PIPELINES AND POLITICS

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Introduction

Over the last several years, interstate natural gas pipelines have become one of the most controversial and consequential issues in the environmental and energy space. More than 300,000 miles of interstate pipelines snake across the United States,[1] transporting natural gas for domestic and, increasingly, international consumption.[2] Natural gas currently accounts for a third of total energy consumption in the United States[3] and is by far the most common energy resource used to generate electricity.[4] At the same time, this infrastructure comes with significant costs. Natural gas currently accounts for around a third of the United States' greenhouse gas emissions from fossil fuel combustion.[5] Most studies suggest that, to avoid the worst effects of climate change, we must rapidly reduce our natural gas development and consumption.[6] Additionally, natural gas pipelines can run for hundreds of miles across multiple states, involve the

1. Paul W. Parfomak, Cong. Rsch. Serv., R45239, Interstate Natural Gas Pipeline Siting: FERC Policy and Issues for Congress 3 (2022), https://perma.cc/98AA-K4MW.
2. *Natural Gas Explained: Use of Natural Gas*, U.S. Energy Info. Admin. (May 24, 2022), https://perma.cc/6MDA-ZSKV; *Natural Gas Explained: Natural Gas Imports and Exports*, U.S. Energy Info. Admin. (May 12, 2022), https://perma.cc/L76Y-NR26.
3. *U.S. Energy Facts Explained: Consumption and Production*, U.S. Energy Info. Admin. (June 10, 2022), https://perma.cc/5DME-Q3DT.
4. *Natural Gas Explained: Use of Natural Gas*, U.S. Energy Info. Admin. (May 24, 2022), https://perma.cc/894C-2A75 (noting that natural gas accounts for almost 40% of utility-scale electricity generation in the United States).
5. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2019, at 3-7, 3-8 tbl. 3-5 (2021). This number includes fossil fuel consumption from the residential, commercial, industrial, transportation, and electric power sectors. *See id.* It does not include the methane emissions that result from natural gas transportation and production, which account for around 3% of all U.S. greenhouse gas emissions. *See Natural Gas Explained: Natural Gas and the Environment*, U.S. Energy Info. Admin. (May 12, 2022), https://perma.cc/L25A-MC9Y.
6. The most recent report from the United Nations' Intergovernmental Panel on Climate Change estimated that global carbon emissions need to be cut by around half (from 2019 levels) in the next eight years to keep global average temperature rise to below 1.5° Celsius, and net zero carbon emissions need to be achieved by 2050. Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change, Contribution of Working Group III to the Sixth Assessment Report of the IPCC* 3-38 to 39 (2022), https://perma.cc/PR5R-2N46 [hereinafter IPCC AR6]; *see also Summary for Policymakers*, in Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C, An IPCC Special Report* 14 fig. SPM.3b (2018), https://perma.cc/Z9WY-4LSK [hereinafter IPCC Special Report 1.5°C] (presenting four illustrative pathways for preventing global warming of 1.5° Celsius, which require either global reductions of natural gas consumption by 20–25% as compared to 2010 levels by 2030—becoming reductions of 53–74% by 2050—along with some carbon capture and storage, or heavy reliance on carbon capture and storage methods). That would require significant reductions in natural gas consumption along with other fossil fuels. According to these estimates, in the scenarios with the best chances of avoiding the worst effects of climate

construction of above-ground facilities that pose safety and health risks, and disrupt the local community in which they are built, including, oftentimes, poor or minority communities.[7]

Under the Natural Gas Act of 1938, no company can construct or operate an interstate natural gas pipeline unless it obtains a "certificate of public convenience and necessity" from a federal agency known as the Federal Energy Regulatory Commission ("FERC").[8] To obtain such a certificate, FERC must find that the pipeline "is or will be required by the present or future public convenience and necessity; otherwise, such application shall be denied."[9] FERC has explained that its public convenience and necessity determination is a balancing test, in which it weighs the "public benefits" of proposed pipelines against their potential "adverse effects."[10] If FERC finds that a pipeline is required by the public convenience and necessity, it automatically conveys federal eminent domain authority to the certificate holder.[11]

Recently, FERC's certificate decisions have been the site of much contestation. Opponents of pipelines have argued that FERC has neglected to consider the negative consequences associated with pipeline construction, including their climate change and environmental justice impacts.[12] Proponents, on the other hand, have argued that FERC's certificate authorizes the agency to permit pipelines so long as they can produce evidence of market need.[13] Although pipeline opponents have not had much success before FERC, they have found a friendly ear in the courts. Over the last five years, the D.C. Circuit issued sev-

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change, natural gas accounts for only around 8% of global electricity generation in 2050, even with carbon capture and storage. IPCC Special Report 1.5°C, at 14–15.

7. *See infra* Part II.

8. 15 U.S.C. §§ 717-717w. FERC is an independent agency composed of five commissioners, no more than three of whom can be members of the same political party, and all of whom are subject to five-year terms. *See infra* Part IV.B.

9. 15 U.S.C. § 717f(e).

10. *See infra* Part II.A.

11. 15 U.S.C. § 717f(h); Allegheny Def. Project v. FERC, 964 F.3d 1, 4 (D.C. Cir. 2020) (en banc).

12. *See, e.g.*, Supplemental Comments of Public Interest Organizations, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (May 26, 2021), https://perma.cc/P3CQ-CPRY; Comment of the Harvard Electricity Law Initiative, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (July 25, 2018), https://perma.cc/PC6K-SMLY; Comments of the Environmental Defense Fund, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-10-000 (July 25, 2018), https://perma.cc/85ML-999Q.

13. *See, e.g.*, Comments of American Petroleum Institute, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (July 25, 2018), https://perma.cc/DYE3-KW2L; Comments of the Interstate Natural Gas Association of America, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (July 25, 2018), https://perma.cc/26A4-FG9Y.

eral decisions faulting FERC for failing to consider the adverse consequences associated with its pipeline approvals.[14]

In the midst of this activity, there has been surprisingly little legal scholarship on the certificate provision in the Natural Gas Act and FERC's authority under it.[15] This paper fills that gap by doing two things. First, drawing on historical sources, the paper gives the first comprehensive legal history of the certificate provision and its application in the first few decades after the Natural Gas Act's passage.[16] Second, drawing on an original database composed of all of FERC's major pipeline decisions made in the period from 2000 to 2021—425 certificate decisions in total—the paper analyzes how FERC has applied its certificate authority in the modern era.

In the process, the paper makes three contributions. First, the history developed here suggests that FERC has a significant amount of discretion to consider the long-term impacts of pipeline development in its certificate proceedings. Shortly after the Natural Gas Act was passed, it became clear that

14. *See* Food & Water Watch v. FERC, 28 F.4th 277, 287–89 (D.C. Cir. 2022); Env't Def. Fund v. FERC, 2 F.4th 953, 973–74 (D.C. Cir. 2021); Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1330–31 (D.C. Cir. 2021); Sierra Club v. FERC, 867 F.3d 1357, 1373–75 (D.C. Cir. 2017); *see also infra* Part II.

15. The primary exception to this is Alexandra Klass's work on the topic, including *Evaluating Project Need for Natural Gas Pipelines in an Age of Climate Change: A Spotlight on FERC and the Courts*, 39 YALE J. ON REG. 658 (2022); *The Public Use Clause in an Age of U.S. Natural Gas Exports*, 72 STAN. L. REV. ONLINE 103 (2020); *The Electric Grid at a Crossroads: A Regional Approach to Siting Transmission Lines*, 48 U.C. DAVIS L. REV. 1895 (2015); and, with Danielle Meinhardt, *Transporting Oil and Gas: U.S. Infrastructure Challenges*, 100 IOWA L. REV. 947 (2015). For the most part, these articles have focused more on the interpretation of the certificate provision in the courts, rather than the provision's historical origins or its application by FERC. *See also* Romany M. Webb, *Climate Change, FERC, and Natural Gas Pipelines: The Legal Basis for Considering Greenhouse Gas Emissions Under Section 7 of the Natural Gas Act*, 28 N.Y.U. ENV'T L.J. 179 (2020).

16. There have been occasional histories written on the Natural Gas Act's certificate authority, although most only touch on that authority in passing while discussing the Natural Gas Act more broadly. *See, e.g.*, Carl I. Wheat, *Administration by the Federal Power Commission of the Certificate Provisions of the Natural Gas Act*, 14 GEO. WASH. L. REV. 194 (1945); Marshall Newcomb, *Effects of Federal Regulation Under the Natural Gas Act upon the Production and Conservation of Natural Gas*, 14 GEO. WASH. L. REV. 217 (1945); EARL DONALD BRAGDON, THE FEDERAL POWER COMMISSION AND THE REGULATION OF NATURAL GAS: A STUDY IN ADMINISTRATIVE AND JUDICIAL HISTORY (1962). The Article draws from broader historical scholarship discussing the Natural Gas Act's certificate authority in ELIZABETH M. SANDERS, THE REGULATION OF NATURAL GAS: POLICY AND POLITICS, 1938-1978 (1981); RICHARD H.K. VIETOR, ENERGY POLICY IN AMERICA SINCE 1945: A STUDY OF BUSINESS-GOVERNMENT RELATIONS (1984); CHRISTOPHER J. CASTANEDA, REGULATED ENTERPRISE: NATURAL GAS PIPELINES AND NORTHEASTERN MARKETS, 1938-1954 (1993); CHRISTOPHER J. CASTANEDA, INVISIBLE FUEL: MANUFACTURED AND NATURAL GAS IN AMERICA, 1800-2000 (1999); CHRISTOPHER J. CASTANEDA & CLARANCE M. SMITH, GAS PIPELINES AND THE EMERGENCE OF AMERICA'S REGULATORY STATE (1996), as well as original sources from FERC, *see infra* Part I.

the construction of interstate pipeline infrastructure posed a threat to key incumbent political players like coal and railroad companies, labor unions, and the states. Thus, Congress amended the Natural Gas Act's certificate provision in order to empower FERC to weigh the long-term social and economic costs of natural gas development in its certificate proceedings. Specifically, Congress authorized the agency to consider the possibility that, while beneficial in the short term, pipeline development could be harmful in the long run, depleting the nation's limited energy resources and simultaneously upending important societal interests. As a result, in the years following the amendments, FERC engaged in highly complex and political certificate proceedings in which it considered the impact of pipeline development on competing interests and the possibility of alternatives. Altogether, this history shows that Congress envisioned the Natural Gas Act's certificate provision to be wielded not as tool of narrow permitting authority, but rather as a mechanism for resolving significant political disputes surrounding the long-term development of natural gas infrastructure in the United States.

Second, and by contrast, the Article's analysis of FERC's major certificate decisions over the last twenty years reveals that FERC's modern certificate decision-making has had a much narrower focus. In particular, FERC relies almost entirely on a single factor: whether the pipeline applicant has a contract with a party that will ship gas along the proposed pipeline. This contract, known as a "precedent agreement," appears to be the most important factor in FERC's decision-making process. At the same time, long-term concerns related to the end use of the natural gas, its impact on competing industries, its air pollution effects, and its social costs appear to have dropped out of FERC's consideration.[17] Using this method, over the last two decades, the agency has approved 423 out of the 425 pipeline applications that have come before it.[18]

17. *See infra* Part II. I am not the first to recognize this phenomenon. As discussed, over the last several years, opponents of pipeline infrastructure, including environmental groups, have criticized FERC's approach to its certificate authority. They have argued that FERC's current approach is too narrowly focused on the presence of precedent agreements and that the agency neglects to consider the negative consequences associated with pipeline development. Even FERC's current chairman, Richard Glick, has acknowledged that the agency's pipeline approval process has come to rely almost entirely on the existence of precedent agreements. *See* Written Testimony of Richard Glick, Chairman, FERC, U.S. S. Comm. on Energy & Nat. Res. (Mar. 3, 2022), https://perma.cc/QB2L-V2XM ("In addition, the Commission's policies changed, albeit often without acknowledgment. Most notably, while the 1999 Certificate Policy Statement provided that the Commission would 'consider all relevant factors reflecting on the need for the project,' the Commission's approach eventually evolved toward a position in which the precedent agreements filed by a project developer were treated as conclusive proof of the need for a proposed project."). This Article buttresses these observations with a more comprehensive review of FERC's certificate decisions.

18. *See infra* Part II.

Third, tying together the historical and modern pieces, the article identifies this historical shift in FERC's approach to its certificate authority and attempts to explain it. The change does not appear to be the result of a formal change in the law; Congress did not subsequently amend the Natural Gas Act's certificate provision, nor did FERC issue any formal rulemaking in which it reinterpreted its certificate authority. Rather, the Article argues that the change is the result of the informal political dynamics occurring within FERC's pipeline proceedings. FERC's historical, more holistic approach to its certificate authority came about only because its hand was forced by pressure from powerful interests and explicit mandates from Congress. But, at the turn of the twenty-first century, the major players that had once populated the agency's certificate proceedings—namely, coal, railroad, and labor interests—disappeared. None of the parties that now commonly intervene to oppose pipeline development—most notably environmentalists, landowners, and community members affected by pipelines—have the same clout as the powerful groups that once lobbied against pipelines. As a result, while FERC's official policy of balancing the public benefits against the adverse interests has ostensibly remained the same, in each decision, the outcome is essentially always the same: certification.

Locating the source of FERC's shift in the underlying political dynamics within pipeline proceedings reveals how difficult it would be to change FERC's behavior. Based on the history of the certificate provision this Article recounts, it appears that FERC's current approach to pipeline certification violates the Natural Gas Act. But because FERC has not adopted this approach through a formal change in policy, but rather through a series of individual proceedings where it is accorded significant discretion by courts, it is difficult to determine whether FERC is violating the statute in any individual case. The result is a record of hundreds of decisions in which FERC certificated a pipeline in a manner that, alone, may not amount to a legal violation, but collectively, suggest that FERC is shirking its statutory duty. This regulatory gap is paired with an equally challenging institutional gap, as it is exceedingly difficult to get any of the traditional powers that check agencies—courts, the Executive, or states—to significantly influence FERC.

Indeed, recent events, including the war in Ukraine and its transformative effect on the demand for (and the politics around) natural gas, have only made these barriers even more formidable. Following the D.C. Circuit's decisions and President Biden's election, it appeared that a majority of FERC Commissioners were interested in reforming the agency's approach to pipeline certifications under the Natural Gas Act.[19] The agency issued two "policy statements"

19. President Biden appointed two new Democratic Commissioners to FERC—Allison Clements and Willie Philips—and made the Democratic Commissioner Richard Glick the Chairman of FERC.

which proposed a more holistic test for whether a pipeline is required by the "public convenience and necessity," including an analysis of a pipeline's climate change and environmental justice impacts.[20] However, following the war in Ukraine,[21] the agency retracted the policy statements and redesignated them as "drafts," opening them up for public comment and declaring in the meantime that the agency would maintain the status quo in its certificate proceedings.[22]

At bottom, this Article concludes that the regulation of natural gas infrastructure in the United States cannot be understood based solely on the formal rules and statutes that have been put in place to govern the industry. Rather, understanding natural gas infrastructure regulation requires a comprehensive view, one that threads together the relationship between the formal laws on the books, the informal political dynamics driving the system, and the institutional landscape in which laws and politics operate. In short, understanding the regulation of natural gas pipelines requires understanding the political economy of natural gas.

The Article proceeds in five parts. Part I gives the statutory history of the certificate provision in the Natural Gas Act and explains FERC's historical approach to its certificate proceedings. Part II documents FERC's shift in approach in the modern era, as revealed through a comprehensive analysis of an original database that compiles information from all of FERC's major certificate proceedings, dating from 2000 to 2021. Part III reviews possible explanations for this shift. Part IV discusses some of the key implications of the story of the certificate provision in the Natural Gas Act.

I. The History of the Certificate

There are two important observations to make with respect to the history of the certificate of public convenience and necessity in the Natural Gas Act. First, the story of the certificate is one of a significant amount of power layering within an agency over time. Congress first included the certificate provision in the Natural Gas Act of 1938, granting the Federal Power Commission ("the Commission," the predecessor to FERC) the authority to regulate the entry of interstate natural gas pipeline companies into the industry. This authority,

20. *See* Certification of New Interstate Natural Gas Facilities, 87 Fed. Reg. 11,548 (Feb. 18, 2022); Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 87 Fed. Reg. 14,104 (Feb. 18, 2022).

21. A week after Russia invaded Ukraine, the FERC Commissioners appeared before the Senate Energy and Natural Resources Committee and were berated by Senators from across the aisle, who claimed that FERC was jeopardizing the nation's energy security in the middle of a devastating war. *See* Miranda Wilson, *FERC Hearing: Gas Fights, Manchin and a 'Snowball Effect*,' E&E News (Mar. 4, 2022), https://perma.cc/ZC6M-6ZZ4.

22. Order on Draft Policy Statements, 178 FERC ¶ 61,197 (2022); *see also* Miranda Wilson, *FERC Retreats on Gas Policies as Chair Pursues Clarity*, E&E News (Mar. 25, 2022), https://perma.cc/WLX4-7X99.

though powerful, was not particularly remarkable—it was a standard tool of public utility regulation wielded by many state public utility regulators at the time. But over time, the Natural Gas Act's certificate authority expanded as both proponents and opponents of pipeline development—most notably natural gas, coal, railroad, and labor representatives—lobbied Congress to take their interests into account. Congress responded by amending the certificate provision of the Natural Gas Act twice. The first time, Congress authorized the Commission to consider the long-term social and economic costs of pipeline development in its certificate decisions. The second time, Congress authorized the Commission to take into account the national interest (as opposed to parochial state interests) in the buildout of natural gas infrastructure. What emerged from these amendments is a highly discretionary power that transformed the Natural Gas Act's certificate of public convenience and necessity far beyond its traditional public utility roots.

Second, and perhaps surprisingly, the Commission itself was initially reluctant to exercise this power. During this early period, the Commission read its statutory authority narrowly and avoided making significant statements of policy about natural gas or the national interest in developing natural gas infrastructure. But the Commission was pushed along by outside actors—including those same major players that had lobbied Congress to amend the Natural Gas Act—to exercise its certificating authority consistent with its statutory obligations. As a result, through numerous contentious and highly political adjudications, the Commission oversaw the measured expansion of natural gas infrastructure in the United States during the twentieth century, weighing the long-term implications of pipeline development within its individual certificate proceedings.

A. Traditional Public Utility Regulation Under the Natural Gas Act of 1938

In the Natural Gas Act of 1938, the Federal Power Commission was given the authority to regulate the construction of interstate natural gas pipelines through a tool known as the "certificate of public convenience and necessity." This tool, like much of the Natural Gas Act of 1938, was drawn from traditional methods of public utility regulation—a regulatory model developed in the nineteenth and twentieth centuries as a means for controlling certain kinds of businesses, particularly those seen as natural monopolies.[23]

At the time, the natural gas industry was widely understood to be a natural monopoly—and a destructive one at that. A landmark investigation by the Federal Trade Commission at the turn of the twentieth century had revealed that just four companies controlled most of the natural gas produced, transported,

23. *See generally* William J. Novak, *The Public Utility Idea and the Origins of Modern Business Regulation*, *in* CORPORATIONS AND AMERICAN DEMOCRACY 139, 144–51 (Naomi R. Lamoreaux & William J. Novak eds., 2017); William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1636–45 (2014).

and consumed in the United States.[24] These companies used their monopoly power to charge exorbitant prices, provide poor or nonexistent services, and undercut any attempts at competition.[25] States regulated natural gas companies as public utilities; but there was no federal regulation of their interstate components, leaving consumers vulnerable to manipulation in the interstate market.[26]

The Natural Gas Act of 1938 was intended to fill the regulatory gap left by the states. The Act was modeled after the Federal Power Act of 1935, which itself had applied traditional methods of public utility regulation to the interstate electricity industry.[27] Both statutes relied on the delegation of significant authority to an independent, expert agency to set a company's rates and terms

24. FED. TRADE COMM'N, FINAL REPORT OF THE FEDERAL TRADE COMMISSION TO THE SENATE OF THE U.S. ON ECONOMIC CORPORATE, OPERATING, AND FINANCIAL PHASES OF THE NATURAL-GAS-PRODUCING, PIPE-LINE, AND UTILITY INDUSTRIES, WITH CONCLUSIONS AND RECOMMENDATIONS, DOC. 92 NO. 84-A, at 589–90 (1936).

25. *Id.* at 581–606; *see also id.* at 593–94 (describing the unregulated, monopolistic control of the natural gas industry as "an amazing story of high finance, suppression of competition, division of territory, and capture of control or forced receivership by established interests of independent enterprises").

26. *Id.* at 601 (observing that because states could not regulate monopolies beyond their borders, "the way is open to grave abuses in the manipulation of values of properties beyond their respective jurisdiction").

27. Federal Power Act of 1935, ch. 687, tit. II, 49 Stat. 838 (1935). In 1935, Representative Sam Rayburn, Chairman of the Commerce Committee in the U.S. House of Representatives, introduced H.R. 5423 in response to the Federal Trade Commission's investigation. SANDERS, *supra* note 16, at 35–36. The bill consisted of three Titles: Title I was targeted at public utility holding companies, Title II addressed the electricity industry, and Title III addressed the natural gas industry. H.R. 5423, 74th Cong. (1st Sess. 1935). Title III was copied almost entirely from Title II. BRAGDON, *supra* note 16, at 59–60. Title I passed as the Public Utility Holding Company Act of 1935, and Title II passed as the Federal Power Act of 1935. But Title III never made it out of the House, in part because of concerns that the bill would have regulated natural gas pipelines as common carriers and would have applied restrictions on companies' entry into natural gas fields. *See* SANDERS, *supra* note 16, at 37; BRAGDON, *supra* note 16, at 60–65, 77–78. Congress went back to the drawing board, cycling through four versions of substantially the same bill, all of which were modeled after the Federal Power Act. *See* H.R. 11662, 74th Cong. (2d Sess. 1936); H.R. 12680, 74th Cong. (2d Sess. 1936); H.R. 4008, 75th Cong. (1st Sess. 1937); H.R. 6586, 75th Cong. (1st Sess. 1937). The final version, H.R. 6586, included the provision regarding the certificate of public convenience and necessity that was ultimately enacted into law, and by some accounts was the reason for the bill's successful passage. *See* SANDERS, *supra* note 16, at 40 (arguing that the protection against competition convinced pipeline companies to back the bill. The final version of the Natural Gas Act attracted nearly universal support. *Id.* at 46 ("The gas bill . . . evoked no significant opposition. It was enthusiastically promoted by state and federal regulators, and endorsed, during floor consideration, by representatives of both producer and consumer states. It was apparent that the legislation was perceived by all concerned as an improvement on the status quo.").

of service in exchange for protection of the company's monopoly status.[28] In the Natural Gas Act, Congress directed the Federal Power Commission—an independent agency composed of five members appointed by the President and confirmed by the Senate[29]—to regulate the transportation and sale of natural gas in interstate commerce.[30]

Most importantly for our purposes, Section 7 of the Natural Gas Act of 1938 prohibited natural gas companies from constructing or extending interstate pipelines without first obtaining "from the Commission a certificate that the present or future public convenience and necessity require or will require such new construction or operation of any such facilities."[31]

The certificate of public convenience and necessity had originated in state public utility laws as a mechanism for restricting entry into industries considered to be natural monopolies.[32] The idea behind the provision, as Justice Brandeis had explained in a prominent Supreme Court case on public utility regulation just a few years before the Natural Gas Act's passage, was "to promote the public interest by preventing waste."[33] As Justice Brandeis recounted, for natural monopolies or other businesses with high capital expenditures, "experience has taught that the financial burdens incident to unnecessary duplication of facilities are likely to bring high rates and poor service."[34] Rather than allow unfettered competition in these industries, states chose to restrict companies' entry and heavily regulate those who were authorized to participate in the business. "The introduction in the United States of the certificate of public convenience and necessity marked the growing conviction that under certain circumstances free competition might be harmful to the community, and that,

28. *See* Joshua C. Macey & Jackson Salovaara, *Rate Regulation Redux*, 168 U. PA. L. REV. 1181, 1194–96 (2020) (describing traditional public utility regulation in the context of the electricity industry).

29. The Federal Power Commission was created by the Federal Water Power Act of 1920. *See* 16 U.S.C. §§ 792, 797. The Commission's jurisdiction was expanded to electricity following the Federal Power Act of 1935, *see* 16 U.S.C. § 791(a), and natural gas following the Natural Gas Act of 1938, *see* 15 U.S.C. § 717(b).

30. Natural Gas Act, Pub. L. No. 75-688, 52 Stat. 821 § 4(a) (codified at 15 U.S.C. § 717c(a)).

31. *Id.* § 7(c). The certificate was a standard tool of public utility regulation in state and federal law. The House Report accompanying the Natural Gas Act identified other federal public utility regulation statutes, including the Interstate Commerce Act, the Communications Act, and the Motor Carrier Act, as inspiration for the certificate provision. H.R. REP. No. 75-709, at 6723 (1937); *see also* Transportation Act, Pub. L. 66-152, 41 Stat. 456 § 400(18) (1920); Communications Act, Pub. L. No. 73-416, 48 Stat. 1064 § 214(a) (1934); Motor Carrier Act, Pub. L. No. 74-255, 49 Stat. 543 § 206(a) (1935).

32. *See* FORD P. HALL, THE CONCEPT OF A BUSINESS AFFECTED WITH A PUBLIC INTEREST 63 (1940); HERMAN H. TRACHSEL, PUBLIC UTILITY REGULATION 106 (1947); William K. Jones, *Origins of the Certificate of Public Convenience and Necessity: Developments in the States 1870-1920*, 79 COLUM. L. REV. 426, 426–27 (1979).

33. New State Ice Co. v. Liebmann, 285 U.S. 262, 282 (1932) (Brandeis, J., dissenting).

34. *Id.*

when it was so, absolute freedom to enter the business of one's choice should be denied."[35]

State laws also identified other "externalities" that the certificate of public convenience and necessity was intended to protect against.[36] These included "damage to the environment," "impairment of community-wide interconnection" of systems, and "cessation of community services considered to be socially desirable."[37] At bottom, the "essence of the certificate of public convenience and necessity [wa]s the exclusion of otherwise qualified applicants from a market because, in the judgment of the regulatory commission, the addition of new or expanded services would have no beneficial consequences or, in a more extreme case, would actually have harmful consequences."[38]

State public utility commissions in charge of certificating new entrants into an industry were delegated significant authority to consider a variety of factors in their certificate decisions. First, because the certificate was intended to restrict entry, applicants had to satisfy a high bar. Applicants had to make an "affirmative showing" that "the convenience and necessity require[d] the service which it [wa]s offering."[39] "Necessity" meant more than just the needs of a few private individuals;[40] it meant the "public need."[41] The reviewing body also considered, *inter alia*, the applicant's financial health,[42] the quality of the services it proposed to provide,[43] the price it proposed to charge,[44] the presence of other utilities in the area,[45] the applicant's business experience,[46] the relationship of the proposed service "to the future development of the community,"[47] and the impact of the proposed service on the surrounding environment.[48] Ultimately, the agency was tasked with ensuring that the proposed business was truly "in the interest of the public."[49]

35. *Id.*
36. Jones, *supra* note 32, at 428.
37. *Id.*; *see also* Ford P. Hall, *Certificates of Convenience and Necessity*, 28 MICH. L. REV. 107, 108 (1929).
38. Jones, *supra* note 32, at 427.
39. Hall, *supra* note 37, at 279.
40. *Id.* at 277.
41. *Id.* at 278 (quoting Chi., Rock Island & Pac. Ry. v. State, 258 P. 874 (Okla. 1927)).
42. Jones, *supra* note 32, at 427; Hall, *supra* note 37, at 293.
43. Hall, *supra* note 37, at 283–85.
44. Jones, *supra* note 32, at 448; Hall, *supra* note 37, at 293.
45. Hall, *supra* note 37, at 279, 281–85.
46. Jones, *supra* note 32, at 427.
47. Hall, *supra* note 37, at 279, 293.
48. Jones, *supra* note 32, at 428, 511.
49. Chesapeake & Ohio Ry. Co. v. United States, 283 U.S. 35, 42 (1931); *see also, e.g.*, Interstate Com. Comm'n v. Parker, 326 U.S. 60, 65 (1945); Powell v. United States, 300 U.S. 276, 287 (1937).

The limited legislative history that exists on the certificate of public convenience and necessity provision in the Natural Gas Act of 1938 indicates that Congress understood it as performing a similar restrictive function. In response to questions on the House floor about the provision, Representative Clarence Lea (D-CA), the primary author of the bill, explained that the certificate provision was intended to restrict "a [natural gas] company [from] enter[ing] a territory occupied by another," unless given "permission from the Federal Power Commission."[50] Representative Lea clarified that there was "no exclusion of any company by law," but it was up to the Federal Power Commission to decide "in every instance" "whether or not one company may enter the territory of another, in a community already occupied."[51] And in response to a question as to whether the Commission "would have power to deny to the company, which wanted to compete and sell at a lower rate, an opportunity to enter the field and sell at that lower rate," Representative Lea stated that the Commission would "ha[ve] the power to let them in," but "[t]he Commission decides the question from the viewpoint of the public interest and not from the viewpoint of the welfare of that company."[52]

In its early decisions implementing the certificate provision of the Natural Gas Act, the Federal Power Commission also understood the provision as akin to that appearing in traditional public utility laws. In *In re Kansas Pipe Line & Gas Co.*,[53] the Commission's first decision setting forth its understanding of the public convenience and necessity standard, the Commission drew heavily from state public utility law sources.[54] Thus, the Commission defined the term "public convenience and necessity" to mean "a public need or benefit without which the public is inconvenienced to the extent of being handicapped in the pursuit of business or comfort or both—without which the public generally in the area involved is denied to its detriment that which is enjoyed by the public of other areas similarly situated."[55] It derived this definition from decisions of the Supreme Court of Oklahoma and the Supreme Court of Rhode Island.[56] The Commission also defined the term "public" by reference to opinions from the Court of Appeals of Kentucky and the Supreme Court of Illinois,[57] which described the relevant public to be the broader public in the area, "not merely the applicants nor those persons or towns who believe they would benefit from the

50. 81 CONG. REC. 6,721 (1937).

51. *Id.* at 6,722.

52. *Id.* at 6,722–23.

53. 2 F.P.C. 29 (1939).

54. *Id.* at 56.

55. *Id.*

56. *Id.* (citing Chi., Rock Island & Pac. Ry. Co. v. State, 258 P. 874 (Okla. 1927) and Abbott v. Pub. Utils. Comm'n, 136 A. 490 (R.I. 1927)).

57. *Id.* at 56 (citing Red Star Transp. Co. v. Red Dot Coach Lines, 295 S.W. 419 (Ky. 1927), and Choate v. Illinois Com. Comm'n, 141 N.E. 12 (Ill. 1923)).

proposed construction."[58] Finally, the Commission listed several factors it would consider in its certificate proceedings, including whether the applicant had access to sufficient supplies of natural gas;[59] whether the applicant had sufficient financial resources to construct the proposed facilities;[60] whether there were sufficient customers in the territory to justify construction of the pipeline;[61] and whether the costs of construction of the proposed facilities were "both adequate and reasonable."[62] Many of these factors were drawn from state law.

Thus, in its earliest form, the Natural Gas Act's certificate of public convenience and necessity functioned as a traditional (albeit expansive) tool of public utility regulation, the purpose of which was to prevent waste or externalities by restricting pipeline companies' entry into and expansion within the natural gas industry.

B. 1942 Amendments: Adding Long-Term Social and Economic Costs

But there were also early signs that the transplantation of the state certificate tool into the federal context would not be so straightforward. In the same *In re Kansas Pipe Line* case discussed above, the Commission identified a problem that it was reluctant to handle. A series of parties had attempted to intervene in the case that were not present in the state context: "representatives of coal, railroad and labor union interests."[63] Much to the Commission's consternation, the petitioners urged the Commission to "consider the adverse effects upon their interests of the certification of these proposed pipe lines."[64]

At the time, coal was the dominant energy resource in the country, providing around 50% of the nation's energy supply.[65] Particularly in the Midwest and Northeast, coal was used to power industrial processes, generate electricity, and provide residential services through "manufactured gas" (a fuel commonly used for lighting, heating, and cooking, which was produced through the gasification of coal).[66] Indeed, natural gas had not yet penetrated into any of the major

58. *Id.*

59. *Id.* at 40 (citing Incorporators of Serv. Gas Comp. v. Pub. Serv. Comm'n of Pa., 190 A. 653 (Pa. 1937)).

60. *Id.* at 52 (citing Re Niagara River & E. Ry. Co., P.U.R. 1917A 278 (N.Y. Pub. Serv. Comm'n 1916); Re Buffalo Jitney Owners Ass'n, P.U.R. 1923C 645 (N.Y. Pub. Serv. Comm'n 1923); Re Wyo.-Mont. Pipe Line Co., P.U.R. 1931B 63 (Wyo. Pub. Serv. Comm'n 1930); Re W.E. Carver, P.U.R. 1923B 242 (Co. Pub. Utils. Comm'n 1922)).

61. *Id.* at 45.

62. *Id.* at 53.

63. *Id.* at 32.

64. *Id.* at 57.

65. CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 94.

66. *See* SANDERS, *supra* note 16, at 24, 51; CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 94; CASTANEDA, INVISIBLE FUEL, *supra* note 16, at 52–53.

Northeastern cities, including Philadelphia, New York City, and Boston.[67] The introduction, through pipelines certificated by the Commission, of cheap, higher quality natural gas into regions then reliant on coal could deal a significant blow to the industry.[68] This loss, in turn, would affect the railroad companies, which relied on coal shipments for one-fifth of their total revenues, and the labor interests employed in both the coal and railroad industries.[69]

The Commission ultimately concluded that it did not have the authority to consider the coal, railroad, and labor petitioners' interests based on a narrow reading of the certificate provision. The Natural Gas Act limited the Commission's certificate authority to those facilities proposed for "a market in which natural gas is *already being served* by another natural-gas company."[70] The Commission read this phrase to mean that Congress had restricted it to certificating pipelines in communities where natural gas had already broken through—i.e., where coal had already been displaced as the dominant energy source.[71] If that were true, the Commission reasoned, then it did not need to consider the effect of new natural gas pipelines on coal interests because the coal interests in that area had already been diminished. Thus, the Commission concluded that Congress did not intend for it to "weigh the broad social and economic effects of the use of various fuels" in its certificate proceedings.[72]

However, the Commission's interpretation created more problems than it solved. In its first report to Congress the year after the Natural Gas Act was passed, the Commission observed that the "limitation upon the Commission's jurisdiction and the lack of clear definition of the word 'market' have made more difficult the Commission's administration of this section."[73] The Commission's cramped reading of the certificate provision created confusion as to whether the Commission had any role in certificating new interstate pipelines targeted at entirely new gas markets, or even whether those pipelines could be built at all.[74]

A mere year later, this narrow interpretation paralyzed the Commission. The Commission had before it an application to construct a pipeline from southern Texas to New York City.[75] The pipeline would be the first to transport gas from the Southwest to the Northeast and would theoretically carry

67. *See* CASTANEDA, INVISIBLE FUEL, *supra* note 16, at 132.

68. *See* CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 3–4; CASTANEDA, INVISIBLE FUEL, *supra* note 16, at 114.

69. *See* CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 31.

70. Natural Gas Act, Pub. L. No. 75-688, 52 Stat. 821 § 7(c) (1938).

71. *In re* Kansas Pipe Line & Gas Co., 2 F.P.C. 29, 57–58 (1939); *see also* SANDERS, *supra* note 16, at 53; CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 45.

72. *In re Kansas Gas & Pipe Line Co.*, 2 F.P.C. at 57–58.

73. 19 ANN. REP. FED. POWER COMM'N 21 (1939).

74. *Id.*

75. 20 ANN. REP. FED. POWER COMM'N 79 (1940).

billions of cubic feet of gas to the New York City area on a yearly basis.[76] Not only was the Commission uncertain whether it could certificate this pipeline, but it also identified a series of problems posed by the pipeline that it felt it was not statutorily authorized to address.[77] The Commission had recently conducted an analysis of the remaining available natural gas reserves in the United States.[78] According to that study, the United States would deplete its natural gas supply within approximately thirty years at then-current rates of consumption.[79] In its annual report to Congress, the Commission explained that the pipeline application "raised the question whether the proposed use of natural gas would not result in displacing a less valuable fuel [i.e., coal], creating hardship in an industry already supplying the market, while at the same time rapidly depleting the country's irreplaceable reserves of natural gas."[80] While the pipeline could provide access to a cheap source of fuel over the short term, the Commission worried that it could engender significant "social costs" over the long term.[81] But, the Commission told Congress, "under the provisions of the Natural Gas Act the Commission appears to have no authority to consider this important problem."[82]

In 1942, Congress resolved this problem by amending the Natural Gas Act to give the Commission certificating authority over all interstate natural gas pipelines, regardless of the market in which the pipeline was to be built.[83] The amendments were pushed by and received support from the pipeline, coal, and railroad industries.[84] The legislation removed the language restricting the Commission's certificate authority to a "market" already being served by another natural gas company.[85] And the Commission was also given the authority to "attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require."[86] The Senate Report accompanying the amendments explained that the changes "would correct th[e] glaring inadequacy of the act," which prevented the Commission from considering the "possibilities of waste,

76. *Id.*
77. *Id.* at 79.
78. *Id.* at 74–75.
79. *Id.* at 75.
80. *Id.* at 79.
81. *Id.*
82. *Id.* at 10.
83. Natural Gas Act, Pub. L. No. 77-444, 56 Stat. 83 (1942).
84. *See* SANDERS, *supra* note 16, at 50–53 (explaining that coal and railroad companies gave their "enthusiastic approval" to the amendments because they ensured that coal companies and their railroad allies could intervene in the Commission's proceedings and "plead [their] case against displacement [of coal] by natural gas").
85. *Compare* Natural Gas Act, Pub. L. No. 77-444, 56 Stat. 83 § 7(c) (1942) *with* Natural Gas Act, Pub. L. No. 75-688, 52 Stat. 821 § 7(c) (1938).
86. Natural Gas Act, Pub. L. No. 77-444, 56 Stat. 83 § 7(e) (1942).

uneconomic and uncontrolled extensions" of pipelines built in new markets.[87] The House Report also stated that as a result of the amendments, "the door is opened to the consideration by the Commission of the effect of construction and extensions upon the interests of producers of competing fuels and competitive transportation interests."[88]

Following the amendments, coal, railroad, and labor interests soon became the primary intervenors in the Commission's certificate proceedings.[89] Further buoying their efforts, in the 1944 case *Federal Power Commission v. Hope Natural Gas Co.*,[90] the Supreme Court recognized that, as a result of Congress's 1942 amendments to the Natural Gas Act, "considerations of conservation are material to the issuance of certificates of public convenience and necessity under § 7 for any proposed construction or extension" of interstate pipeline facilities.[91] In fact, the Court explained that the Commission's authority under the certificate provision was broader than its authority under the rate-setting provisions of the Natural Gas Act as a result of these amendments.[92] Broad considerations related to natural gas, it seemed, were on the table for the Commission to consider.

Even so, the Commission was reluctant to exercise its newfound authority. To buy time, in 1944, the Commission opened a comprehensive investigation into the competing interests in the natural gas industry.[93] It held a series of public hearings around the country.[94] More than 320 witnesses gave testimony, including senators and House representatives; governors; officials from state public utility commissions; representatives from the natural gas, oil, coal, railroad, and manufactured gas industries; and labor groups.[95] The investigation produced a record amounting to 85 hearing days, more than 14,000 pages of transcripts, and almost 500 exhibits.[96]

87. S. Rep. No. 77-948, at 1–2 (1942).

88. H.R. Rep. No. 77-1290, at 3 (1941).

89. *See* Sanders, *supra* note 16, at 53; Castaneda, Regulated Enterprise, *supra* note 16, at 45–46.

90. 320 U.S. 591 (1944).

91. *Id.* at 612; *see also* Fed. Power Comm'n v. Transcon. Gas Pipe Line Corp., 365 U.S. 1, 9–14 (1961).

92. *See Hope Nat. Gas Co.*, 320 U.S. at 611–13 (holding that the Commission was authorized to consider issues of conservation under its certificate authority but *not* under its authority to set rates under the Natural Gas Act).

93. Natural Gas Investigation, 4 F.P.C. 725, 727 (1944); 26 Ann. Rep. Fed. Power Comm'n 10 (1946).

94. Fed. Power Comm'n, Natural Gas Investigation (Docket No. G-580): Report of Commissioner Nelson Lee Smith and Commissioner Harrington Wimberly 2 (1948) [hereinafter Smith & Wimberly Report].

95. *Id.*

96. *Id.*

The investigation illuminated "conflicting views on broad questions of public policy" as to how to administer the Natural Gas Act's amended certificate provision.[97] The perspectives broke out into roughly four camps. First were the producing states, located mostly in the South and West.[98] At least one state, Louisiana, wanted the Commission to use its certificating authority to restrict exports of natural gas from their state in order to conserve the resource for themselves.[99] As the governor of Louisiana, Jimmie H. Davis, testified:

> We do, however, object, and object strenuously, to pouring enormous volumes of our remaining supply of gas into such states as Alabama, Tennessee, West Virginia, Ohio, Pennsylvania, and other Appalachian States, which have almost limitless reserves of coal, and many of which are producers, as well, of natural gas and petroleum.
>
> When the day of exhaustion arrives, as ultimately it inevitably will, Louisiana will find itself sitting high and dry, with its sole fuel supply consisting of pine knots—if, indeed, we have any pine knots left—and our other valuable natural resources condemned to transportation to other states for manufacturing and processing, with all the economic loss that such a situation entails.[100]

The former governor of Louisiana, Sam Jones, put the issue of the export of gas to other states in even starker terms:

> Early in my term I became convinced that nearly all the South's problems sprang from the poverty that is the byproduct of a raw materials and agricultural economy; and that these problems—social, racial, political, and economic—can never be solved until we develop in the South an economy balanced between agriculture and industry; that in this way alone can we provide the people of the South that equality of opportunity which is the boast of the country's political philosophy . . . .[101]

According to the state's prepared report for the Commission's inquiry, "common equity requires, in certificate cases, that the social and economic effects on

97. 1946 Ann. Rep. Fed. Power Comm'n 66 (1946).

98. At the time, both natural gas production and consumption were heavily concentrated in a handful of states. Texas, Louisiana, California, Oklahoma, and West Virginia produced approximately 87% of the nation's natural gas in 1945 and also consumed approximately 68% of it. Smith & Wimberly Report, *supra* note 94, at 356 tbl.1.

99. Natural Gas Investigation (Docket No. G-580): Report of Commissioner Leland Olds and Commissioner Claude L. Draper 7–9 (1948) [hereinafter Olds & Draper Report]; Smith & Wimberly Report, *supra* note 94, at 299–300.

100. Olds & Draper Report, *supra* note 99, at 42; *see also id.* at 43 (testimony of U.S. Senator John Overton of Louisiana).

101. *Id.* at 63.

the origin as well as the destination territories to be served by new lines be considered in the granting of certificates of convenience and necessity to build and operate new interstate natural-gas pipe lines."[102]

Then there were the consuming states, who sought access to cheap natural gas. For instance, the mayor of Kansas City, Missouri, testified that Missouri relied on natural gas as its sole source of fuel and would have no substitute if reserves were exhausted from the Southwest fields to supply industrial processes in the East.[103] John Beukema, a representative from the Greater Muskegon Chamber of Commerce in Michigan, testified with respect to the Commission's certificating authority:

> [A]s we see it, the governing principle is the general welfare of the Nation and the dedication of this gas to its highest beneficial use, that is, beneficial use for the national welfare, at each and every point along the line of flow before it is made available for a lesser use. Only in this way can the Commission perform its function of preserving the national interest as distinguished from purely local and community interests.[104]

Competing fuel and transportation companies, as well as the labor interests involved in these industries, aligned themselves with the perspective that the Commission ought to certificate pipelines based on the end use of the gas, prioritizing coal for such uses as generating steam in boilers and leaving natural gas to more specialized uses like chemical manufacturing.[105] The groups also advocated for the Commission to take into account the effects of pipeline approvals on the social welfare of coal and railroad workers, in a kind of balancing test:

> [T]he Commission may and should consider the adverse effect of natural-gas pipe-line extensions and expansions, on the social and economic welfare of the coal and railroad industries, weighing such effect against the possible benefits which may accrue to certain segments of the general public as a result of such pipe-line installations. Where the desirability of conserving natural gas for its higher beneficial uses is coupled with considerations of the detrimental effect upon railroad, coal and other industries and their employees, a combination of such circumstances may present a persuasive and forceful reason for denying applications or conditioning certificates.[106]

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102. SMITH & WIMBERLY REPORT, *supra* note 94, at 299–300.

103. OLDS & DRAPER REPORT, *supra* note 99, at 85–86.

104. *Id.* at 112.

105. SMITH & WIMBERLY REPORT, *supra* note 94, at 300–02.

106. *Id.* at 302 n.23 (quoting statement submitted by National Coal Association).

Finally, the natural gas and petroleum industries resisted any restrictions by the Commission on the transport of natural gas in interstate commerce.[107]

The questions raised by the Commission's authority over natural gas were so controversial that the Commission itself produced two separate reports summarizing the conclusions of its investigation. One report, signed by Commissioners Leland Olds and Claude Draper, advocated for the aggressive use of the Commission's certificate authority to support regional economic development and manage dwindling gas supplies.[108] The other report, signed by Commissioners Nelson Lee Smith and Harrington Wimberly, advocated for a more hands-off approach, which would allow states to manage issues related to conservation and rely on the natural gas companies to market their fuels appropriately to address concerns of superior and inferior uses.[109] At bottom, the investigation revealed that "'[c]onservation' meant different things to different people,"[110] and the Commission would have to balance "economic efficiency" with "conflicting institutional interests."[111]

The Commission could not come to a consensus on either policy. So it ultimately chose to weigh the various interests on a case-by-case basis, certificating hundreds of pipelines in the decades following the 1942 amendments to the Natural Gas Act but also "[i]n numerous subsequent decisions," "den[ying] or attach[ing] restrictions to certificates" to balance competing interests.[112] For instance, in *In Re Texas Gas Transmission Corp., Louisville Gas and Electric Co., and United Gas Pipe Line Co.*,[113] the Commission denied applications to construct new pipeline facilities that would carry natural gas from Louisiana to the Tennessee Valley Authority because the Commission concluded that the public convenience and necessity did not require their construction where adequate coal existed.[114] And in *Northern Natural Gas Co.*,[115] the Commission authorized the construction of facilities to supply gas to an electric generating plant but restricted the fuel's use to the operation of "pilot burners, ignition purposes, and as emergency standby in case of breakdown of coal-handling and coal-burning equipment"—not for replacement of coal in the plant's boilers.[116]

In yet other decisions, the Commission weighed the possible air pollution benefits of natural gas as compared to coal to determine whether the construction of a pipeline would be in the public interest. For instance, in *In Re Trans-*

107. Smith & Wimberly Report, *supra* note 94, at 297–99.
108. Olds & Draper Report, *supra* note 99, at 8–14.
109. Smith & Wimberly Report, *supra* note 94, at 29.
110. Vietor, *supra* note 16, at 74.
111. *Id.* at 76.
112. Sanders, *supra* note 16, at 54.
113. 10 F.P.C. 391 (1951).
114. *Id.* at 399–400.
115. 4 F.P.C. 1099 (1945).
116. *Id.* at 1102.

continental Gas Pipe Line Corp.,[117] the Commission approved the construction of a pipeline that would lead to the displacement of coal and fuel oil in generating stations.[118] The Commission acknowledged that the natural gas was intended for what would typically be considered an inferior use.[119] But the Commission determined that the gas would "displace only a small fraction of the coal and oil" used in the generating stations, and the introduction of gas to the area could provide other benefits, including the potential alleviation of a "serious air pollution problem."[120] The Commission explained that sulfur oxides produced by coal contributed to air pollution, and the substitution of coal with natural gas could reduce these emissions.[121] The Commission conceded that the substitution would not solve the air pollution problem but was nonetheless an "additional benefit" that contributed to its decision to grant the certificate.[122]

In *Federal Power Commission v. Transcontinental Gas Pipe Line Corp.*,[123] the Supreme Court upheld the Commission's practice of taking the end use of fuels into account in its certificate proceedings.[124] The case involved the Commission's denial of a certificate for a proposed pipeline to supply gas to boilers owned by a local distribution company in New York City.[125] The boilers ran on coal, but the local distribution company wanted to run them on gas, in part due to concerns about excessive air pollution from the coal.[126] The Commission rejected the application on the ground that the use of the gas in boilers was an

117. 38 F.P.C. 906 (1967).

118. *Id.* at 907, 909.

119. *Id.* at 916.

120. *Id.* at 909, 911.

121. *Id.* at 911–13.

122. *Id.* at 911–12; *accord* Re Chandeleur Pipe Line Co., 44 F.P.C. 1747, 1756 (1970) (explaining that "while [the Commission] ha[s] termed boiler fuel use inferior in the past, at present it cannot necessarily be so termed because of the air pollution problem. In *Transcontinental Gas Pipe Line Corp.*, 38 F.P.C. 906 (1967), the Commission approved delivery of additional firm gas to Con Ed for boiler fuel use noting among other things that i[t] would be an affirmative step in dealing with the air pollution problem."); *see also* Re El Paso Nat. Gas Co., 22 F.P.C. 900, 902–03 (1959) (granting certificate in case where introduction of natural gas would help reduce the "acute smog problem in the Los Angeles area"); Re Transwestern Pipeline Co., 36 F.P.C. 176, 185–91 (1966) (discussing the Commission's responsibility to "take the matter of air pollution into consideration in a certificate proceeding under the Natural Gas Act" at length, and evaluating the impact of the introduction of natural gas on smog in the Los Angeles Basin); Re Consol. Edison Co. of New York, 44 F.P.C. 350, 362 (1970) (discussing the "weighing of social values required by the concept of the public convenience and necessity," including "reliability," "economic savings," "anti-air pollution benefits," "feasible alternative[s]," and potential "aesthetic and environmental detriment," in the context of an application to construct hydroelectric dam facilities under the Federal Power Act).

123. 365 U.S. 1 (1961).

124. *Id.* at 8–22.

125. *Id.* at 3–5.

126. *Id.* at 5.

"inferior" one, and although there were potential air quality benefits that could come from the use of gas, these were outweighed by conservation concerns.[127]

The Court upheld the Commission's certificate denial. First, the Court explained that "[t]he Commission is the guardian of the public interest in determining whether certificates of convenience and necessity shall be granted."[128] This power "requires the Commission to evaluate all factors bearing on the public interest" in its certificate decisions.[129] Second, the Court recognized that Congress's 1942 amendments to the Natural Gas Act expanded the Commission's authority to include end use as one of these factors.[130] The Court recounted how the Commission felt that the first version of the certificate provision "barred it from considering 'the broad social and economic effect of the use of various fuels' in a § 7 proceeding";[131] how the Commission had identified this problem in its reports to Congress, including its concerns related to conservation and the long-term "social costs" of its pipeline authorizations;[132] and how the 1942 amendments were "framed in response to the Commission's complaint."[133] The Court concluded that Congress had clearly authorized the Commission to consider both the interests of competing fuels and conservation under its certificate authority.[134] Finally, the Court acknowledged that testimony from New York officials as to the air pollution benefits of natural gas was "entitled to great weight," but found that the Commission did not act unreasonably in determining that these potential benefits were outweighed by other considerations.[135]

The 1942 amendments thus gave the Commission the authority to consider long-term social and economic costs in its certificate proceedings. In particular, the amendments authorized the Commission to consider the need to conserve a limited resource and the possibility that, while beneficial in the short term, pipeline development could in the long run deplete the nation's energy resources and simultaneously upend important labor and other social interests. At the same time, the Commission was authorized to take into account possible end-use benefits associated with pipeline development, including the impact of natural gas on air pollution.

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127. *Id.* at 5–6.

128. *Id.* at 7 (quoting United States v. Detroit & Cleveland Navigation Co., 326 U.S. 236, 241 (1945)).

129. *Id.* at 8 (quoting Atl. Refin. Co. v. Pub. Serv. Comm'n, 360 U.S. 378, 391 (1959)).

130. *Id.* at 8–14.

131. *Id.* at 10 (quoting Kan. Pipe Line & Gas Co., 2 F.P.C. 29, 24 (1939)).

132. *Id.* at 11 (quoting 20 ANN. REP. FED. POWER COMM'N 79 (1940)).

133. *Id.* at 12.

134. *Id.* at 14.

135. *Id.* at 30.

Newly empowered with an authority much more expansive than its traditional public utility roots, the Commission (albeit cautiously and stiltedly) began assessing these weighty considerations in individual proceedings.

C. 1947 Amendment: Adding Federal Eminent Domain Power

Congress's final step in expanding the Commission's certificate authority occurred in 1947, as the result of yet another push by major parties with vested interests in pipeline development.

Because of the significant interests at play in these certificate proceedings, individual pipeline applications were often turned into highly political affairs. One of the most famous incidents occurred when two interstate pipelines that had originally been constructed to transport oil during World War II were put up for sale.[136] "Big Inch" and "Little Big Inch," as the two pipelines were called, ran more than a thousand miles from Texas to New Jersey.[137] If they were converted into natural gas pipelines, they would be the first interstate pipelines to break into the Northeast.[138] One natural gas company hired "a former Ohio Senator, a former justice of the Supreme Court, and a former chairman of the Maritime Commission," along with "former Roosevelt aide Thomas Corcoran, a former general counsel for the [Federal Power Commisssion ("FPC")], and a former FPC commissioner," to lobby on its behalf.[139] Another company hired "former trust-buster Thurman Arnold and Abe Fortas, one-time undersecretary of Interior for Harold Ickes."[140] Ickes himself made public statements in favor of converting the lines to transport natural gas, in part to cut down the power of John L. Lewis, the president of one of the biggest labor unions at the time, the United Mine Workers.[141]

Texas Eastern, a natural gas company, ultimately won the bid to purchase the pipelines and then applied for a certificate before the Federal Power Commission.[142] Eight coal and railroad organizations swiftly intervened in the Commission's proceeding.[143] Meanwhile, the project's opponents turned to their home court advantage: the pipelines crossed through Pennsylvania, which was still coal country.[144] Pennsylvania had already ensured that no natural gas would cross through its territory without its permission. When Big Inch and Little Big Inch were first constructed, Pennsylvania granted the pipelines rights-of-

136. CASTANEDA, INVISIBLE FUEL, *supra* note 16, at 134–40.
137. CASTANEDA & SMITH, *supra* note 16, at 128.
138. *See* CASTANEDA, INVISIBLE FUEL, *supra* note 16, at 134.
139. *Id.* at 136.
140. *Id.*
141. *Id.* at 136–37.
142. *Id.* at 138–39.
143. *Id.* at 139.
144. CASTANEDA, REGULATED ENTERPRISE, *supra* note 16, at 94.

way through the state, conditioned on the transportation of only petroleum or its by-products. To use the pipelines, Texas Eastern would have to secure new permits from Pennsylvania to transport natural gas.[145] And the coal interests had Pennsylvania's politicians at their back: Pennsylvania's U.S. Senator Francis Meyers had publicly declared that the Federal Power Commission would "never permit the transmission of natural gas to the eastern seaboard."[146]

So, Texas Eastern took the fight to Congress. It successfully lobbied Congress to amend the Natural Gas Act to authorize the Commission to grant federal eminent domain authority to successful certificate applicants.[147] The Senate Report on the bill explained that the amendment was necessary because states were denying eminent domain authority to pipelines certificated by the Federal Power Commission.[148]

Thus, political fights over pipelines led Congress to add an additional layer of power to the Commission's certificate authority: the ability to prioritize the national interest over parochial state interests within its pipeline proceedings. To some extent, this additional power was reminiscent of the certificate's state law roots, for the public convenience and necessity standard had originated in state law not just as a mechanism for restricting entry into certain industries, but also as a tool for government oversight of public utilities' use of delegated eminent domain authority.[149] At state law, the standard ensured that the invasion of private rights in any particular case was justified in order to benefit the broader public.[150] As the Connecticut Supreme Court explained, government entities charged with deciding whether a proposed line is required by the public convenience and necessity must "determine[ ] in each case that may arise the relation of the duty implied in the broad grant of legislative power to promote by appropriate action the interests of the commonwealth to the limitations of that power established for the protection of private rights."[151] The legislature may have identified the service to be provided by the public utility as an important one. "Sometimes, however, the necessity is one which does not affect the whole body politic the same way, but may or may not exist in different localities for reasons peculiar to each."[152] Agencies or courts are then "called upon to

145. *Id.* at 95–96.

146. *Id.* at 99 (quoting *Duff Doubts Pipeline Curb*, PHILA. BULL. (Feb. 15, 1947)).

147. *Id.* at 103; *see also* H.R. 2956, 80th Cong., (1st Sess. 1947); S. 1028, 80th Cong., (1st Sess. 1947); Natural Gas Act, Pub. L. No. 80-245, 61 Stat. 459 (1947) (codified at 15 U.S.C. § 717f(h)).

148. S. REP. NO. 80-429, at 2 (1947).

149. *See* Jones, *supra* note 32, at 434–38.

150. *See id.*

151. *In re* Shelton St. Ry. Co., 38 A. 362, 363 (Conn. 1897). At the time, Connecticut law charged courts with the public convenience and necessity analysis, although later state public utility commissions often took on this duty.

152. *Id.*

decide whether conditions existing in a particular case create 'a public convenience and necessity,' within the meaning of some legislative act."[153] The question is one of "public policy," but it is "limited to the relation of the particular action asked to the legal rights of the person or persons which such action may impair."[154]

In the Natural Gas Act, however, the Federal Power Commission was given the authority to grant *federal* eminent domain power to successful pipeline applicants[155] (a power that, notably, had not accompanied certificate provisions in other federal laws like the Interstate Commerce Act, the Communications Act, or the Motor Carriers Act[156]). Thus, the Commission was now tasked with determining whether a particular pipeline was required by the *national* public convenience and necessity such that it amounted to a public use within the context of the Fifth Amendment.

* * *

Over the course of the 1940s, primarily in response to the Commission's tendency to read its statutory authority narrowly, the Commission acquired a broad discretionary power to weigh the long-term social and economic costs and national interest in natural gas development in its certificate proceedings. In particular, the Commission was authorized to consider the long-term implications of pipeline development on the nation's energy resources, including the health and welfare of competing industries and their labor forces, as well as the end-use impacts of natural gas on air pollution. Throughout the latter half of the twentieth century, the Commission used this power to oversee the expansion of a significant amount of the nation's pipeline infrastructure—certifying thousands of pipeline applications and tens of thousands of miles of pipeline construction—while also balancing these long-term concerns.

II. The Certificate Today

Around the turn of the twenty-first century, however, FERC's[157] approach to pipeline certification shifted. This shift cannot be seen in any single action. In fact, FERC's only modern statement on how it conducts its pipeline certifi-

153. *Id.*

154. *Id.*

155. 15 U.S.C. § 717f(h).

156. *See supra* note 31 and accompanying citations.

157. In 1977, the Federal Power Commission was renamed the Federal Energy Regulatory Commission, or FERC, and was brought under the organizational structure of the Department of Energy (although the agency retained its status as an independent agency). These changes were part of a reorganization of energy regulatory agencies in the federal government that occurred following the 1973 Arab oil embargo. *See infra* Part III.C.

cation process, a "Policy Statement" that it issued in 1999, outlined an approach to pipeline certification that does not look all that different from FERC's previous process. And in the early part of the twenty-first century, some of FERC's individual certificate decisions resemble those that it issued in the latter half of the prior century. But reviewing all of FERC's pipeline approvals over the last twenty years, it becomes clear that FERC has increasingly transformed the way in which it has wielded its certificate authority.

To complete this review, I compiled an original database of all of FERC's certificate decisions for major new pipeline projects from 2000 to 2021—totaling 425 certificate decisions.[158] The database includes information gathered from FERC's final orders in each of these proceedings, the projects' environmental assessments, and relevant filings on the project dockets. From these, I reviewed FERC's reasoning in each proceeding to determine how, in practice, FERC decides whether a pipeline is required by the public convenience and necessity.

In particular, I focused on three elements of FERC's reasoning, roughly corresponding to three factors that FERC historically considered in its pipeline proceedings: (1) the necessity of the project; (2) the long-term economic impact of the project, evaluated in terms of the end use of the project and its potential impacts on both competing fuels in the area and the air pollution effects of the natural gas; and (3) the long-term social impact of the project, evaluated in terms of the impact on the labor interests in competing industries as well as the interests of the surrounding community (or the community of origination).

In general, these factors did not translate seamlessly to the modern context, but they could be roughly approximated within FERC's modern certificate decisions. So, first, I evaluated what criteria FERC used to determine whether a proposed project was necessary.

Second, I assessed whether FERC took into account the end use of the natural gas of the proposed pipeline in its certificate decision. More specifically, I reviewed whether FERC considered the proposed project in the context of other competing fuels in the area, as well as the potential air pollution impacts of the natural gas from the project. In general, I found that FERC often did not discuss the air pollution impacts of the natural gas; but when it did, it did so specifically with reference to the greenhouse gas emissions associated with the natural gas—likely because these emissions are the ones that have garnered the greatest attention from both participants in FERC's proceedings and from the agency itself. As such, in each certificate proceeding, I recorded FERC's discussion of a project's greenhouse gas emissions (or lack thereof) as a rough proxy for FERC's consideration of the end use impacts of the gas.

Finally, I assessed whether FERC considered the potential social costs of the proposed pipeline. In general, I found that FERC did not discuss the impact of pipeline development on the labor interests in competing industries; but

158. *See* Appendices A & B (on file with the author and available at harvardelr.com); *see also infra* Part II.B (explaining methodology in greater detail).

FERC did occasionally include some socioeconomic analysis within its certificate decisions, particularly with respect to the environmental justice impacts of the proposed project. As such, in each certificate proceeding, I recorded FERC's discussion of a project's environmental justice impacts (or lack thereof) as a rough proxy for FERC's consideration of the potential social costs of the project.

I discuss each of these factors and my evaluation of them in more detail below. But first, a few caveats. First, it is entirely possible that my database is missing potential-but-never-proposed pipeline projects. For instance, it could be that the pipeline companies themselves conduct an internal screening process of their own, eliminating potential pipeline candidates before they ever come to FERC's attention and therefore evading my review. It is also possible that the pipeline companies consider the precise factors that I discuss here in their screening. This possibility should not, however, affect my analysis. After all, what interests me is *FERC's own reasoning* with respect to whether a proposed project is required by the public convenience and necessity, and whether that reasoning has changed from the historical era to the modern day. As such, what matters is whether and how *FERC* considers these factors in its certificate decisions, not whether these factors are being evaluated in the abstract; and FERC's reasoning should be captured in the materials from these proceedings.

Second, due to time constraints, I did not review the individual conditions placed on each of the pipeline projects that FERC approved. It is possible that even if FERC did not discuss these factors or take them into account when deciding whether to certificate a pipeline, it did address concerns related to the long-term impacts of pipeline development through its placement of conditions on projects.[159] A more rigorous review of FERC's reasoning here would include an evaluation of the conditions on each of these certificates.[160]

Finally, while my comprehensive analysis of the reasoning in FERC's certificate decisions over the last twenty years is new, the results would not surprise many who are familiar with FERC's modern pipeline proceedings. As will be discussed shortly, my analysis shows that, for the most part, FERC has come to rely almost entirely on a single factor in its certification process for the construction of new pipeline facilities: whether the pipeline applicant has a contract with a party that will ship gas along the proposed pipeline. This contract, known as a "precedent agreement," appears to be the most important factor in FERC's decision-making process. At the same time, long-term concerns related to the end use of the natural gas, its impact on competing industries, its air pollution effects, and its social costs appear to have dropped out of FERC's consideration.

159. *See* J.R. DeShazo & Jody Freeman, *Public Agencies as Lobbyists*, 105 COLUM. L. REV. 2217, 2303–04 (2005) (finding that changes in FERC's evaluation of the environmental consequences of hydropower projects could be observed by evaluating the number of environmental conditions placed on approved projects).

160. My thanks to Leon Szeptycki for this suggestion.

For some years now, local community groups and environmental organizations have been making the argument before FERC and the courts that FERC inappropriately truncates its certificate analysis, relying solely on the existence of a precedent agreement and dismissing concerns related to the environmental and social impacts of pipeline development.[161] Over the last several years, these arguments have resulted in important victories before the courts. Beginning in 2017, the D.C. Circuit held (1) that FERC has the authority to consider the greenhouse gas emissions associated with end use of the natural gas from its pipeline projects under the certificate provision of the Natural Gas Act, and indeed can deny projects on the ground that these emissions are too harmful;[162] (2) that for some projects FERC is *required* to consider these emissions as part of its environmental evaluation under the National Environmental Policy Act ("NEPA");[163] and (3) that for some projects FERC has given inadequate consideration to the social impacts of pipeline construction under the requirements

161. *See, e.g.*, Comments of Earthjustice and Other Organizations on Scope of Environmental Assessment To Be Prepared for MARC I Hub Line Project at 8–9, Central New York Oil and Gas Company, LLC, FERC Docket No. CP10-480 (Oct. 26, 2010), https://perma.cc/U4X5-AGYJ (arguing that FERC must consider the greenhouse gas emissions associated with the end use of a proposed natural gas project); Request for Rehearing and Rescission of Certificates and Motion for Stay of Shenandoah Valley Network et al. at 6–8, Atlantic Coast Pipeline, LLC, Docket No. CP15-554 (Nov. 13, 2017), https://perma.cc/4S79-N87W (arguing that FERC failed to evaluate evidence in the record of lack of demand for Atlantic Coast Pipeline, failed to consider reasonable alternatives, and failed to take a hard look at the project's environmental impacts); Gillian Giannetti, *Reform Is Long Overdue for FERC's Gas Pipeline Reviews*, SUSTAINABLE FERC PROJECT (Nov. 19, 2020), https://perma.cc/85DL-FNTM.

162. Sierra Club v. FERC, 867 F.3d 1357, 1373–74 (D.C. Cir. 2017) ("*Sabal Trail*") (explaining that "Congress broadly instructed [FERC] to consider 'the public convenience and necessity' when evaluating applications to construct and operate interstate pipelines," "including adverse environmental effects," and concluding that "[b]ecause FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment," FERC has the authority to consider the end-use greenhouse gas emissions associated with a pipeline and deny a pipeline application on those grounds); *see also* Birckhead v. FERC, 925 F.3d 510, 519 (D.C. Cir. 2019) (affirming that FERC has the authority to consider the environmental impact of a pipeline project in its decision whether to certificate the pipeline under the Natural Gas Act, including the greenhouse gas emissions associated with the end use of the natural gas).

163. National Environmental Policy Act, Pub. L. No. 91-190, 83 Stat. 852 (codified as amended in scattered sections of 42 U.S.C.). *See, e.g.*, *Sabal Trail*, 867 F.3d at 1371–74 (holding that the greenhouse gas emissions associated with the end use of the natural gas from a proposed pipeline project are "reasonably foreseeable" indirect effects that FERC must consider as part of its obligations under NEPA where the proposed project is intended to supply natural gas to known power plants); *Birckhead*, 925 F.3d at 518–20 (reiterating that FERC has a responsibility under NEPA to estimate the greenhouse gas emissions associated with the end use of the natural gas from a proposed project where those emissions are "reasonably foreseeable" indirect effects); Food & Water Watch v. FERC, 28 F.4th 277, 288–89 (D.C. Cir. 2022) (holding that FERC violated NEPA when it failed to consider the reasonably foreseeable greenhouse gas emissions associated with the end use of the natural gas from a proposed

of both the Natural Gas Act and NEPA.[164] None of these arguments or decisions relied on the history recounted in Part I or on the idea that FERC's modern practice represents a significant shift from its historical approach. Nonetheless, these organizations have raised the alarm about FERC's modern pipeline approval practices for years now. This analysis buttresses their arguments, but it is by no means the first to point out the flaws with FERC's modern approach to its certificate authority.

With these points addressed, I turn now to a more in-depth discussion of FERC's modern approach to pipeline approvals—in its 1999 Policy Statement and in the 425 certificate decisions that comprise my database.

A. FERC's 1999 Policy Statement

In 1999, FERC issued a "Policy Statement" that outlined how it would approach its certificate authority for major new pipeline construction in the modern era.[165] This Policy Statement is the only comprehensive statement on the topic that FERC has issued since the historical period. And for the most part, the Policy Statement does not look all that different from its past approach. FERC explained that the "goal" of its public convenience and necessity analysis was to "foster competitive markets, protect captive consumers, and avoid unnecessary environmental and community impacts while serving increasing demands for natural gas."[166] To achieve this goal, FERC would "balance the public benefits against the potential adverse consequences of an application for new pipeline construction."[167]

This balancing test would be a three-step process. First, FERC would assess whether the applicant could "financially support the project without relying on subsidization from existing customers."[168] Second, FERC would analyze any adverse effects from the pipeline on the pipeline's existing customers, other pipelines and their customers, or landowners and the surrounding community.[169] FERC would weigh these effects against the "public benefits" of the project, including "meeting unserved demand, eliminating bottlenecks, access to new supplies, lower costs to consumers, providing new interconnects that improve the interstate grid, providing competitive alternatives, increasing elec-

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project where FERC had "sufficiently specific" information as to the intended end use of the gas).

164. *See, e.g.*, Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1330–31 (D.C. Cir. 2021) (holding that FERC's environmental justice analysis of a proposed pipeline was deficient under both NEPA and the Natural Gas Act).

165. Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227 (1999), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000).

166. *Id.* at 61,743.

167. *Id.* at 61,745.

168. *Id.* at 61,746.

169. *Id.* at 61,747–50.

tric reliability, or advancing clean air objectives."[170] Finally, FERC would weigh the adverse environmental effects of the pipeline—which included interests beyond those of the customers and affected landowners—against its public benefits.[171]

Ultimately, FERC emphasized, it would approve a pipeline "only if the public benefits from the project outweigh any adverse effects."[172] FERC would apply the balancing test "on a case-by-case basis" and would evaluate "specific proposals" based on their unique "facts and circumstances."[173]

B. FERC's Certificating Process in Practice

Looking just at the Policy Statement, one might conclude that not much has changed in FERC's approach to the certification of pipelines. The Policy Statement's emphasis on a balancing test that takes into account the public benefits and adverse effects of pipelines does not sound all that different from the agency's historical approach to pipeline certification. But the Policy Statement can only reveal so much: to understand how FERC's certificate process works in practice, it is necessary to review FERC's actual decision-making. And that requires a review of FERC's individual pipeline proceedings.

To get a sense of how FERC has approached pipeline certification in the modern era, I reviewed every application for major new pipeline construction that FERC has processed under its 1999 Policy Statement.[174] To locate the projects that FERC has approved, I first turned to FERC's website, where FERC keeps track of every major pipeline project that it has approved dating back to 1997.[175] I narrowed this list down to only those projects that were approved under the approach outlined in FERC's Policy Statement, which removed projects prior to 2000 as well as several projects that FERC approved under different regulatory authorities.[176] I combined projects that were so related that they were evaluated in the same FERC proceeding. I then cross-referenced each project with its FERC docket number on FERC's eLibrary[177] to review (1) FERC's decision in each proceeding; (2) its environmental assess-

170. *Id.* at 61,748.

171. *Id.* at 61,745–46, *clarified*, 90 FERC ¶ 61,128, 61,396 (2000).

172. *Id.* at 61,750.

173. *Id.* at 61,737.

174. FERC uses other criteria to issue certificates for the simple transport or sale of natural gas in interstate commerce, known as "blanket certificates." *See* 18 C.F.R. §§ 157.201–.218 (2022). FERC also has a process for expedited certificate approval for minor projects. *See* 18 C.F.R. § 157.208 (2022). I excluded both of these categories of certificates.

175. *Approved Major Pipeline Projects (1997-Present)*, FERC, https://perma.cc/2XEH-QBU6.

176. These were primarily projects that FERC approved pursuant to its import/export authority under Section 3 of the Natural Gas Act and pipeline projects approved under its blanket certificate regulations set forth in 18 C.F.R. § 157.203 (2022).

177. *See eLibrary*, FERC, https://perma.cc/EFQ7-WGJF.

ment of the project, usually contained within an Environmental Assessment ("EA") or Environmental Impact Statement ("EIS") that FERC staff compiled in accordance with NEPA; and (3) any other relevant filings in the proceeding, e.g., comments by intervenors or interested parties. From this, I compiled a set of 423 decisions in which FERC approved a major pipeline project under its 1999 Policy Statement. These are listed in Appendix A.

As to the remaining decisions issued under the 1999 Policy Statement, FERC does not publish certificate denials on its website. Thus, to locate the projects that FERC rejected under this same authority, I searched Westlaw's database of FERC's administrative decisions and guidance using the Boolean search "'order denying application!' AND 'public convenience and necessity.'" I then limited the results to the date range of January 1, 2000, to December 31, 2021. This search yielded six results. Again, I narrowed down those results to only those certificate applications that were denied under the approach outlined in FERC's 1999 Policy Statement. This additional filter left two decisions in which FERC denied a certificate to a major pipeline project. These decisions are gathered in Appendix B. The only other study[178] attempting to estimate the number of certificates that FERC has denied over the past twenty years under its 1999 Policy Statement also discovered only two such denials—the same ones that I found.[179]

Reviewing this database suggests that FERC's reasoning in its decisions changed from its past approach, particularly with respect to the three factors discussed above. More specifically, in the vast majority of the certificate decisions, FERC relies almost entirely on a single factor in deciding whether a

178. Susan F. Tierney, Analysis Group, FERC's Certification of New Interstate Natural Gas Facilities: Revising the 1999 Policy Statement for 21st Century Conditions 8 (2019), https://perma.cc/CUY5-PKVY.

179. *Id.* It is possible that both my search and the prior study did not uncover all of the relevant certificate applications that FERC has denied under its Policy Statement. But a third source indicates that, at a minimum, these results are not far off. In response to a Congressional subpoena issued by the House Subcommittee on Civil Rights and Civil Liberties in 2020, FERC reported that, over the past twenty years, taking into account all of the certificates of public convenience and necessity it has granted—including those not reviewed pursuant to the approach outlined in FERC's 1999 Policy Statement—the agency granted 1,021 certificates and denied six. *See* Press Release, Representative Jamie Raskin, Rep. Raskin Releases Preliminary Findings Showing FERC Pipeline Approval Process Skewed Against Landowners (Apr. 28, 2020), https://perma.cc/UM76-LYET. Both the number of certificates approved and the number of certificates denied in this estimate are higher than mine; but that is likely because I reviewed only those certificate applications for major new pipeline construction that FERC considered under the approach outlined in its 1999 Policy Statement, not all certificate applications. Indeed, the four additional certificate denials that FERC identified may map onto the four I found but rejected because they were not analyzed under the Policy Statement. FERC's own data, therefore, likely confirms the two denials I identified; at most, FERC's response would suggest that there are no more than four additional denials that may be relevant.

project is necessary: whether the pipeline has a precedent agreement with someone who will ship gas along the pipeline. At the same time, FERC generally declines to consider end use in its decisions, both in terms of available alternatives and in terms of the relative air pollution impacts of various sources. Finally, while FERC occasionally does conduct a socioeconomic impact assessment as part of its pipeline proceedings, typically in the form of an environmental justice analysis, these assessments never seem to factor into its decisionmaking. I discuss each of these points in greater detail below.

1. Public Convenience and Necessity

As described in Part I, the Commission historically understood the "public convenience and necessity" in broad terms. And, in some of FERC's earlier decisions in the modern era, it appears that the agency applied a similarly broad analysis. For instance, in *Questar Pipeline Company*, which was decided in 2001, FERC approved a pipeline project because the project would create a new market for natural gas; provide gas supplies to communities that had, until that point, not been able to receive natural gas and had no other potential sources of gas service in the area; and allow new producers to access the grid.[180] FERC's conclusion relied on a variety of evidence, including a report documenting the need for additional pipeline infrastructure in the area, letters of support written by local towns and producers, and multiple contracts with shippers on the pipeline.[181]

But, reviewing FERC's modern decisions as a whole, and particularly within the last several years, it becomes clear that FERC's method of assessing the necessity of a project has changed. Instead of its prior holistic analysis, FERC has come to rely almost entirely on a single factor: whether the applicant submitted evidence of a contract with someone who will ship gas along the pipeline—i.e., a "precedent agreement." FERC says that these precedent agreements demonstrate that there is a market "need" for the pipeline and therefore a public benefit that outweighs any adverse effects of the pipeline.

FERC's decision certificating the Cheyenne Connector Pipeline[182] is typical of its reasoning in these cases.[183] First, FERC found that there would be no subsidization by existing customers because the pipeline was a new pipeline without existing customers.[184] Then, FERC stated that "[t]here [was] no evidence that the project will adversely affect other pipelines or customers" because the pipeline would not replace service on an existing pipeline, and no pipeline

180. Questar Pipeline Co., 93 FERC ¶ 61,279, 61,929–30 (2001).

181. *Id.* at 61,929–30.

182. Cheyenne Connector, LLC, 168 FERC ¶ 61,180 (2019).

183. *See* Appendix C (additional examples) (on file with the author and available at harvardelr.com).

184. *Cheyenne Connector, LLC*, 168 FERC at 61,984.

company protested the application.[185] Next, FERC said the applicant had "taken steps to minimize any adverse effects on landowners and communities" because, even though the pipeline ran seventy miles, included five aboveground stations, and affected around 1,600 acres of land, the applicant had secured voluntary agreements with landowners for much of the necessary land.[186] Finally, FERC concluded:

> The proposed Cheyenne Connector Pipeline Project will enable Cheyenne Connector to provide 600,000 [Dekatherms per day ("Dth/d")] of firm transportation service for Anadarko and DCP Midstream, which have executed 10-year precedent agreements. Based on the benefits the project will provide, the lack of adverse effects on existing customers and other pipelines and their captive customers, and the minimal adverse effects on landowners and surrounding communities, we find, consistent with the Certificate Policy Statement and section 7 of the [Natural Gas Act], that the public convenience and necessity require approval and certification of Cheyenne Connector's proposal . . . .[187]

Notably, FERC observed:

> While it appeared that [a] system alternative on [an already-existing] pipeline would have *less environmental impact or disruption* than the Cheyenne Connector Pipeline Project, at a *reduced cost* and at *concomitantly reduced rates*, we note that the prospective shippers on the Cheyenne Connector Project have executed precedent agreements with Cheyenne Connector and *it is longstanding Commission policy not to second guess the business decisions of pipeline shippers*."[188]

In other words, having identified precisely the type of factors that previously weighed heavily in FERC's consideration (including environmental disruption, the availability of alternatives, and cheaper rates), FERC nevertheless deferred to the market's judgment; specifically, the judgment of the private companies that had signed the precedent agreements.

In fact, in none of the decisions I reviewed did FERC find the adverse effects of a pipeline project—to consumers, landowners, the surrounding community, or the environment—to outweigh the existence of a precedent agreement.

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185. *Id.*

186. *Id.* at 61,984–85. FERC noted that "[s]everal commenters expressed concerns about easement negotiations and Cheyenne Connector's possible misuse of eminent domain." *Id.* at 61,984. But the agency stated that "legal issues surrounding a certificate holder's exercise of eminent domain are beyond our jurisdiction." *Id.* at 61,984 n.25.

187. *Id.* at 61,985.

188. *Id.* at 61,984 (emphasis added).

Perhaps not surprisingly, under this approach, FERC's decisions have become incredibly standardized. The public hearings that the Federal Power Commission once conducted as part of its certificate proceedings—where witnesses from the interested parties would come and testify before the Commission—are now gone. Instead, FERC conducts its certificate proceedings entirely by paper.

Additionally, FERC's decisions all use the same boilerplate format and language. Each decision begins with an identical recitation of the 1999 Policy Statement.[189] The decision then goes on to find that the pipeline project will not be subsidized by existing customers and that any adverse effects of the project on customers, landowners, and the surrounding community are nonexistent or "minimal."[190] FERC often completes this analysis in less than a page, although it gives a more fulsome discussion where opponents have made specific objections to the project's adverse consequences or public benefits.[191] Then, FERC concludes that because the applicant presented evidence of a precedent agreement, the project is needed, the public benefits of the project outweigh its adverse effects, and therefore the public convenience and necessity require its approval.[192]

Indeed, in the only two instances that I could identify in which FERC denied a certificate application under its Policy Statement, the applicants failed to submit evidence of a precedent agreement.[193] In one of those cases, the Jordan Cove Energy Project, FERC made clear that its analysis turned on precedent agreements. In that case, FERC denied the application of Pacific Connector Gas Pipeline, L.P., and Jordan Cove Energy Project, L.P.—both wholly owned subsidiaries of Jordan Cove LNG, L.P.—to construct an interstate pipeline and associated Liquefied Natural Gas ("LNG") export terminal in Oregon.[194] FERC did so because the parties had produced no precedent agreements establishing that someone would ship gas along the pipeline and instead relied on "generalized allegations of need" for the project.[195] After the application was denied, Pacific Connector Gas Pipeline, L.P., signed two precedent agreements with its affiliate Jordan Cove Energy Project, L.P., and reapplied for certification before FERC.[196] FERC granted the parties' new application, finding that "the precedent agreements entered into between Pacific Connector and Jordan Cove for approximately 96 percent of the pipeline's capacity adequately demonstrate that the project is needed" and therefore was required by

189. *See* Appendix C (on file with the author and available at harvardelr.com).
190. *See id.*
191. *See id.*
192. For an example of a certificate decision, see *id.*
193. *See* Appendix B (on file with the author and available at harvardelr.com).
194. Jordan Cove Energy Project, L.P., 154 FERC ¶ 61,190, paras. 1–2, 37–41, (2016).
195. *See id.*
196. Jordan Cove Energy Project, L.P., 170 FERC ¶ 61,202, 62,356 (2020).

the public convenience and necessity.[197] In other words, the affiliated companies signed an agreement with themselves, and that was sufficient to establish need, even though there had otherwise been no change in the evidence of the demand for the project.[198]

As the Jordan Cove Energy Project example demonstrates, once given a precedent agreement, FERC does not investigate whether these agreements reflect actual demand for a project. In fact, in the modern era, FERC has repeatedly stated that it does not "look behind th[e precedent agreement] to assess the certainty that an end-use shipper will actually require the service" of the proposed project.[199]

But, as many opponents of pipeline projects have repeatedly pointed out, always taking these contracts at face value does not make sense in an industry of regulated monopolies. Natural gas pipeline companies do not operate within a free market: their rates are set by FERC, and their primary customers are local distribution utilities, which themselves are local monopolies serving captive customer bases. Under these circumstances, a precedent agreement between two companies may not always represent actual demand for a project, particularly if the monopoly contracts with an unregulated or extra-jurisdictional affiliate.[200]

For an illustration of this problem, one need look no further than the Spire STL Pipeline Project. The Spire Pipeline involved a project that FERC found was needed based on a single precedent agreement signed with the applicant's corporate affiliate, Spire Missouri, a local distribution utility based in the St.

197. *Id.* at 62,365; *see also id.* at 62,371 ("Pacific Connector's proposed project will enable it to transport natural gas to the Jordan Cove LNG Terminal, where the gas will be liquefied for export. Pacific Connector executed a precedent agreement with Jordan Cove for nearly 96 percent of the pipeline's capacity. . . . For these reasons, we find that the benefits the Pacific Connector Pipeline will provide outweigh the adverse effects on economic interests.").

198. A year later, the project developers canceled their project and asked FERC to vacate their certificate. Pac. Connector Gas Pipeline, 177 FERC ¶ 61,198 (2021).

199. Trans-Union Interstate Pipeline, L.P., 92 FERC ¶ 61,066, 61,219 (2000); *see also, e.g.*, Islander E. Pipeline Co., L.L.C. 97 FERC ¶ 61,363, 62,690 (2001) (same); Midwestern Gas Transmission Co., 114 FERC ¶ 61,257, 61,816 (2006) (same); E. Shore Nat. Gas Co., 132 FERC ¶ 61,204, 62,058 (2010) (same); Atl. Coast Pipeline, LLC, 161 FERC ¶ 61,042, para. 54 (2017) (same); Fla. S. Connection, LLC, 163 FERC ¶ 61,158, para. 23 (2018) (same); RH energytrans, LLC, 165 FERC ¶ 61,218, 61,804 (2018) (same); Mountain Valley Pipeline, LLC, 171 FERC ¶ 61,232, 62,641 (2020) (same); Double E Pipeline, LLC, 173 FERC ¶ 61,074, 61,533 (2020) (same).

200. *See* Richard J. Pierce, *Reconstituting the Natural Gas Industry from Wellhead to Burnertip*, 9 ENERGY L.J. 1, 44 (1988) (describing risks of affiliate self-dealing in the natural gas industry); *see also* Joshua C. Macey, *Utility Mergers and the Modern (and Future) Power Grid*, 42 ENERGY L.J. 237, 237, 239 (2021) (observing that "market power remains a pervasive problem" in the similarly regulated electricity market and highlighting the specific problem of utilities wielding market power to subsidize affiliates).

Louis area.[201] To show that the project was not needed, opponents presented evidence that (1) projections of market demand for natural gas in the St. Louis area were flat, and the applicant itself admitted that the project "was not developed to serve new demand" but instead would simply shift existing demand on the system;[202] (2) existing pipelines in the area provided adequate capacity to Spire Missouri;[203] (3) Spire Missouri had previously declined to support other pipeline projects with unaffiliated applicants;[204] and (4) the project had the potential to increase costs to Spire Missouri's consumers.[205]

According to the project opponents, this evidence collectively demonstrated that the project was not actually "needed," but was instead an attempt by Spire Missouri and its corporate affiliate to engage in self-dealing. They pointed out that, because Spire Missouri was a regulated monopoly with a captive customer base, Spire Missouri's customers would pay for the new pipeline, including the costs of its construction and the roughly 14% return on equity that FERC allowed the pipeline to recover, as well as the transportation costs associated with shipping gas on the new pipeline.[206] All of these revenues would accrue to Spire Missouri's corporate affiliate.[207] In addition, as the Missouri Public Service Commission explained to FERC in a filing in the proceeding, the state regulatory agency had little ability to deny Spire Missouri recovery of the costs associated with the pipeline construction once FERC approved the pipeline.[208] In other words, the project essentially functioned as a mechanism for Spire Missouri to pay itself for its transportation costs and earn a return on equity for the construction of the pipeline, all without any benefit to Spire Missouri's consumers.

Despite these concerns, FERC declined "to look behind the precedent agreement[ ] to evaluate project need."[209] FERC "emphasized its disinclination to second-guess reasoned business decisions by pipelines' customers evidenced

201. Spire STL Pipeline, LLC, 164 FERC ¶ 61,085, paras. 1–11 (2018), *vacated*, Env't Def. Fund v. FERC, 2 F.4th 953 (D.C. Cir. 2021).

202. *Id.* at para. 49.

203. *Id.* at paras. 51–56.

204. *Id.* at paras. 57–60.

205. *Id.* at paras. 61–67.

206. *Id.* at para. 36.

207. *Id.*

208. *Id.* at para. 63. Under Missouri's public utility laws, the Missouri Public Service Commission ("PSC") could conduct a prudence review to determine whether the costs that Spire Missouri incurred to construct the pipeline were "prudent" and therefore recoverable from its customers. *Id.* But the Missouri PSC's prudence review was limited to comparing the transportation costs associated with the Spire Pipeline to the transportation costs charged on other interstate pipelines; it could not thoroughly consider alternatives, including the possibility that the pipeline not be built at all. *Id.*

209. *Id.* at paras. 75–76.

by precedent agreements."[210] FERC then concluded that "the benefits that the Spire STL Project will provide to the market, including enhanced access to diverse supply sources and the fostering of competitive alternatives, outweigh the potential adverse effects," and the "public convenience and necessity requires approval of Spire's proposal."[211]

In an unusual move, the D.C. Circuit vacated FERC's certificate for the Spire STL Pipeline Project.[212] The court held that FERC's analysis was arbitrary and capricious because it "was insufficiently probative of market need"—including "plausible evidence of self-dealing"—and yet FERC "count[ed] the single precedent agreement between corporate affiliates as conclusive proof of need."[213] The court observed that "[n]othing in the Certificate Policy Statement endorses this approach," and therefore FERC's decision was inconsistent with its own Policy Statement.[214] Moreover, the court determined that FERC's balancing of the benefits and adverse effects of the project "consisted largely of . . . *ipse dixit*" that provided "no concrete evidence" of its conclusion.[215]

There are reasons to think that the Spire Pipeline Project is not an outlier in FERC's certificate applications. In my review of FERC's 423 project approvals over the last twenty years, I was able to identify at least forty-one projects (~9%) involving a precedent agreement with an affiliate.[216] FERC often does not specify in its decisions whether a precedent agreement is with an affiliate, so this number could be an underestimate. And the mere presence of an affiliate precedent agreement does not mean that a project is suspect. But because FERC does not look behind precedent agreements to determine whether they are evidence of actual need, it is difficult to tell.

FERC has signaled recently that it may change its approach to precedent agreements, both affiliated and unaffiliated, although it remains to be seen

210. *Id.* at para. 79.

211. *Id.* at para. 123.

212. Env't Def. Fund v. FERC, 2 F.4th 953, 976 (D.C. Cir. 2021), *cert. filed sub. nom.* Spire Missouri, Inc. v. Env't Def. Fund, No. 21-848 (Dec. 7, 2021) ("*Spire*"). Previously, the D.C. Circuit had generally deferred to FERC's practice of relying solely on the existence of a precedent agreement—affiliate or not—as conclusive evidence of the need for a pipeline project. *See* Minisink Residents for Env't Pres. & Safety v. FERC, 762 F.3d 97, 111 (D.C. Cir. 2014); Myersville Citizens for a Rural Cmty., Inc. v. FERC, 783 F.3d 1301, 1311 (D.C. Cir. 2015); City of Oberlin v. FERC, 937 F.3d 599, 606 (D.C. Cir. 2019).

213. *Spire*, 2 F.4th at 973–75.

214. *Id.* at 973.

215. *Id.*

216. *See* Appendix D (on file with the author and available at harvardelr.com). This number includes projects that had a mix of both affiliate precedent agreements and non-affiliate precedent agreements.

whether and how that change will be implemented.[217] For the last twenty years, however, the presence of a precedent agreement has taken on a prominent, if not dispositive, role in FERC's certificate proceedings—in sharp contrast to historical practice.

2. End Use

As described in Part I, the Commission also used to take into account the end use of various fuels in its certificate decisions. In particular, the Commission would assess whether alternative fuels existed that could serve the proposed demand and the air pollution benefits of competing energy sources. Reviewing FERC's decisions under the 1999 Policy Statement, both of these practices have dropped out of the decision-making process. Particularly over the last several years, FERC has refused to consider the availability of alternative sources of energy in the area; and while it has occasionally calculated the air pollution impacts of its pipeline certifications, it has generally declined to take these calculations into account in its decisions.

Turning to the alternatives analysis first: over the course of the last two decades, FERC has increasingly declined to evaluate whether alternative energy sources could satisfy the demand identified by pipeline applicants. There is some indication that in the early 2000s, FERC's staff engaged in a semblance of an alternatives analysis. For instance, in the environmental reports prepared for the Bradwood Pipeline Project, FERC staff compared the proposed project to alternatives in the region, including other natural gas projects, possible renewable energy projects, and even energy efficiency options.[218] But staff found that these were not viable alternatives to the proposed project.[219] And importantly, FERC itself dismissed these alternatives in its decision certificating the Bradwood Pipeline.[220] FERC explained that "[s]hould potential gas customers determine, for example, that [another natural gas project] will provide a cost benefit, or that additional energy from renewable sources is necessary . . . they can choose to support a project which they believe is better suited to their objectives."[221] But, because the project applicants had submitted evidence of

217. FERC's new draft policy statement proposes to reduce the agency's emphasis on precedent agreements in its analysis. *See* Certification of New Interstate Natural Gas Facilities, 87 Fed. Reg. 11,548, 11,554, 11,556–57 (Feb. 18, 2022).

218. *See, e.g.*, Final Environmental Impact Statement at 3-1 to -9, Bradwood Landing Project, Bradwood Landing, LLC, FERC Docket No. CP06-365-000 (2008).

219. *Id.*

220. Bradwood Landing, LLC, 124 FERC ¶ 61,257, 62,308 (2008).

221. *Id.*

precedent agreements for the project, "[w]e decline to substitute our judgment for that of the market."[222]

More recently, FERC has taken to justifying its lack of analysis of alternative energy sources by explaining that these sources cannot substitute for the specific service that pipelines provide—the transportation of natural gas. For instance, in its decision certificating the Del-Mar Energy Pathway Project, FERC acknowledged calls that it review renewable energy alternatives to the project but explained that "the Commission reviews applications for construction and operation of natural gas pipelines."[223] "Despite commenters' general opposition to pipeline infrastructure, renewable energy sources would not accomplish the project purpose of providing natural gas transportation service to the project shippers."[224] "Thus, renewable energy is *outside the scope* of this proceeding."[225]

Similarly, FERC has also generally declined to take into account the air pollution impacts of natural gas in its modern certificate decisions. In a handful

222. *Id.*; *see also, e.g.*, Fla. Se. Connection, LLC, 154 FERC ¶ 61,080, para. 87 (2016) ("Even though the market, in its consideration of alternative means for addressing energy needs, could have selected renewable energy alternatives and energy efficiency gains, we find that the precedent agreements sufficiently demonstrate the need for the project.").

223. E. Shore Nat. Gas Co., 169 FERC ¶ 61,228, 62,803 (2019).

224. *Id.*

225. *Id.* at 62,804 (emphasis added); *see also, e.g.*, Mountain Valley Pipeline, LLC, 171 FERC ¶ 61,232, 62,640 n.88 (2020) (noting that because "generation of electricity from renewable energy sources or the gains realized from increased energy efficiency and conservation are not transportation alternatives," they "cannot function as a substitute for the proposed project"); Columbia Gas Transmission, LLC, 164 FERC ¶ 61,036, para. 65 (2018) ("The EA's omission of clean energy alternatives was appropriate because they could not feasibly achieve the projects' aims, i.e., renewable energy measures could not transport natural gas. Thus, they were not considered or evaluated. As we have concluded with respect to other natural gas transportation infrastructure projects, we do not find that the potential for energy conservation and renewable energy sources to be practical alternatives."); NEXUS Gas Transmission, LLC, 164 FERC ¶ 61,054, para. 33 (2018) ("[A]lternatives such as renewable energy and energy conservation are not reasonable alternatives because they do not meet the purpose of providing natural gas transportation service along the proposed pathway."); Millennium Pipeline Co., 161 FERC ¶ 61,229, para. 19 (2017) ("[R]enewable energy or energy efficiency measures would not accomplish the project purpose of providing incremental natural gas transportation service to the nine project shippers. As discussed above, the project shippers have elected to meet their present energy needs by signing precedent agreements for natural gas service. The Commission cannot require individual energy users to use different or specific energy resources. Thus, these long-term precedent agreements accurately reflect the need for the project."); Columbia Gas Transmission, LLC, 145 FERC ¶ 61,257, 62,445 (2013) ("[Project opponents] suggest[ ] that the Commission consider alternatives to the proposed action, mentioning renewable energy sources including solar, offshore wind, and energy conservation and efficiency measures. The EA concluded that these alternatives relate to energy generation and usage and have no relation to the transportation of natural gas. The alternatives would not meet the project objectives (i.e., to provide additional natural gas transportation service for up to 444,000 Dth per day).").

of projects from the early 2000s, FERC staff included some vague language referencing the air pollution benefits of natural gas as opposed to other fossil fuel sources in their environmental assessment.[226] But more recently, FERC has refused to consider the end-use air pollution impacts of the proposed project for reasons similar to its refusal to consider renewable energy alternatives: that the end-use air pollution impacts are outside the scope of its analysis.

For example, in its decision certificating the North Baja Pipeline Project, FERC declined to consider the "end-use in California of the gas to be transported by North Baja's proposed pipeline."[227] FERC claimed that because the proposed project involved simply the transportation of natural gas, questions about the "operation of, and air emissions from, power plants, manufacturing plants, or residential end users in California who potentially may burn" the natural gas were outside of its purview.[228] Thus, said FERC, the "end use" of the natural gas "is not within the scope of the proposed project."[229] FERC has used the same reasoning as justification not to consider the greenhouse gas emissions associated with the end use of the natural gas from a proposed project.[230]

To analyze further FERC's consideration of the end use factor, I tracked FERC's evaluation of the greenhouse gas emissions associated with the projects in my database. As discussed above,[231] greenhouse gas emissions may be a helpful proxy for FERC's general approach to end-use air pollution impacts. That is because while FERC does not usually mention end-use air pollution in its modern certificate decisions, it has done so more often with respect to greenhouse gas emissions. This is likely because starting as early as 2008,[232] project opponents have pushed FERC to consider the greenhouse gas emissions associated with the end-use (or downstream) combustion of the natural gas from projects; and in 2017, the D.C. Circuit held that FERC is required to calculate the downstream greenhouse gas emissions from at least some of its projects.[233]

Out of all 425 of the pipeline projects in my database, I could definitively determine that FERC calculated the downstream greenhouse gas emissions as-

226. *See* Appendix A (projects whose GHG emissions are coded as "Better than alternative") (on file with the author and available at harvardelr.com).

227. N. Baja Pipeline, LLC, 121 FERC ¶ 61,010, 61,042 (2007).

228. *Id.*

229. *Id.*

230. *See, e.g.*, Dominion Transmission, Inc., 163 FERC ¶ 61,128, 61,695–97 (2018) (order on rehearing) (explaining that the greenhouse gas emissions associated with the end-use combustion of natural gas are beyond the scope of FERC's review).

231. *See infra* Part II.

232. *See, e.g.*, Bradwood Landing, LLC, 124 FERC ¶ 61,257, 62,306–07 (2008).

233. Sierra Club v. FERC, 867 F.3d 1357, 1371–74 (D.C. Cir. 2017) ("*Sabal Trail*"); *see also supra* note 162 and accompanying citations.

sociated with a given project 15% of the time (or for a total of sixty-three projects).[234]

Even in those sixty-three projects, it does not appear that those emissions made any difference in FERC's decision-making. For instance, in its decision certificating the Atlantic Coast Pipeline, FERC acknowledged that the downstream emissions associated with the end use of the natural gas from the project were expected to be around 29.96 million tons of carbon dioxide equivalent per year.[235] To "provide some context" to this number, FERC explained that this would likely increase greenhouse gas emissions in the four states where the project was located (Pennsylvania, West Virginia, Virginia, and North Carolina) by up to 5.2%.[236] But, FERC claimed that it had no ability to determine whether this contribution to climate change would be "significant."[237] Nonetheless, it then concluded that "the projects, if constructed and operated as described in the Final EIS, are environmentally acceptable actions" and are therefore "in the public convenience and necessity."[238] In other words, FERC either concluded that the projects' contribution to climate change was not significant (something it claimed it could not do) and therefore the projects could be certificated under the Natural Gas Act, or FERC did not incorporate the end-use effects of the projects in its evaluation of whether they were required by the public convenience and necessity.

As in the precedent agreement context, there have been recent signs that FERC may be changing its approach with respect to greenhouse gas emissions. In the Northern Natural Project, FERC's first pipeline application decided after President Biden appointed Richard Glick as FERC Chair and Allison Clements was appointed and confirmed as a new Commissioner, FERC acknowledged that it could determine whether a project's greenhouse gas emissions were significant, calculated that the emissions associated with the project before it—involving the abandonment and replacement of part of an aging pipeline—would not be significant, and concluded the project was required by the public convenience and necessity.[239]

234. In 152 decisions (~36%), FERC did not calculate the downstream emissions associated with the project but did give some estimate of the emissions from the construction or operation of the project. In 147 decisions (~35%), FERC did not analyze the greenhouse gas emissions impact of the project at all. In fifty-one projects (~12%), I could not access the environmental assessment on FERC's docket or the docket did not provide an environmental assessment. In the remaining twelve projects (~3%), FERC stated only generically that the greenhouse gas emissions associated with natural gas are better than alternative fossil fuels (without specifically calculating those emissions). *See* Appendices A & B (on file with the author and available at harvardelr.com).

235. Atl. Coast Pipeline, 161 FERC ¶ 61,042, para. 298 (2017).

236. *Id.* at para. 305.

237. *Id.* at para. 306.

238. *Id.* at para. 325.

239. N. Nat. Gas Co., 175 FERC ¶ 61,238, 62,385–86 (2021).

Additionally, in its recent "draft" policy statements, FERC has proposed adopting a significant threshold of 100,000 metric tons per year of greenhouse gas emissions.[240] If the end-use combustion emissions of a proposed pipeline project are expected to exceed that threshold, FERC proposes to require the creation of an EIS under NEPA and potentially the adoption of mitigation measures to reduce or negate entirely the pipeline's downstream emissions.[241]

It remains to be seen whether FERC's "draft" policy statements will come into effect and in what form. Nonetheless, in its modern certificate decisions, particularly within the last several years, FERC's tendency has been to declare that both alternative energy and the end-use air pollution impacts of its pipeline projects are beyond the scope of its analysis.

3. Social Costs

Finally, as discussed in Part I, a key historical concern in FERC's certificate decisions was the social impact of pipeline development, including on labor unions and on the communities who would (or would not) benefit from the construction of the natural gas infrastructure. In the modern era, the only arguably comparable socioeconomic calculation that FERC performs is its consideration of the impact of pipeline projects on the surrounding community—in particular, the socioeconomic or environmental justice assessment that it completes as part of its NEPA review.

Most federal agencies are required to complete an environmental justice analysis in their NEPA reviews under Executive Order 12,898, issued by President Clinton in 1994.[242] Pursuant to that directive, the Council on Environmental Quality ("CEQ") and Environmental Protection Agency ("EPA") developed guidance for federal agencies to incorporate environmental justice analyses into their NEPA reviews.[243] As an independent agency, FERC is not subject to Executive Order 12,898,[244] but it has nonetheless occasionally performed an environmental justice analysis of its pipeline projects.

For this analysis, FERC identifies the low-income and/or minority communities in the affected area and assesses whether those communities may suf-

240. Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 87 Fed. Reg. 14,104, 14,104 (Feb. 18, 2022).

241. *Id.*

242. Exec. Order No. 12,898 § 1-101, 3 C.F.R. § 859 (1995).

243. *See, e.g.*, EPA, Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses § 1.1.1 (1998), https://perma.cc/TRX5-9TTT [hereinafter EPA EJ Guidance]; Council on Env't Quality, Environmental Justice: Guidance Under the National Environmental Policy Act (1997), https://perma.cc/NGH5-A4YS [hereinafter CEQ_EJ Guidance].

244. *See* Memorandum of Understanding on Environmental Justice and Executive Order 12898 (2011), https://perma.cc/8LAL-KRZU.

fer disproportionately high or adverse health or environmental effects from the project.[245] A minority population is one where minorities[246] comprise over 50% of an affected area or where the percentage of the minority population in the affected area is "meaningfully greater" than the minority population in the general population or "other appropriate unit of geographic analysis."[247] A low-income community is one where more than 20% of the population lives below the poverty level, as calculated based on the annual statistical poverty thresholds from the U.S. Census Bureau.[248]

To develop some sense of the socioeconomic impact of FERC's pipeline certification, I reviewed each of the 425 decisions to determine whether the projects were sited in low-income or minority communities (also known as "environmental justice communities"). I was able to identify 101 decisions (~24%) where the approved project ran through at least one low-income or minority community. I could identify only twenty decisions (~5%) where the project definitively did *not* run through any environmental justice communities.[249]

Moreover, I found that in all 101 of the decisions in which FERC identified an environmental justice community, it concluded that the project would *not* have a disproportionately high or adverse impact on the community. It is difficult to say, in any given decision, whether FERC's conclusion was right or wrong. After all, the determination of whether an impact is disproportionately high or adverse is likely uniquely suited to an agency's expert eye. That is even more true if the analysis is understood as deciding whether the construction of a pipeline is in the public interest because its broader public benefits outweigh

245. EPA EJ GUIDANCE, *supra* note 243, §§ 2.1, 3.2; CEQ EJ GUIDANCE, *supra* note 243, at 9, 14–15.

246. Defined as "[i]ndividual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic." CEQ EJ GUIDANCE, *supra* note 243, at 25.

247. EPA EJ GUIDANCE, *supra* note 243, §§ 2.1.1–.2 (citing CEQ EJ GUIDANCE, *supra* note 243, at 25–26).

248. EPA EJ GUIDANCE, *supra* note 243, § 2.1.2; CEQ EJ GUIDANCE, *supra* note 243, at 25.

249. It is less clear what is going on in the remaining decisions. In 232 decisions (more than 50% of the 423 total decisions), FERC either (a) did not conduct an environmental justice analysis or (b) concluded that no disproportionately high or adverse impact would be felt by environmental justice communities from the project, without including any information on whether environmental justice communities were present in the project area. In thirty-six decisions (~9%), I could not access the environmental assessment on FERC's docket. In fourteen decisions (~3%), FERC did not produce an environmental assessment at all. And in twenty-two decisions (~5%), it was unclear whether any environmental justice communities were present in the project area. *See, e.g.*, Sabine Pass Liquefaction Expansion Project and Cheniere Creole Trail Pipeline Expansion Project: Environmental Assessment at 76, Sabine Pass Liquification Expansion, LLC, FERC Docket No. CP13-553 (Dec. 2014) (identifying two parishes as having minority populations higher than the state average but failing to explain whether these qualify as "minority communities" in FERC's analysis); *see also* Appendices A & B (on file with the author and available at harvardelr.com).

the individual harm it may place on particular communities. But it is notable that FERC has found *no* project to have a disproportionately high or adverse impact on an environmental justice community, even where there is evidence that the project would be built in communities that, for example, are already burdened by polluting infrastructure, are at higher risk for adverse health effects, are composed of socially isolated and unique populations, or have historic connections to the land that would be disrupted by the project.[250]

Take, for instance, the Rio Bravo Pipeline Project. In that project, FERC certificated a 135-mile pipeline running across Texas to an LNG export terminal in Cameron County, Texas.[251] The proposed pipeline runs through five counties in Texas, all of which contain populations greater than 50% minority (primarily Hispanic or Latino populations).[252] In three of the counties, more than 20% of the population live below the poverty level.[253] On the same day that FERC certificated the pipeline and its associated LNG export terminal, FERC also approved two other LNG export projects to be built in Cameron County.[254] Nonetheless, FERC found that "[n]either construction nor operation of the projects would result in disproportionately high or adverse environmental and human health impacts on low-income and minority populations."[255] It explained that "[b]ecause all project-affiliated populations are minority or low-income populations, or both, it is not possible that impacts will be disproportionately concentrated on minority and low-income populations versus on some other project-affected comparison group."[256] In other words, because *every*

250. *See* Appendix E (gathering examples of the environmental justice analyses of FERC's pipeline projects) (on file with the author and available at harvardelr.com).

251. Rio Grande LNG, LLC, 169 FERC ¶ 61,131 (2019), *order on rehearing and stay*, 170 FERC ¶ 61,046 (2020), *remanded*, Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321 (D.C. Cir. 2021).

252. Rio Grande LNG Project Final Environmental Impact Statement Vol. I at 4-235 tbl. 4.9–10-1, Rio Grande LNG, LLC, FERC Docket No. 16-454 (Apr. 26, 2019).

253. *Id.*

254. *Rio Grande LNG, LLC*, 169 FERC at 61,918 n.318. The D.C. Circuit subsequently remanded FERC's Orders certificating the Rio Grande terminal, the Rio Bravo pipeline, and the Texas LNG Brownsville terminal, in part because FERC's environmental justice analysis was arbitrary and capricious. *Vecinos para el Bienestar de la Comunidad Costera*, 6 F.4th at 1330–31. The court observed that FERC confined its environmental justice analysis to the two-mile radius around the project sites but did not look at communities "farther afield" despite FERC's recognition elsewhere in its environmental analysis that the environmental effects from the projects would extend "well beyond two miles from the project sites." *Id.* at 1330. The court held that this error infected FERC's analysis of the projects both under NEPA and under its public convenience and necessity determination under the Natural Gas Act because FERC's determination that the project was required by the public convenience and necessity "relied on" its environmental analysis conducted under NEPA. *Id.* at 1331.

255. Rio Grande LNG, LLC, 170 FERC ¶ 61,046, 61,350 (2020) (order on rehearing).

256. *Id.*

community in the project area was an environmental justice community, the project could not *disproportionately* impact environmental justice communities.

Or consider the Atlantic Bridge Project. In that project, FERC approved the construction of a compressor station in Weymouth, Massachusetts, in a community already burdened by heavy infrastructure.[257] All four census tracts in the vicinity of the compressor station were identified as minority populations, and two of the four were identified as low-income communities.[258] Within a 0.3-mile radius of the proposed station, there existed or there were plans to build three natural gas electric generation plants, a bridge replacement project, a chemical plant, and a sewage pumping station.[259] And while FERC's environmental justice analysis acknowledged that "[t]he combined impact of multiple construction projects occurring in the same airshed and timeframe . . . could temporarily add to the ongoing air impacts in the Project area," it concluded that "the Project would not result in any disproportionately high or adverse environmental and human health impacts on minority or low-income communities."[260] Given the preexisting concentration of polluting infrastructure in the vicinity of the proposed compressor station, any additional air pollution from the compressor station would necessarily be disproportionate in the Weymouth area as compared to any other area that did not contain all of these facilities. Nonetheless, FERC did not appear to believe that this disproportionality satisfied some threshold sufficient to change its analysis. Additionally, although perhaps unforeseeable at the time of the permitting decision, after the Weymouth compressor station was built, it experienced three equipment failures that repeatedly spewed volatile organic compounds and natural gas into the air.[261]

To give one final example here,[262] in a scenario that rings eerily similar to the ones that concerned the state of Louisiana almost eighty years ago, when the Federal Power Commission was just beginning to exercise its authority under the Natural Gas Act, in the Coden Pipeline Project, FERC approved the construction of a five-mile pipeline in Alabama to connect with a proposed

257. Algonquin Gas Transmission, LLC, 158 FERC ¶ 61,061, paras. 14–19, 185 (2017).

258. Atlantic Bridge Project Environmental Assessment at 2-77 to -79 tbls.2.5.7-1, 2.5.7-2 & 2.5.7-3, Algonquin Gas Transmission, LLC, FERC Docket No. CP16-9 (May 2, 2016).

259. *Id.* at 2-128 tbl.2.10-1.

260. *Id.* at 2-80; Algonquin Gas Transmission, LLC, 158 FERC ¶ 61,061, para. 113 (2017).

261. Algonquin Gas Transmission, LLC, 174 FERC ¶ 61,126, paras. 5–14 (2021) (Danly, Comm'r, dissenting). In October 2020, several groups filed petitions with FERC requesting a rehearing of FERC's decision authorizing the Weymouth compressor station to be put into service due to safety concerns with the operation of the station. *Algonquin Gas Transmission, LLC*, 174 FERC at paras. 1–2. In February 2021, FERC acknowledged the "concerns raised regarding the operation of the project" and "set the matter for paper briefing." *Id.* On January 20, 2022, FERC sustained its authorization of the operation of the compressor station. *See* Algonquin Gas Transmission, LLC, 178 FERC ¶ 61,029 (2022).

262. See Appendix E for more examples (on file with the author and available at harvardelr.com).

offshore LNG terminal.[263] The pipeline would run near the towns of Bayou La Batre and Coden, Alabama.[264] FERC prepared a "Social Impact Assessment" for the project:

> Beginning in the 1970s the Catholic Church began a resettlement program that resulted in the development of a significant Asian population within the two communities. At least 27.9 percent of the population of Bayou La Batre claims origins from Southeast Asia. As a consequence of this wave of ethnic immigration, there is a recent emergence of what locals term a "Creasian" culture resulting from the blending of the longstanding Creole and Cajun, and recent Asian ethnicities (Salter 2005). . . .
>
> On the first Sunday in May of each year a traditional religious festival known as the Blessing of the Fleet occurs in Bayou La Batre. This event corresponds with the opening of shrimp season when local fishermen have historically left for the [Gulf of Mexico]. The Archbishop of Mobile visits Bayou La Batre to bless the fleet, the souls of the fishermen who have not returned from the sea in previous years, and the shrimpers who are about to depart. This event, like Mardi Gras, combines religious observance with festivities and food (Salter 2005).
>
> Current baseline social conditions are indicative of a culturally and socially isolated population with a depressed economy. Residents living within Census Tract 73, which includes Bayou La Batre and Coden, Alabama, have a lower median household income ($26,831), lower per capital [*sic*] income ($12,010), and a higher percent of individuals living below the poverty level (23.3 percent) compared to Mobile County and Alabama. A higher proportion of residents who are of Asian descent (21 percent) live within Census Tract 73 compared to the county average (0.8 percent) (U.S. Census Bureau 2000). The continuing reliance of this portion of the Alabama Gulf Coast on the tradition of marine-related occupations has resulted in a high level of school dropouts with young people leaving school to take up work on ships, in shipyards, and in seafood processing, occupations which do not require extensive formal education (Salter 2005).[265]

The EIS for the project found that the construction and operation of the pipeline could have "long-term" impacts on "the social conditions and cultural

263. Freeport-McMoRan Energy, LLC, 115 FERC ¶ 61,201, 61,720–21 (2006).

264. Final Environmental Impact Statement for the Main Pass Energy Hub Project under CP04-68, Vol. 1 at 2-34 fig.2.1-4, FERC Docket No. CP04-68 (Mar. 10, 2006).

265. *Id.* at 3-148.

resources in Coden, Alabama."[266] It also found that another pipeline already existed in the area, and the construction of an additional pipeline nearby "would be a cumulative impact."[267] And it found that any "indirect beneficial impacts" realized "from taxes generated by the project" were likely to be "negligible to minor" for minority and low-income residents.[268]

But FERC ultimately concluded that the project would not have a disproportionately high or adverse impact on the minority or low-income communities.[269] Contrary to the EIS, FERC decided that "any physical impacts resulting from the construction and operation of the pipeline would be minimal and generally short-term."[270] It observed that "[t]he Commission has encouraged pipelines to co-locate new pipelines within or adjacent to existing" pipelines in order to minimize environmental impacts.[271] And, again contrary to the EIS, FERC characterized the project as likely to have "a minor, direct, beneficial socioeconomic impact" on the environmental justice communities in the area.[272]

In the 1940s, the concerns raised by Louisiana with respect to the socioeconomic impacts of extractive natural gas pipeline projects factored into the Federal Power Commission's decision-making. Indeed, these concerns led to the Commission's denial of proposed pipeline projects.[273] But in the modern era, similar socioeconomic concerns, like those that appeared in the Coden Pipeline Project, do not appear to factor into FERC's decision-making. Instead, in each decision, FERC concludes that any adverse impacts are insufficient to trigger some unstated significance threshold and therefore are zeroed out in FERC's balancing test.

This is not to suggest that a true evaluation of the broader social and economic impact of a pipeline project would result in FERC rejecting all proposed pipelines that run through the kinds of communities described above. In many instances, the economic development associated with the project could be beneficial to and even desired by the local community. Indeed, there is some evidence that the Rio Bravo Pipeline Project could be just such a project.[274] But there is no indication in the decisions I reviewed that FERC is seriously grappling with those issues—and that appears to be a shift from its past approach.

266. *Id.* at 4-138.

267. *Id.*

268. *Id.* at 4-139, 4-140.

269. Freeport-McMoRan Energy, LLC, 115 FERC ¶ 61,201, 61,726 (2006).

270. *Id.*

271. *Id.* at 61,726.

272. *Id.*

273. *See supra* notes 112–17 and accompanying text.

274. *See* Miranda Willson, *Gas Projects Reveal FERC's Environmental Justice Conundrum*, E&E News (Aug. 3, 2021), https://perma.cc/4JBT-CLER.

* * *

Ultimately, there is a difference between how the agency used to approach its certificate proceedings in the twentieth century, and how it does so now under its 1999 Policy Statement. *Why* that difference exists is what I turn to next.

III. Reasons for the Change

This section discusses possible explanations for the change in FERC's approach towards interstate natural gas pipeline approvals. The section entertains three possibilities: (1) that FERC's change in approach is the result of a formal change in FERC's legal authority; (2) that FERC's change in approach is the result of agency capture; and (3) that FERC's change in approach is the result of a shift in the political economy at the level of the individual pipeline proceeding. These explanations do not necessarily have to be mutually exclusive; nonetheless, this section argues that the third explanation is the most convincing one.

A. Formal Change in Legal Authority

One possible explanation for FERC's changed approach is that FERC's legal authority over pipeline permitting changed. This theory runs into an immediate hurdle: Congress did not amend the certificate provision of the Natural Gas Act during this period, nor did FERC itself issue any rulemaking or other formal policy statement indicating that it was shifting its approach on pipeline certification. Thus, any argument grounded in a formal change in FERC's legal authority would have to draw from legal changes to natural gas regulation that occurred *outside* of the pipeline certification process. In that light, the end of the twentieth century did witness significant changes in FERC's regulatory approach over another aspect of natural gas regulation: the prices of natural gas in the field. Beginning in the 1970s and extending throughout the 1980s and 1990s, Congress deregulated natural gas prices, leading to a restructuring of natural gas regulation. While this deregulation was not directed at FERC's pipeline approval process, it is possible that these changes could have prompted the shift seen in FERC's pipeline proceedings.

1. Deregulation of Natural Gas Prices

In the late 1970s and onwards, the natural gas industry in the United States underwent a dramatic transformation when Congress deregulated natural gas prices following the energy crisis of the 1970s.[275] The deregulation was, in

275. *See* Sanders, *supra* note 16, at 125–36; Vietor, *supra* note 16, at 272–91.

part, a response to problems caused by the Commission. Soon after the Natural Gas Act's passage, the Commission had disclaimed any regulatory authority over the production of natural gas in the field, including the prices at which producers sold gas to pipelines.[276] But, in a series of cases in the 1940s and 1950s, the U.S. Supreme Court rejected the Commission's interpretation, for the most part on the ground that the Commission's abdication of regulatory authority would leave consumers vulnerable to market manipulation by pipeline companies.[277]

Forced by the Supreme Court to act, the Commission reluctantly began regulating natural gas prices in the field—and it caused chaos. Embracing a conservative regulatory approach, the Commission attempted to apply old techniques of public utility regulation to the entirely different context of natural gas production.[278] The result was a backlog of cases that "inundated and paralyzed the agency."[279] The Commission also prohibited the price of natural gas from rising in concert with increasing demand.[280] Depressed prices in turn caused severe natural gas shortages that coincided with the Arab oil embargo.[281] Nationwide curtailments resulted in school closings, factory shutdowns, layoffs, and insufficient natural gas to get the Northeast through a bitter winter.[282]

The energy crisis forced Congress to step in. First, Congress passed the Natural Gas Policy Act of 1978 to require the partial deregulation of natural gas prices in the field.[283] Second, Congress passed the Natural Gas Wellhead Decontrol Act of 1989, effectively repealing all remaining price controls on natural gas.[284] The purpose of the Acts was to "promote competition for natural gas at the wellhead in order to ensure consumers an adequate and reliable supply of natural gas at the lowest reasonable price."[285]

Neither statute amended FERC's authority to permit pipelines. But, to ensure that the benefits of Congress's deregulated prices were passed on to consumers, FERC issued a series of rules that converted pipelines from direct sellers of gas—where the pipeline company was responsible for both transporting

276. *See* CASTANEDA & SMITH, *supra* note 16, at 9.

277. *See, e.g.*, Interstate Nat. Gas Co. v. Fed. Power Comm'n, 331 U.S. 682, 693 (1947); Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672, 685 (1954).

278. *See* ARLON R. TUSSING & BOB TIPPEE, THE NATURAL GAS INDUSTRY: EVOLUTION, STRUCTURE AND ECONOMICS 149–51 (2d ed. 1995).

279. CASTANEDA & SMITH, *supra* note 16, at 164–65.

280. *Id.* at 161.

281. SANDERS, *supra* note 16, at 125–36; VIETOR, *supra* note 16, at 272–91.

282. SANDERS, *supra* note 16, at 127–28; CASTANEDA & SMITH, *supra* note 16, at 184–85, 211.

283. *See* Natural Gas Policy Act of 1978, Pub. L. No. 95-621, 92 Stat. 3350 (1978).

284. *See* Natural Gas Wellhead Decontrol Act of 1989, Pub. L. No. 101-60, 103 Stat. 157 (1989).

285. S. REP. NO. 101-38, at 1 (1989).

gas and selling it to consumers—to simply transporters of gas.[286] The rules "unbundled" the various functions of pipelines, allowed producers to sell gas directly to consumers, and required pipelines to provide transportation to anyone who wanted to ship gas along them. In other words, FERC converted pipelines to common carriers.

2. Deregulation of Pipelines?

At first glance, it seems plausible that Congress's deregulation of natural gas prices and FERC's subsequent conversion of pipelines to common carriers could be the source of FERC's changed approach. Even though Congress did not amend FERC's authority to certificate pipelines during this period, FERC could have read the congressional tea leaves to be encouraging it to deregulate its pipeline approvals. Thus, FERC turned to the existence of precedent agreements—ostensibly a market-based indication of need for a pipeline—as the deciding factor for the approval of a pipeline. Indeed, much of the language in FERC's modern certificate decisions appears to reflect a desire to defer to "market forces," the "judgment of the market," or the "business decisions" of private sector actors, much as one might expect in a deregulatory environment.

There are at least two problems with this theory, however. First, when Congress deregulated natural gas prices in the field, it made clear that it did not thereby intend to deregulate pipelines, which were still considered to be natural monopolies requiring government regulation. The Senate Report for the Natural Gas Wellhead Decontrol Act specifically stated that "[w]hile this bill decontrols the first sale of natural gas, it does not deregulate interstate natural gas pipelines."[287] "The Committee intends that the FERC continue to fulfill its consumer protection mandate under the Natural Gas Act by regulating transportation and wholesale sales by such pipelines."[288] The House Report similarly said "[t]his legislation does not deregulate natural gas pipelines, and the Committee will continue its oversight of the FERC to ensure that captive residential consumers are not disadvantaged."[289] Indeed, in its rules converting pipelines to common carriers, FERC itself acknowledged that these statutes did not alter its mandate to regulate pipelines.[290] And the D.C. Circuit, reviewing FERC's

286. *See* Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, Order No. 436, 50 Fed. Reg. 42,408 (Oct. 18, 1985) (codified at 18 C.F.R. pts. 2, 157, 250, 284, 375, 381); Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 of the Commission's Regulations, Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, Order No. 636, 57 Fed. Reg. 13,267 (Apr. 8, 1992) (codified at 18 C.F.R. pt. 284).

287. S. REP. NO. 101-38, at 8 (1989).

288. *Id.* at 9.

289. H.R. REP. NO. 101-29, at 4 (1989).

290. *See* Order No. 636, 57 Fed. Reg. at 13,272.

common carrier rules, acknowledged the continued need for federal regulation of pipelines "to curb pipelines' potential monopoly power over gas transportation."[291] Thus, Congress did not intend for these statutes to change FERC's legal authority over pipelines, nor did any actor appear to view Congress's actions as accomplishing as much.

Second, this explanation would be inconsistent with FERC's own 1999 Policy Statement. In the Policy Statement, FERC acknowledged that one of its goals under its certificate authority was to "foster competitive markets," which would be consistent with a more deregulatory approach; but this was not its only goal.[292] FERC also sought to "protect captive customers" and "avoid unnecessary environmental and community impacts while serving increasing demands for natural gas."[293] That is why FERC stated that it would weigh the "public benefits" of the project against its "potential adverse impacts"—to take into account interests broader than just the market forces associated with pipeline construction.[294]

In fact, in the Policy Statement, FERC explicitly stated that it would place *less* emphasis on precedent agreements because they did not adequately reflect all of the interests at stake.[295] FERC explained that relying on precedent agreements "does not test for all the public benefits that can be achieved by a proposed project," including "the environmental advantages of gas over other fuels, lower fuel costs, access to new supply sources or the connection of new supply to the interstate grid, the elimination of pipeline facility constraints, better service from access to competitive transportation options, and the need for an adequate pipeline infrastructure."[296] Nor do precedent agreements reveal important "adverse effects" of proposed pipelines to "the interests of the applicant's existing customers," "the interests of competing existing pipelines and their captive customers," "the interests of landowners and surrounding communities," and "environmental interests."[297] If FERC had interpreted Congress's deregulation of natural gas prices to mandate a broader policy of deregulation, FERC would have no reason to insist that it would continue to take all of these broader concerns into account.

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291. United Distrib. Cos. v. FERC, 88 F.3d 1105, 1122 (D.C. Cir. 1996); *see also* Interstate Nat. Gas Ass'n of Am. v. FERC, 617 F.3d 504, 506 (D.C. Cir. 2010) ("Order No. 636 mandated pipelines 'unbundle' their sales and transportation services, effectively deregulating the sales market while preserving cost-based regulation of pipelines' transportation services.").

292. Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227, 61,743 (1999).

293. *Id.*

294. *Id.*

295. *Id.* at 61,748.

296. *Id.* at 61,744.

297. *Id.* at 61,747.

Altogether, while the deregulation of natural gas prices in the 1970s and 1980s could have prompted FERC to focus more on "market forces" in its certificate decisions in the modern era, it does not appear that this phenomenon sufficiently changed FERC's legal authority over pipeline permitting to explain the shift in its approach in the last twenty years.

B. Agency Capture

If FERC's changed approach cannot be explained by any formal change in the legal structure, then it must be the result of an informal change either internal or external to the agency. One possible locus of change could be the natural gas industry. Perhaps FERC's trend over the last twenty years—which, at the most superficial level, reflects the agency's tendency to approve essentially all pipeline applications that come before it—is simply the product of an agency "captured" by the natural gas industry.

Agency capture is a notoriously slippery concept.[298] In general, it describes "the result or process by which regulation, in law or application, is consistently or repeatedly directed away from the public interest and toward the interests of the regulated industry, by the intent and action of the industry itself."[299] Capture can come in a variety of different forms: it can involve the industry's use of its (often greater) resources to pressure the agency to make decisions in the industry's favor;[300] it can involve the regulated industries' use of campaign finance donations and lobbying access to cultivate political favor with the legislators that oversee the agency in order to pressure the agency indirectly;[301] it can involve a "revolving-door phenomenon," where agency officials are selected from the regulated industry itself, and then return to the industry following their time in government, creating an alliance between industry and agency interests;[302] or it can involve a much more subtle form of "cultural capture," where agency officials, as a result of the people they interact with or the institu-

298. *See* PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 13 (Daniel Carpenter & David Moss eds., 2013).

299. *Id.*; *see also* Michael A. Livermore & Richard L. Revesz, *Regulatory Review, Capture, and Agency Inaction*, 101 GEO. L.J. 1337, 1343 (2013) ("[T]aking a relatively broad view, capture can be understood to occur when organized groups successfully act to vindicate their interests through government policy at the expense of the public interest.").

300. *See* Rachel E. Barkow, *Insulating Agencies: Avoiding Capture Through Institutional Design*, 89 TEX. L. REV. 15, 22 (2010) (describing "well-financed and well-organized" regulated industries' ability to "monitor agencies closely and to challenge any and all agency decisions that will negatively affect them," thus pressuring agencies to "work with, rather than against," them).

301. *See id.* at 22–23 (describing regulated industries' lobbying of congressional members with oversight over the U.S. Securities and Exchange Commission to threaten budget cuts to the agency if it did not regulate in accordance with industry preferences).

302. *See id.* at 23.

tions in which they were trained, simply begin to "think like" the regulated industry.[303] At bottom, however, most theories of capture require the satisfaction of two elements: (1) the "intent and action" of the regulated industry to (2) redirect regulation in service of the private (industry's) interest as opposed to the public interest.[304]

A more comprehensive study would be needed to demonstrate that capture is the driving force of FERC's shift here,[305] but there is a superficial case to be made that FERC's pipeline approval process reflects agency capture. Most obviously, FERC approves essentially all pipeline applications, which is in the interest of the industry—as demonstrated by the fact that most pipeline companies and industry associations have generally indicated support for FERC's current approach to pipeline approvals and strongly resist efforts to change the agency's methodology.[306] There is also some circumstantial evidence to suggest a connection between FERC officials and industry. For example, some former commissioners have worked in the oil and gas industry or associated trade organizations following their service with the Commission.[307] There is some evidence that FERC officials meet more regularly with industry representatives than public interest organizations.[308] And in a perhaps particularly blatant over-

303. PREVENTING REGULATORY CAPTURE, *supra* note 298, at 18.

304. *Id.* at 13–14.

305. *Id.* at 8 (calling for a more rigorous approach to both diagnosing and categorizing capture, given that capture can easily be confused with the public's political preference or other institutional dynamics).

306. *See, e.g.*, Comments of the Interstate Natural Gas Association of America at 1, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (May 26, 2021), https://perma.cc/J5WZ-9EVX ("Although significant changes in the natural gas industry may have occurred over the past 20 years, significant changes to the Certificate Policy Statement are *not* warranted. In fact, the Certificate Policy Statement has provided reasoned, consistent, and predictable review of the over 23,000 miles of major pipeline projects issued certificates by the Commission over this period despite industry changes."); Comments of Cheniere Energy, Inc. to Notice of Inquiry Concerning Certification of New Interstate Natural Gas Facilities at 2, Certification of New Interstate Natural Gas Facilities, FERC Docket No. PL18-1-000 (July 25, 2018), https://perma.cc/EY5P-H9G2 ("Deviation from the Commission's long-standing practices would, at a minimum, create market uncertainty in the near term and hamper investment as infrastructure developers, natural gas pipeline companies, shippers, lenders and FERC itself adjust to the new policies.").

307. Donald Santa was a Commissioner at FERC for four years and now serves as the President of the Interstate Natural Gas Association of America. Donald F. Santa, U.S. ENERGY ASS'N, https://perma.cc/7LQZ-B6M8. Vicky Bailey served at FERC for three years and now serves as a director of several natural gas companies, including Cheniere Energy. Vicky A. Bailey, PNM RES., https://perma.cc/7LSE-SEEV.

308. *See* Kristen Lombardi & Jamie Smith Hopkins, *Natural Gas Building Boom Fuels Climate Worries, Enrages Landowners*, CTR. FOR PUB. INTEGRITY (July 17, 2017), https://perma.cc/Q9RK-WDUB (reporting that, over a six-and-a-half-year period, energy companies scheduled at least ninety-three meetings with FERC officials, while environmental and public interest groups met with FERC officials seventeen times over the same period).

ture to industry, Commissioner James Danly, a current FERC Commissioner, has repeatedly called on pipeline representatives to intervene in FERC's proceedings to ensure that their interests are represented.[309]

But there are reasons to doubt whether agency capture is the full story here. As an initial matter, the evidence cited above is merely circumstantial—none of it establishes that it is the "intent and action" of the pipeline industry that is motivating FERC's decision-making here, much less disproves the possibility of other motivations (e.g., sincerely held political beliefs that find public support). And for the handful of FERC Commissioners who have gone on to jobs in the industry, there are many more who have not.[310]

Additionally, agency capture would not seem to explain the position of former commissioners like Cheryl LaFleur, Norman Bay, and Jon Wellinghoff (not to mention current commissioners Richard Glick, Allison Clements, and Willie Phillips), all of whom have indicated support for a much more robust public interest inquiry under the agency's certificate authority but nonetheless signed onto decisions certificating pipelines where that inquiry was not performed. Commissioner LaFleur may be the most prominent example of this: during her nine-year tenure on the Commission, Commissioner LaFleur signed onto dozens of FERC orders permitting pipelines but also maintained a regular practice of writing concurrences in which she would calculate the greenhouse gas emissions associated with those pipelines "as part of [her] public interest determination."[311] Commissioner LaFleur explained her actions as reflecting her disagreement with the Commission's failure to analyze all factors relevant to the public interest, but acknowledging that "a project under review may be needed to serve customers and is in the public interest."[312] In other words, Commissioner LaFleur would have had FERC conduct a more holistic review of pipeline projects but would not go so far as to deny a project.

309. *See, e.g.*, N. Nat. Gas Co., 174 FERC ¶ 61,189, 61,783 (2021) (Danly, Comm'r, dissenting in part) ("I reiterate the advice I have given to everyone who would listen since the Commission's issuance in *Algonquin* last month: *every single* natural gas pipeline company, LNG company, and shipper should intervene in *every single* certificate item. Start now. Most interventions are costless. If the requested intervention is out of time, rely on this case and *Algonquin* as justification for prophylactic intervention in order to demonstrate good cause."); Algonquin Gas Transmission, LLC, 174 FERC ¶ 61,126, para. 17 n.242 (2021) (Danly, Comm'r, dissenting) (calling on "[e]very pipeline company, shipper, and pipeline investor" to intervene in proceeding reviewing safety risks associated with the Weymouth Compressor Station).

310. Most appear to have taken positions at white shoe law firms. It is possible their clients there include oil and gas companies, but the connection is less direct.

311. Tenn. Gas Pipeline Co., 163 FERC ¶ 61,190 (2018) (LaFleur, Comm'r, concurring); *see also, e.g.*, Tex. E. Transmission, LP, 165 FERC ¶ 61,132, 61,536 (2018) (same); Transcon. Gas Pipeline Co., 167 FERC ¶ 61,110, 61,190 (2019) (same).

312. *Tenn. Gas Pipeline Co.*, 163 FERC at 61,190 (LaFleur, Comm'r, concurring).

Commissioner LaFleur's example reflects the more nuanced position that, at a broader level, FERC does not "think like" the industry, but, nonetheless, when the rubber meets the road, the agency almost always approves the pipeline. That nuance suggests that a closer examination of the political dynamics at play within an individual pipeline proceeding is required.

C. The Political Economy of the Individual Pipeline Proceeding

A final explanation for FERC's shift over the last twenty years could lie in a combination of both political dynamics at play and the institutional structure of the individual pipeline proceeding. This explanation would rely on two observations: (1) throughout its history, FERC has consistently been a reluctant regulator; and (2) FERC conducted a more robust public convenience and necessity inquiry only when it was forced to by the presence of powerful interests in its individual proceedings opposing the construction of a pipeline—namely, coal, railroad, and labor interests. Together, these two observations could explain why FERC's public convenience and necessity inquiry was hollowed out at the turn of the twenty-first century: when the powerful interests dropped out of FERC's proceedings, FERC defaulted to its natural state of reluctant regulation.

1. The Reluctant Regulator

The first important observation to make from the history recounted in these pages is that FERC has always been a reluctant regulator. In the certificate context, FERC was slow to regulate. It read its statutory authority narrowly at first, requiring Congress to go back and amend the Natural Gas Act to give it the authority to consider the long-term social and economic costs of pipeline construction.[313] Even after the certificate provision was amended, the agency refused to adopt a broad policy approach to its certificate authority, instead proceeding on a case-by-case basis to resolve the competing interests before it.[314] Each expansion in the agency's authority came not from the agency itself, but from the pressure that outside interests—coal, railroad, labor, the pipeline companies—placed on the agency.

The same can even be said for FERC's regulation of natural gas prices in the field. Again, the agency initially declined to exercise jurisdiction over the production of natural gas until it was forced to by the Supreme Court. Even then, it waited until it was sure that Congress would not step in and rescue it before it attempted to regulate prices.[315] Once it finally got around to regulating

313. *See supra* Part I.A.

314. *See supra* Part I.B.

315. *See* Stephen G. Breyer & Paul W. MacAvoy, Energy Regulation by the Federal Power Commission 58 (1974); Vietor, *supra* note 16, at 146.

prices, the agency proceeded in such a tentative and slow manner that it caused more problems than necessary.[316] In fact, in their landmark study of the Federal Power Commission's regulation of the production side of the natural gas industry, then-professor Stephen Breyer and his co-author Paul MacAvoy observed that the Commission's primary motivation in regulating wellhead prices was best described as "seeking to reduce controversy."[317] The Commission attempted to proceed as "'inoffensively' as possible," becoming "absorbed" in the notion that it wanted everything to run "smoothly," to the point that it lost sight of the "public rationale" that was supposed to be guiding it.[318]

Interestingly, Jody Freeman and J.R. DeShazo observed a similar phenomenon in a related context: FERC's licensing of hydropower projects.[319] In an eerily similar story, Freeman and DeShazo describe, as here, an agency that approved essentially all hydropower projects that came before it, that was focused solely on "developing hydropower to meet the needs of a growing economy," and that resisted considering other interests associated with the construction of a dam (including other public uses and environmental values)—despite statutory language instructing it to do so.[320] In fact, Freeman and DeShazo also label FERC as a "reluctant" regulator in the hydropower context.[321] Thus, even across its statutory disciplines, FERC has demonstrated a consistent tendency to resist exercising its authority to control energy development to any significant degree.

The origins of FERC's reluctance to regulate are murky. Freeman and DeShazo attribute it to FERC's "propower" mission—that is, the idea that the agency was created at a time when "there was a strong national imperative to generate power," and therefore the agency has absorbed as its primary duty the task of overseeing this development.[322] But that explanation does not hold up as well in the natural gas context. As recounted in Part I, FERC was given jurisdiction over natural gas just as much to temper the chaos that had resulted from an unregulated natural gas industry, and to manage the competing interests of other energy sources in the country, as to encourage the development of natural gas as an energy source.[323] As a result, historically the agency appeared to understand its role to be overseeing the measured expansion of natural gas resources, not its unfettered growth.

A better explanation for FERC's reluctance may be that the political consequences of disrupting energy development are so severe that FERC is hesi-

316. *See* VIETOR, *supra* note 16, at 146–47.
317. BREYER & MACAVOY, *supra* note 315, at 55.
318. *Id.* at 54–55.
319. *See* DeShazo & Freeman, *supra* note 159, at 2238.
320. *Id.* at 2237–39.
321. *Id.* at 2235.
322. *Id.* at 2237–38.
323. *See supra* Part I.A.

tant to take any action that could cause such a disruption. In the natural gas context, FERC suffered the wrath of Congress, the President, and the American public when it bungled natural gas pricing and helped cause the energy crisis of the 1970s.[324] Indeed, this incident in some ways catalyzed FERC's current structure: the agency was renamed the Federal Energy Regulatory Commission and brought under the jurisdiction of the Department of Energy in the wake of the energy crisis.[325] And in the modern era, as described in the Introduction, FERC has faced significant political backlash for the potential disruption of natural gas development, even when that disruption does not materialize. Similarly, in the hydropower context, Freeman and DeShazo found that both Congress and the President consistently sent FERC a "clear propower message" in favor of hydropower development and even discovered that a hydropower project was more likely to be approved without restriction by FERC if the project was located in the jurisdiction of a congressperson in charge of oversight over FERC.[326] In other words, FERC may simply be reacting to external political forces, attempting not to rock the boat by taking whatever regulatory path seems least likely to upset its political overseers.

Whatever the reason, FERC has consistently demonstrated a tendency to be a reluctant regulator, both historically and across regulatory disciplines.

2. The Individual Pipeline Proceeding

The second key observation to make from the history recounted here is that FERC's reluctance to regulate was checked only by the presence of powerful interests opposing the construction of a pipeline. Historically, coal, railroad, and labor interests were the primary intervenors in the agency's pipeline proceedings, and these representatives pushed FERC to consider the broader consequences of pipeline construction.

But over the last twenty years, we no longer see these interests populating FERC's certificate proceedings. Instead, in the majority of cases, the pipeline proceeds unopposed; even for those more controversial pipelines, the intervenors tend to be landowners and environmental groups, who are typically not as well-resourced as the pipeline companies or the coal and railroad interests that preceded them.[327] Thus, at the individual proceeding level, what it meant for

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324. *See* VIETOR, *supra* note 16, at 272–91; *supra* Part III.

325. *See* Department of Energy Organization Act, Pub. L. No. 95-51, 91 Stat. 565 (1977).

326. *See* DeShazo & Freeman, *supra* note 159, at 2242–44.

327. *Cf.* PETER M. SHANE, MADISON'S NIGHTMARE: HOW EXECUTIVE POWER THREATENS AMERICAN DEMOCRACY 162 (2009) ("[T]he parties with adequate resources and organization to make themselves effectively heard within the administrative process are far more likely to be the antiregulatory voices of big business than even well-known public interest groups such as the Sierra Club or the Natural Resources Defense Council.").

FERC to proceed as "inoffensively as possible"[328] has changed over the last twenty years. With the political dynamics skewed in favor of the pipeline companies, the consequences of denying a certificate loom much greater than the consequences of granting one.

A key example of this dynamic occurred in the aftermath of the Spire Pipeline Project described in Part II. Recall that FERC approved this project, but the D.C. Circuit vacated FERC's certificate after finding that the agency had not adequately addressed concerns of self-dealing. Following the vacatur, Spire Missouri (the local distribution utility) sent an email to its utility consumers warning that the decision could result in "serious service disruptions" during the winter months and directing its consumers to file complaints with FERC.[329] The utility went on a "bare-knuckles marketing campaign" across social media, radio, and traditional press.[330] It drafted a letter that the Governor of Missouri submitted to FERC on the utility's behalf.[331] The Missouri Public Service Commission subsequently found that Spire's campaign was an attempt "to mobilize public opinion, through fear," and ordered Spire Missouri to turn over copies of its communications with its consumers and draft a new notice to its consumers.[332] Even though the D.C. Circuit's vacatur was based on the idea that the Spire Pipeline was not necessary and there was adequate transportation on the existing system, Spire Missouri's alarms created enough concern that FERC granted the Spire Pipeline a temporary certificate of public convenience and necessity while it reevaluated whether the pipeline (which, by this point, had already been constructed) was required by the public convenience and necessity.[333] Importantly, it was not FERC, but the D.C. Circuit, which slowed the project in this case; but it was still FERC that took the blame.

Interestingly, again, Freeman and DeShazo observed a very similar interest group dynamic in the context of FERC's hydropower licensing. Historically, FERC approved most hydropower projects without consideration of their environmental and other public use consequences, even though the statute governing such licenses delegated FERC broad authority to weigh such considerations.[334] As the environmental consequences of dams became more well-known and pronounced, other entities started to push FERC to conduct a more holistic review: environmentalists and other public interest groups inter-

328. BREYER & MACAVOY, *supra* note 315, at 54–55.

329. Alison Kite, *Spire Missouri's Warning of Natural Gas Outages a 'Manufactured Crisis,' Critics Say*, MO. INDEP. (Nov. 11, 2021), https://perma.cc/A737-RMAF.

330. Mario Alejandro Ariza, *Documents Show Spire Scrambling for Survival of St. Louis Pipeline After Court Ruling*, MO. INDEP. (Apr. 27, 2022), https://perma.cc/ZPL5-BWF4.

331. *Id.*

332. Alison Kite, *Under Pressure from Regulators and Elected Officials, Spire Tones Down Pipeline Messaging*, MO. INDEP. (Dec. 3, 2021), https://perma.cc/C9CR-VV3D.

333. *See* Spire STL Pipeline, LLC, 177 FERC ¶ 61,147 (2021).

334. DeShazo & Freeman, *supra* note 159, at 2223, 2238–39.

vened in FERC's proceedings and sued the agency when it refused to budge, the courts found that FERC was obligated to take into account environmental consequences in its licensing decisions, and Congress passed statutes like NEPA and the Clean Water Act in part to correct for FERC's deficiencies.[335] Despite this push, FERC continued to resist regulating.[336] But, a significant turning point in FERC's behavior occurred when Congress strengthened the ability of state and federal resource management agencies like the U.S. Fish and Wildlife Service to intervene and substantively act in FERC's licensing proceedings.[337] The intervention of these public agencies resulted in a significant jump in the number of environmental conditions that FERC posed on its hydropower licenses.[338]

The same dynamic, only chronologically reversed, could be taking place here. Early in its history, FERC was pressed to consider broader interests in its pipeline certifications because of the presence of the major players that populated the agency's certificate proceedings. But, over the last twenty years, these interests have disappeared from FERC's proceedings. Thus, in any individual certificate proceeding, it became the easier (i.e., less politically controversial) decision for FERC to defer to the pipeline applicant and certificate the pipeline. And although other parties have intervened in FERC's proceedings in the modern era—environmentalists, landowners, and community members affected by the pipeline—none of these have the same clout as the powerful groups that once lobbied against pipelines. FERC's near-complete deference to the "market"—in the form of a precedent agreement—therefore reflects the highly asymmetric political pressures it now faces, where it is easiest to rule in favor of the interests of the private pipeline companies.

The unique political economy of the individual pipeline proceeding thus has arguably enabled FERC to maintain a duality: a formal policy of balancing the public benefits against the adverse interests in its certificate decisions, but a functional reality in which in each decision, the outcome is essentially always the same—in favor of certification.

IV. Implications

The story of the certificate provision in the Natural Gas Act, and FERC's shift in approach in enforcing it, has important implications not just for its real-world impact—a rapid and relatively unimpeded development of natural gas infrastructure in the United States over the last twenty years[339]—but also for

335. *Id.* at 2242–53.

336. *Id.* at 2247.

337. *Id.* at 2253–63, 2265–66.

338. *Id.* at 2266.

339. Under the agency's modern approach to pipeline certification, the United States has added more than 25,000 miles of new natural gas transmission pipelines since the early 2000s.

how we think about structuring agency power. That is because, based on the statutory history recounted above, it appears that FERC is shirking its statutory duty under the Natural Gas Act in its current approach to pipeline certification. But, because FERC's current approach appears to result not from any formal legal policy adopted by the agency, but rather from the political economy at the individual pipeline proceeding level, it is exceptionally difficult to force FERC to exercise its authority properly. The story reveals a potentially troubling conclusion: at least at the federal level, we may be limited in how much we can rely on various institutional structures to overcome trenchant political dynamics. This section discusses both the legally dubious nature of FERC's modern approach to pipeline certifications and the difficulty in holding FERC to account.

A. The Legal Gap

The certificate story reveals what could be thought of as a legal gap in the oversight of FERC. This gap is best understood by imagining, for a moment, that FERC had not made its certificate decisions in a series of individual proceedings but instead issued a new rule in which it declared that it was making its certificate decisions solely dependent upon the existence of a precedent agreement between the pipeline applicant and its proposed shipper. Although the Natural Gas Act's certificate provision is highly discretionary, there are several reasons to think such a sweeping abdication would be a bridge too far.

First, FERC cannot offload its certificate decision-making to the private market without violating the fundamental purpose of the Natural Gas Act. The Act's purpose is to "protect consumers against exploitation at the hands of natural gas companies."[340] Specifically, "[f]ederal regulation of the natural gas industry is designed to curb pipelines' potential monopoly power over gas transportation."[341] The concern that pipelines would assert monopolistic control to the detriment of consumers motivated the passage of the Natural Gas Act,[342] led Congress to insist that it was *not* deregulating pipelines when it deregulated wellhead prices for natural gas in the 1980s,[343] and continues to motivate both the courts[344] and FERC itself[345] to conclude that ongoing agency oversight of

PAUL W. PARFOMAK, CONG. RSCH. SERV., R45239, INTERSTATE NATURAL GAS PIPELINE SITING: FERC POLICY AND ISSUES FOR CONGRESS 3 (2022), https://perma.cc/FA2Y-WRC7.

340. Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591, 610 (1944); *see also* Penn. Power Co. v. Fed. Power Comm'n, 343 U.S. 414, 418 (1952); Fed. Power Comm'n v. Tenn. Gas Co., 371 U.S. 145, 154 (1962); Atl. Refin. Co. v. Pub. Serv. Comm'n, 360 U.S. 378, 388 (1959); *In re* Permian Basin Area Rate Cases, 390 U.S. 747, 770 (1968).

341. United Distrib. Cos. v. FERC, 88 F.3d 1105, 1122 (D.C. Cir. 1996).

342. *Id.* at 1122–23.

343. *Id.* at 1148–61.

344. *Id.* at 1122; Interstate Nat. Gas Ass'n of Am. v. FERC, 617 F.3d 504, 506 (D.C. Cir. 2010); Interstate Nat. Gas Ass'n of Am. v. FERC, 285 F.3d 18, 30 (D.C. Cir. 2002).

interstate pipelines is necessary. Thus, FERC's most basic job with respect to pipeline regulation is to ensure that pipeline companies do not wield their market power at the expense of consumers.

As a part of that regulatory scheme, the certificate provision, as a traditional tool of public utility regulation, requires FERC to decide whether the certification of a pipeline is "in the interest of the public."[346] While the agency has significant discretion in how these interests are defined and weighed, there is a clear mandate on at least one point: because of the Natural Gas Act's concern with the monopoly power of pipeline companies, the relevant "public" cannot be just the private interests of the pipeline company and its contracting partner.[347] If FERC were to adopt a rule that it will approve pipeline applications so long as they contain evidence of the existence of a private contract, then it would be abdicating its fundamental statutory role to the private sector. This abdication could cause serious harm to the public, as seen in the Spire Pipeline Project,[348] in violation of the Natural Gas Act.

Second, FERC's sole reliance on precedent agreements would also arguably violate the 1942 amendments to the Natural Gas Act, which gave FERC the authority (and maybe the obligation) to consider the long-term social and economic costs of pipeline development. At the time of the amendments' passage, Congress was motivated by concerns that natural gas was a cheap but limited resource; that its overdevelopment would lead to waste and eventually exhaustion of the resource; and that this overdevelopment could in turn destroy competing fuel and transportation industries and their workforces leaving the country without an available energy supply.[349] To address these concerns, Congress gave FERC the authority to consider the impact of pipeline development on competing fuels and transportation industries and their workforces and to consider the end use of the natural gas in its certificate decisions.[350] The Supreme Court confirmed this expansion of the certificate authority through the 1942 amendments.[351] Although Congress's concerns in 1942 may not directly

345. *See, e.g.*, Order No. 636, 57 Fed. Reg. 13,267, 13,272 (Apr. 8, 1992) (codified at 18 C.F.R. pt. 284).

346. Chesapeake & Ohio Ry. Co. v. United States, 283 U.S. 35, 42 (1931); Atl. Refin. Co. v. Pub. Serv. Comm'n, 360 U.S. 378, 392 (1959) ("[T]he Act's standard in § 7 proceedings" is "to protect the public interest in determining whether the issuance of the certificate is required by the public convenience and necessity.").

347. *See United Distrib. Cos.*, 88 F.3d at 1122–23.

348. *See id.* at 1137–41.

349. *See id.* at 1123–25.

350. *Id.*

351. Fed. Power Comm'n v. Transcon. Gas Pipe Line Corp., 365 U.S. 1, 7–22 (1961); *see also United Distrib. Cos.*, 88 F.3d at 1123–25; Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591, 611–12 (1944); Fed. Power Comm'n v. E. Ohio Gas Co., 338 U.S. 464, 468–69 (1950).

translate to the modern day,[352] FERC's refusal—without adequate explanation—to take these factors into account, and to defer to the existence of a precedent agreement in its certification decision-making, could be a statutory violation.[353]

Finally, FERC's sole reliance on the existence of precedent agreements would also likely violate the 1947 amendment to the Natural Gas Act, which gave FERC the power to convey federal eminent domain authority to successful pipeline applicants. As a result of this amendment, the determination that the construction of a pipeline is required by the public convenience and necessity is equivalent to a determination that the pipeline constitutes a "public use" under the Fifth Amendment.[354] While the "public use" standard is a capacious one, it is not clear that, under the Natural Gas Act, FERC could delegate the authority to make that determination to a set of private actors. Moreover, if we were to take the certificate's origins in state law seriously, the pairing of the certificate analysis with eminent domain authority would require FERC to make a determination that the invasion of private rights to construct a pipeline *in any particular case* was justified, even if it acknowledged that in the general case Congress decided that pipelines are a "public use."[355]

For these reasons, FERC likely could not issue a rule declaring its certificate decision-making to turn solely on the existence of a precedent agreement.

But of course, FERC has issued no such rulemaking formally deregulating pipelines. Its formal policy approach to pipeline certification—as embodied in the 1999 Policy Statement—makes no such claim to deregulation, and thus poses no legal conundrum. On paper then, it appears that FERC complies with the Natural Gas Act.

The problem appears, however, once you recognize that FERC has managed to accomplish something quite similar to a formal policy of deregulation through its series of individual certificate decisions. Looking at the totality of FERC's certificate decisions over the last twenty years, it certainly seems that FERC's decisions turn on the presence of a precedent agreement. And yet, it is not clear that any one decision constitutes a legal violation. In each of its deci-

352. Although they may not be all that far off: the development of pipelines to facilitate cheap access to natural gas could be beneficial in the short term, but in the long run it could crowd out investments in renewable energy alternatives, contribute to higher greenhouse gas emissions, and ultimately threaten the country's energy security in an era of climate change. As in the 1942 context, FERC could take these long-term concerns into account by considering the impact of pipeline development on renewable energy alternatives and evaluating the end use of the natural gas in its certificate decisions, both with respect to its air pollution impacts and the relative value of deploying natural gas for a particular end use as opposed to an alternative energy source.

353. *See Transcon. Gas Pipe Line Corp.*, 365 U.S. at 23 n.19 (noting that the Commission's refusal to "consider certain factors within its power of notice" can amount to legal error).

354. *See* City of Oberlin v. FERC, 937 F.3d 599, 602, 606–07 (D.C. Cir. 2019).

355. *See supra* Part I.C.

sions approving a pipeline application, FERC reiterates the framework of the 1999 Policy Statement; claims that, pursuant to that policy, it is weighing the public benefits against the adverse effects of a project; and concludes that the pipeline is required by the public convenience and necessity. FERC's assessment of how this balancing test comes out is exactly the kind of thing courts are particularly unlikely to question: the "grant or denial of a Section 7 certificate of public convenience and necessity is a matter 'peculiarly within the discretion of the Commission,'"[356] and courts will "not substitute [their] judgment for that of the Commission."[357]

Indeed, in the wake of the 1999 Policy Statement, I could find no instance in which a court overturned a certificate of public convenience and necessity granted by FERC on the ground that the agency violated the statute. I found one case (aside from the Spire Pipeline Project) where a court vacated a certificate on the ground that FERC had not provided substantial evidence for its reasoning[358] and a handful of cases where courts remanded the certificate decision to FERC on the ground that the reasoning was arbitrary and capricious.[359] Notably, in the Spire Pipeline Project, the court vacated the certificate granted by FERC on the ground that FERC's reasoning was inconsistent *with its own 1999 Policy Statement*.[360] It was not because—at a more fundamental level—FERC is shirking its statutory duty by ceding its certificate decisions over to the private parties that signed the relevant precedent agreements. Thus, we are in a situation in which the whole is greater than the sum of its parts: FERC's practice in the aggregate is legally suspect, but in a way that arguably cannot be revealed through challenges to any individual decision.

B. The Institutional Gap

Perhaps equally troubling, it is not clear which institution would be able to check FERC on this behavior. Part of the problem is that FERC represents the inverse of the standard story that we tell about agencies and administrative law: the issue here is not an agency overreaching its statutory boundaries, but rather an agency that has been delegated a significant amount of authority but is reluc-

356. Myersville Citizens for a Rural Cmty., Inc. v. FERC, 783 F.3d 1301, 1308 (D.C. Cir. 2015) (quoting Okla. Nat. Gas Co. v. Fed. Power Comm'n, 257 F.2d 634, 639 (D.C. Cir. 1958)).

357. *Myersville*, 783 F.3d at 1308 (quoting Nat'l Comm. for the New River, Inc. v. FERC, 373 F.3d 1323, 1327 (D.C. Cir. 2004)).

358. *See* Dominion Cove Point LNG, LP, 115 FERC ¶ 61,337 (2006), *rev'd in part*, Wash. Gas Light Co. v. FERC, 532 F.3d 928 (D.C. Cir 2008) (vacating certificating in part), *remanded,* Dominion Cove Point LNG, LP, 125 FERC ¶ 61,018 (2008) (reinstating certificate), *aff'd*, Wash. Gas Light Co. v. FERC, 603 F.3d 55 (D.C. Cir. 2010) (upholding reinstatement of certificate).

359. *See, e.g.*, *City of Oberlin*, 937 F.3d at 601–02; Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1325, 1331–32 (D.C. Cir. 2021).

360. *See supra* Part II.B.1.

tant to exercise it.[361] And so, the normal tools we think of as checking agency authority are not as well-suited to the problem. The problem is compounded by the fact that FERC is an independent agency, making it generally less responsive to the standard actors we might think of as being able to check agency malfeasance derived from political dynamics.[362] And there are specific features unique to FERC's current structure in the natural gas space—including the near total concentration of decision-making power within FERC and the fact that FERC deploys that power primarily in individual pipeline proceedings—that make this problem triply difficult. This section discusses some of the standard actors we might think of as being able to check FERC and why they are insufficient here.

1. Courts. The structure of the individual pipeline proceeding and the significant amount of authority and discretion that FERC has over pipeline permitting make it difficult for courts to check FERC. As described above, courts tend to defer to FERC's determination of whether a pipeline is required by the public convenience and necessity, and the whole-is-greater-than-the-sum-of-its-parts nature of the certificate provision make it difficult for courts to see the problems with FERC's pipeline policy.[363] Moreover, even if courts reject individual pipeline decisions made by FERC, they often do so on procedural grounds and are ineffective at forcing the agency to make significant substantive changes.

In fact, this is precisely the problem we have seen with respect to FERC's obligation to consider the greenhouse gas emissions associated with the end use of the natural gas from its project. As mentioned, in 2017, the D.C. Circuit held that FERC is required to calculate the end-use greenhouse gas emissions from its pipeline projects where those emissions are a "reasonably foreseeable" result of the approval of the pipeline.[364] In subsequent pipeline decisions, FERC declined to calculate the downstream greenhouse gas emissions associated with the projects because it said the end uses of the gas were not known and therefore not reasonably foreseeable.[365] When one of those decisions finally made it to the D.C. Circuit, the court appeared to be frustrated by the agency's tactics but could not reverse the agency on the issue because it had not been

361. *Cf.* Daryl J. Levinson, *Empire-Building Government in Constitutional Law*, 118 HARV. L. REV. 915, 917 (2005) (critiquing the common misconception that "much government behavior is driven by self-aggrandizing motives").

362. *See, e.g.*, Livermore & Revesz, *supra* note 299, at 1344 (observing that the typical response to concerns about political dynamics related to agency capture is to expand executive control or turn to centralizing authorities such as the Office of Information and Regulatory Affairs).

363. *See supra* Part C.

364. *See* Sierra Club v. FERC, 867 F.3d 1357, 1371–73 (D.C. Cir. 2017).

365. *See, e.g.*, Dominion Transmission, Inc., 163 FERC ¶ 61,128, paras. 41–44 (2018) (order denying rehearing).

adequately preserved for review.[366] The same ping-ponging has continued for the last several years, as FERC declines to follow the spirit of the D.C. Circuit's decisions and the court attempts to correct the agency one case at a time.[367]

2. The President and Congress. FERC's independent agency structure and the unique political dynamics of the natural gas context make it difficult for the President or Congress to check FERC.

FERC is a five-member, bipartisan, independent agency whose commissioners serve five-year terms and enjoy some degree of removal protection, making it difficult for either Congress or the President to exert direct control over the agency. The President can appoint commissioners—like Commissioner LaFleur—who may be interested in changing the agency's approach. But the President can appoint a maximum of three commissioners of the same political party, and the commissioners' staggered terms (which extend beyond those of a single presidential term) can make it difficult for the President to secure a majority.

Moreover, even if the President can appoint three commissioners of their own political party, the commissioners still need to be approved by the Senate. That additional layer of approval can temper any presidents or commissioners eager to change the agency's direction. For instance, President Biden had the opportunity to appoint two new Democratic commissioners to FERC in his first term and name an existing Democratic commissioner as chair, theoretically giving President Biden significant influence over FERC's agenda. But the term of Chair Glick expires in 2022, and if Chair Glick hopes to be appointed to a second term, he will have to be approved by the Senate. This has given senators significant influence over the chair's agenda, reflected in part by the fights over FERC's draft policy statements discussed in the Introduction.[368]

366. *See* Birckhead v. FERC, 925 F.3d 510, 519–21 (D.C. Cir. 2019) ("Despite our misgivings regarding the Commission's decidedly less-than-dogged efforts to obtain the information it says it would need to determine that downstream greenhouse-gas emissions qualify as a reasonably foreseeable indirect effect of the Project, [the challengers] failed to raise this record-development issue in the proceedings before the Commission.").

367. *See, e.g.*, Food & Water Watch v. FERC, 28 F.4th 277, 288–89 (D.C. Cir. 2022); *see also, e.g.*, DeShazo & Freeman, *supra* note 159, at 2247–51 (describing a similar phenomenon in the context of FERC's hydropower licensing authority, in which the agency managed to avoid meaningful judicial review through the issuance of licenses in individual proceedings); David B. Spence, *Managing Delegation Ex Ante: Using Law to Steer Administrative Agencies*, 28 J. LEGAL STUD. 413, 439 (1999) (finding that when courts remanded hydropower licenses to FERC based on a finding of legal error, FERC would simply reissue the license).

368. *See supra* notes 20–22 and accompanying text; *see also, e.g.*, Ethan Howland, *Biden Taps FERC Chairman Glick for a Second Term, Potentially Providing Consistency amid Energy Transition*, UTIL. DIVE (May 23, 2022), https://perma.cc/AJ8K-NKPV (quoting former FERC Chairman Neil Chatterjee as saying that Chairman Glick is "likely to get some pretty significant questions from Republicans on the Energy and Natural Resources Committee, as well as from Chairman Manchin, on the path forward on pipelines, and that's likely to be the thorniest part of his [confirmation] process").

Finally, even if the President or Congress were able to exert more control over the agency, it is not clear that that would solve a problem like this one, where the agency's reluctance to regulate appears to be the result of the political dynamics surrounding natural gas. Over the last two decades, natural gas has become the dominant energy resource in the United States, second only to oil. Natural gas accounts for 32% of our primary energy consumption.[369] It provides almost 40% of our utility-scale electricity generation.[370] That is almost double the share of the next most common resource.[371] It is produced in states that can carry significant political weight—most notably, the swing state of Pennsylvania and Senator Manchin's home state of West Virginia.[372] In both the energy crisis of the 1970s and the energy crisis of today, natural gas has played a crucial role.[373] Taking all of these factors into account, across all areas of the government, there is a significant amount of political force behind natural gas.

These dynamics make it exceedingly unlikely that the President or Congress will attempt meaningfully to push back against natural gas development. As Rachel Barkow points out, independent agencies, like FERC, are often created precisely to avoid concerns of asymmetric political dynamics that may overwhelm the President or Congress.[374] If an independent agency has been captured or is driven by particularly strong political forces on one side, then it is likely that the President and Congress are subject to the same forces as well. To put it in plain terms: if the President or Congress were in FERC's shoes, it would be difficult to imagine them doing anything differently.[375]

3. States. Because FERC exercises a particularly strong preemptive effect over natural gas pipeline permitting, it is also difficult for states to effectively check the agency. Barkow points out that states may be able to counteract concerns of capture or asymmetrical political dynamics within the federal govern-

369. *See U.S. Energy Facts Explained*, ENERGY INFO. ADMIN. (June 10, 2022), https://perma.cc/XF9A-HTL8.

370. *See Use of Natural Gas*, ENERGY INFO. ADMIN. (May 24, 2022), https://perma.cc/XF9A-HTL8.

371. At around 22%, coal is the next most common resource. *See Where Our Natural Gas Comes from*, ENERGY INFO. ADMIN. (Oct. 18, 2021), https://perma.cc/G825-RDXY.

372. Pennsylvania and West Virginia rank in the top five producing states of natural gas. *See id.*

373. *See supra* Introduction; *supra* Part III.A.1.; *see also, e.g.*, *Today in Energy,* ENERGY INFO. ADMIN (June 7, 2022), https://perma.cc/XKV7-GR7H (observing that the United States has become the largest liquefied natural gas supplier to Europe since Russia's invasion of Ukraine).

374. Barkow, *supra* note 300, at 19–26.

375. Again, this is precisely the dynamic Freeman and DeShazo observed in the hydropower context. They note that "[l]egislative oversight" of FERC's hydropower licensing authority "was sending FERC a clear propower message," DeShazo & Freeman, *supra* note 159, at 2243, and "[t]o the extent that executive oversight has made an impact on FERC, the signaling has been consistently propower," *id.* at 2244.

ment because states may be subject to different political dynamics.[376] There is some evidence that this is the case in the context of energy policies: states have been the leaders in adopting clean energy initiatives like renewable portfolio standards, and some states and local governments have passed laws restricting natural gas usage in new buildings to reduce reliance on natural gas.[377] Of course, plenty of states have also preempted natural gas restrictions passed by local governments, so it is not entirely clear that state-level policy dynamics would be all that different.

But states have few tools to encourage FERC to conduct a more holistic review of pipeline certification. First, because Congress amended the Natural Gas Act to give FERC the ability to grant eminent domain authority to successful pipeline applicants, states have few tools to resist the construction of a pipeline that FERC has authorized.[378] Indeed, that was precisely the purpose of the amendment.[379] Second, because the "Natural Gas Act occupies the field of interstate natural gas transportation and sale," it preempts most local and state law that would prevent the construction of a pipeline.[380] This includes state and local environmental, safety, and zoning laws.[381] The Natural Gas Act makes exceptions only for certain authorities delegated to the states under the federal Clean Air Act, the Coastal Zone Management Act, and the Clean Water Act.[382] Some states have used these federal authorities successfully to deny necessary permits to pipelines, but this tactic is ill-suited to addressing the actual

376. Barkow, *supra* note 300, at 54–55 ("[S]tates might be more sensitive to the public interest, either because of ballot initiatives that give consumers a more direct voice or because some states are particularly harmed by an industry interest (for example, by pollution) and so stand in a good position to vindicate a more general public interest.").

377. *See, e.g.*, Ann C. Mulkern, *California Aims to Cut Gas in New Homes, Stops Short of Ban*, ENERGYWIRE (May 10, 2021), https://perma.cc/N6BY-URZ7; David Iaconangelo, *N.Y. Governor Backs Nation's First Statewide Gas Ban*, ENERGYWIRE (Jan. 6, 2022), https://perma.cc/4BCG-QQGF.

378. *See* PennEast Pipeline Co., LLC v. New Jersey, 141 S. Ct. 2244, 2251–52 (2021) (holding that states cannot claim sovereign immunity to condemnation proceedings brought by pipeline companies pursuant to the eminent domain authority granted to them by FERC under its certificate authority).

379. *See supra* Part I.C.

380. Myersville Citizens for a Rural Cmty., Inc. v. FERC, 783 F.3d 1301, 1315 (D.C. Cir. 2015).

381. *See, e.g.*, Algonquin Gas Transmission, LLC v. Weymouth, 919 F.3d 54, 58, 63–66 (1st Cir. 2019) (observing that because FERC employs a "comprehensive regulatory scheme pursuant to which FERC must consider environmental, siting, and safety factors when issuing a [certificate of public convenience and necessity]," it preempts any conflicting state or local law); *see also, e.g.*, N. Nat. Gas Co. v. Iowa Utils. Bd., 377 F.3d 817, 818–19, 820–24 (8th Cir. 2004); Nat'l Fuel Gas Supply Corp. v. Pub. Serv. Comm'n of N.Y., 894 F.2d 571, 576–79 (2d Cir. 1990).

382. *Myersville*, 783 F.3d at 1315.

problem here: that a more holistic, public-interest-oriented review of pipeline infrastructure is required.

4. Other Interest Groups and FERC. This leaves other interest groups and FERC as the best bets for reform. Intriguingly, the story of FERC's certificate authority as discussed here, and the story of FERC's hydropower licensing authority as discussed by Freeman and DeShazo, suggest that the presence of other powerful interest groups in the context of individual permitting proceedings can have a significant influence on FERC. But these interest groups must be well-resourced and perhaps have independent political authority of their own—it was not enough in the hydropower context to rely solely on environmental groups and public interest organizations, and that seems to be the case here as well. The problem is that it is not immediately clear who could serve this role in the natural gas context.

Alternatively, FERC itself may be able to redirect its pipeline certification process. As described in the Introduction, at least some FERC commissioners are interested in issuing a revised approach to the 1999 Policy Statement. Their efforts so far have stalled, although FERC could attempt to revise these new policy statements at a later date. Thus, it remains to be seen if FERC will make another attempt to reform its pipeline permitting process.

Conclusion

Over the last eighty years, the same legal tool—the "certificate of public convenience and necessity"—has been used to implement two very different methods of energy infrastructure development: the first, slow, politically contested, and cognizant of long-term consequences; the second, rapid, routine, and focused on short-term needs. Nothing changed in terms of the formal legal or institutional structure overseeing these methods. Rather, underlying political forces appear to be driving this change. This story suggests that more attention may need to be paid to precisely how politics and institutions interact within the energy and environmental law fields. Understanding how the politics of pipelines have shaped FERC over time and continues to drive the dynamics in individual certificate proceedings is crucial to understanding how we regulate energy today—or, more precisely, why we do not. In addition, the story of FERC suggests an outcome that upends our stereotypical image of agencies. It is a story of an agency charged with immense, nearly limitless authority, and a surprising response: not vigor in need of restraint, but reluctance.