

**Testimony of Susan F. Tierney, Ph.D.  
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**Before the U.S. House  
Subcommittee on Energy of the Committee on Energy and Commerce**

**Subcommittee Hearing on  
“Modernizing the Natural Gas Act to Ensure It Works for Everyone”**

**February 5, 2020**

**Testimony**

**Introduction**

Good morning, Chairman Rush, Ranking Member Upton, and Members of the Subcommittee. My name is Susan Tierney.<sup>1</sup> I am a Senior Advisor in the Denver office of Analysis Group, an economic consulting firm where I specialize on policy, regulation, economics, and environmental issues associated with the electric and gas industries.

Thank you for inviting me to testify at this important hearing on ensuring that the Natural Gas Act works broadly for Americans. I am testifying on my own behalf at today’s hearing, and it is an honor to share my thoughts with you.

I appreciate the Subcommittee’s decision to look at whether changes are needed in the NGA, especially in light of how the Federal Energy Regulatory Commission has been implementing the Act. Although natural gas plays an important role in the nation’s current energy economy, much has changed in the many decades since the NGA was enacted. The nation’s energy systems are in transition, and this is an important area of inquiry by the Subcommittee and by others in Congress.

My comments focus on trends in FERC’s administration of its authority to certify new natural gas pipeline projects under Section 7 of the NGA. My views reflect the findings of a review I conducted in 2019 of comments submitted by a large, diverse set of individuals, states, companies, trade associations, think tanks, environmental groups, and others in response to FERC’s April 2018 Notice of Inquiry.<sup>2</sup> That NOI solicited comments on what, if any, changes FERC should make in its 1999 Policy Statement, which it originally adopted to guide its review of gas-project applications.

Major developments have occurred in the gas industry over the 20 years since 1999. These changes prompted FERC to consider whether its policy was in need of revision. Over 1,600 organizations and individuals submitted formal comments in response to the inquiry. Commenters<sup>3</sup> weighed in on one or

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<sup>1</sup> I have provided my bio at the end of this testimony.

<sup>2</sup> FERC, *Certification of New Interstate Natural Gas Facilities*, 163 FERC ¶ 61,042, Notice of Inquiry, Docket No. PL 18-1-000, April 19, 2018 (“FERC NOI”).

<sup>3</sup> Among other, I submitted comments in response to the NOI. See, Comments of Susan F. Tierney, Ph.D., before the FERC, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000, July 25, 2018, available at [https://www.analysisgroup.com/globalassets/content/insights/publishing/tierney\\_comments\\_ferc\\_pipeline\\_certification.pdf](https://www.analysisgroup.com/globalassets/content/insights/publishing/tierney_comments_ferc_pipeline_certification.pdf).

more of the four topics FERC identified as critical to its evaluation, which were: (1) FERC’s reliance on preliminary contracts (“precedent agreements”) between pipeline developers and potential shippers to demonstrate need for a proposed project; (2) FERC’s consideration of affected landowners’ interests, particularly with respect to the exercise of eminent domain; (3) FERC’s evaluation of the environmental impacts of proposed facilities; and (4) the efficiency of the Commission’s review processes.<sup>4</sup>

In November 2019, I prepared a report to summarize the themes that emerged from my review of these comments.<sup>5</sup> I focus today on a few themes from that analysis: FERC’s record of pipeline approvals since 1999; FERC’s reliance on precedent agreements to establish whether projects are needed; FERC’s review of environmental impacts of projects; and other issues (such as eminent domain).

### **FERC Approvals of Pipeline Applications Since 1999**

FERC’s approvals of new natural gas pipelines have led to a substantial increase in U.S. pipeline capacity over the past two decades. Relying on its authority under the NGA and guided by its 1999 Policy Statement, FERC has approved 487 projects and rejected only two.<sup>6</sup>

As of the end of 2019, approved projects totaled 286 Bcf/d of capacity and over 24,000 miles of new pipeline.<sup>7</sup> For context, the amount of capacity approved since 1999 is nearly double the all-time record for gas use in a single day (which occurred in January of 2019). Actual pipeline capacity added between 2000 and 2018 was 254 Bcf/d. The year-by-year approvals, capacity additions, and new miles of approved pipelines are shown in Figures 1, 2, and 3, below.

Clearly, FERC’s actions have allowed for significant expansion of the nation’s gas delivery system. But in light of the energy transitions now underway and anticipated going forward, it is timely for this Subcommittee to explore whether policy changes are needed to address FERC’s determinations in the future about the extent to which further expansion of the nation’s gas delivery infrastructure is needed and in the public interest.

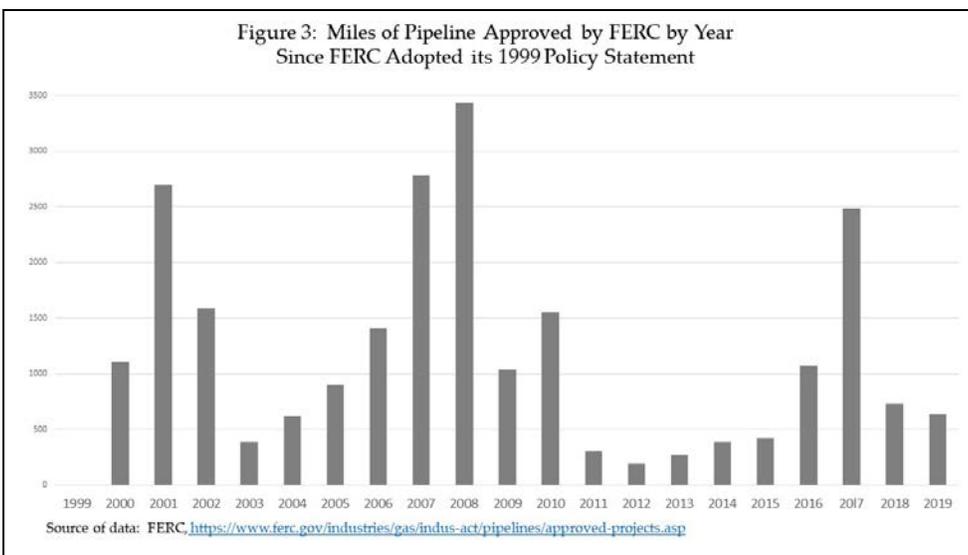
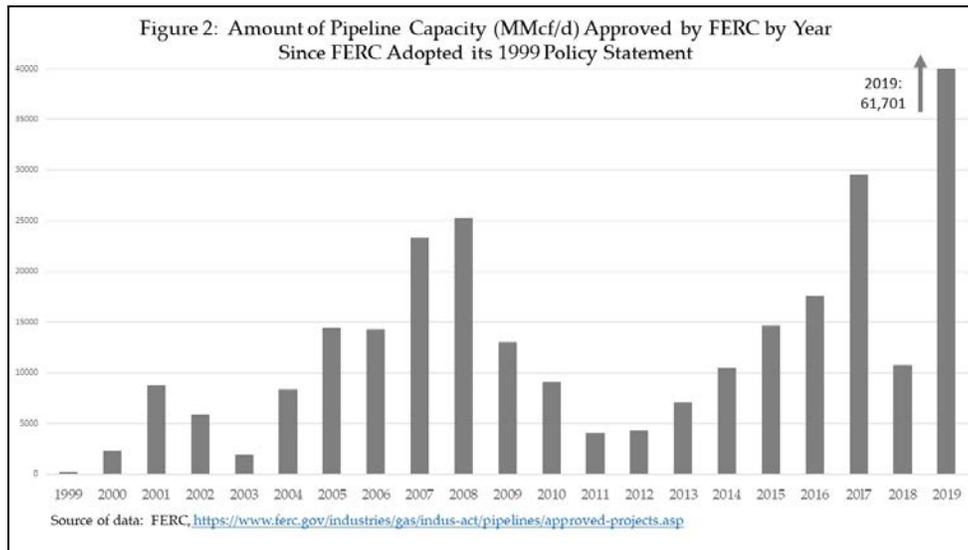
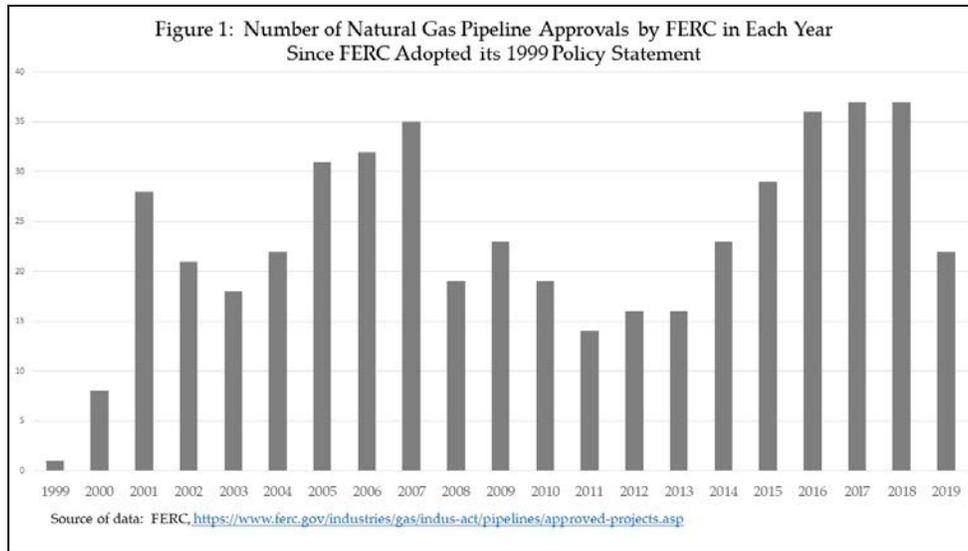
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<sup>4</sup> FERC NOI, pages 45-46.

<sup>5</sup> Susan F. Tierney, “FERC’s Certification of New Interstate Natural Gas Facilities: Revising the 1999 Policy Statement for 21<sup>st</sup> Century Conditions,” November 2019, [https://www.analysisgroup.com/globalassets/content/insights/publishing/revising\\_ferc\\_1999\\_pipeline\\_certification.pdf](https://www.analysisgroup.com/globalassets/content/insights/publishing/revising_ferc_1999_pipeline_certification.pdf). See also, Susan Tierney, “Time to move away from old precedents in FERC pipeline reviews,” *Utility Dive*, November 19, 2019, <https://www.utilitydive.com/news/time-to-move-away-from-old-precedents-in-ferc-pipeline-reviews/567512/>.

<sup>6</sup> These numbers reflect an update of information since my November 2019, when I reported that as of the end of July 2019, FERC had approved 474 projects and rejected only two.<sup>6</sup> These data on approved pipeline applications (as of the end of 2019) are posted on FERC’s website, at <https://www.ferc.gov/industries/gas/indus-act/pipelines/approved-projects.asp>.

<sup>7</sup> These numbers reflect an update since my November 2019, when I reported that as of the end of July 2019, FERC approvals amounted to 278 Bcf/d of capacity additions and nearly 23,773 new miles of pipeline.



## **Divided views on the suitability of FERC’s pipeline-approval process going forward**

Stakeholders are sharply divided in their views about the importance of making changes in FERC’s pipeline certification approach.

On the one hand, many commenters—oil and/or gas companies, industry trade associations, business groups, large industrial consumers, labor unions, and politicians from mainly gas-producing states—argue that the status quo is working well, appropriately identifies and supports determinations of project need, provides ample opportunity for public participation, and properly addresses the environmental impacts of proposed projects. An underlying premise of this perspective is that FERC’s role is to approve the development of new pipelines when at least two parties—a pipeline developer and a prospective shipper—want that new capacity, and then to work to minimize the adverse environmental and landowner impacts associated with getting that pipeline sited, built, and into operation.

Others—including state attorneys general, state utility and environmental regulators, politicians from states affected by pipeline projects or concerned about carbon emissions, academics and other industry experts, environmental organizations, publicly owned gas utilities, libertarian think tanks, and individual citizens—urge FERC to modify how it reviews projects. In such a revised approach, FERC’s reviews would ensure that pipeline infrastructure additions occur only if they: are required by the public interest after considering all relevant factors; produce greater benefits than costs (including through consideration of environmental externalities); do not impose undue burdens on landowners and communities; and enable the orderly development of infrastructure.

Underlying the different perspectives is a fundamental disagreement about how FERC carries out its duties under the combined authorities of the NGA and the National Environmental Policy Act.

The NGA declares that “the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest, and that Federal regulation . . . is necessary in the public interest.” A key question is whether a finding that precedent agreements between two parties who seek to add new pipeline capacity is sufficient to reach a determination that new facilities are needed and in the public interest.

NEPA requires FERC to take a “hard look” at the environmental impacts of a proposed project and determine whether any environmental impacts would be significant. FERC’s process does not weigh these impacts in its decisions about whether the benefits of adding pipeline capacity exceed the negative impacts of such additions.

The U.S. Supreme Court has found that the principal purpose of the NGA is to serve the public’s interest in encouraging the orderly development of plentiful supplies of natural gas at reasonable prices.<sup>8</sup> Rather than promoting natural gas development at any cost or in any manner, the NGA calls for doing so in an orderly and reasonable way. The NGA further directs FERC to approve natural gas pipeline projects only if they are required by the “public convenience and necessity.” FERC should take environmental impacts and other factors (e.g., consistency with state energy policies, the existence

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<sup>8</sup> *NAACP v. Federal Power Commission*, 425 U.S. 662, 669-70 (1976).

of other gas facilities in a region) into account in its determination of whether a project is “necessary in the public interest.”

**Observations on restoring confidence that the federal government only approves those pipelines that are in the public interest.**

FERC’s approach, and moreover perhaps the NGA itself, needs to be updated to reflect current conditions and to assure that the agency carries out its duties under the NGA in a way that credibly satisfies its public-interest purpose. I have a number of observations and recommendations about how FERC should modernize its implementation of the NGA to “ensure that it works for everyone,” and by extension, about issues that the Subcommittee should take into consideration as it reviews the vitality of the NGA, and any needed changes to it, at the start of the 2020s.

*FERC’s Need Determination*

A key element of the confidence-building approach would be involve changing FERC’s near-exclusive reliance on precedent agreements as the basis for determining that a project is needed.

Here’s how it works at present: When FERC reviews a pipeline application, the agency looks to see if the pipeline applicant has an agreement with someone (the shipper) who wishes to purchase capacity on the pipeline. FERC treats such agreements as decisive in determining whether a project is needed. The theory is that, if a shipper wants to purchase capacity along a new pipeline (instead of an existing pipeline), then there must be a market demand for the new project.

But there are major problems with relying on precedent agreements for this purpose:

Such agreements reflect the private interests of two parties, and a precedent agreement alone cannot universally demonstrate that a pipeline project is needed to meet the “public convenience and necessity” —the standard under the NGA. No doubt, the existence of a precedent agreement is a relevant factor, but it is not the *only* relevant factor.

Also, FERC’s near-exclusive reliance on these agreements undervalues the many other factors—such as demand forecasts, availability of capacity on other pipelines, impacts on landowners and local communities, states’ energy and environmental policies, and the findings from the agency’s own environmental reviews—that are relevant when reviewing whether a particular pipeline is needed to serve the public interest. FERC’s review should compare the anticipated benefits of a project against its anticipated economic and environmental costs. In other areas of its work, FERC does not shy away from compiling and reviewing complicated records with substantial technical information.

The origins of “certificates of public convenience and necessity”—the permit that FERC issues to pipeline applicants when it approves a project under Section 7 of the NGA—point to reasons why FERC can and should conduct more fulsome reviews of whether a new pipeline is needed. Before the NGA was enacted, states were responsible for issuing CPCNs to pipeline developers. States continue to have jurisdiction to issue CPCNs for power plants and electric transmission lines, and consider complex records on need when reviewing such facilities (just as states did for pipelines prior to the enactment of the NGA). This history of state regulation supports a more robust need assessment by FERC, and

suggest (through examples from the states’ current practices) that such reviews are within the analytic and evidentiary capability of utility regulators.

The 1999 Policy Statement’s threshold review focuses on whether existing customers will subsidize the monetary costs of a new pipeline project. But this consideration of monetary subsidies should not overshadow other important cost shifts: There are real costs associated with gas pipelines (e.g., taking of private property valued by owners well above the market price of their land; local air pollution emitted from compressor stations; visual impacts of rights of way) that are neither reflected in the price of gas-transportation service nor monetized in other ways. These other impacts are borne by parties who may not otherwise benefit from the project, and such economic transfers from the direct beneficiaries of a project to others are also a form of subsidization.

As an economic regulator, FERC should rely on benefit-cost analyses to determine project need. Using a more fulsome need analysis that relies on a more systematic benefit/ cost framework, would better align with FERC’s responsibilities under the NGA. Such a framework would include information about economic and environmental benefits and costs, without necessarily converting all impacts into dollars. FERC would evaluate whether a project proposal’s unmitigated environmental impacts (i.e., externalities), when combined with any other residual adverse economic impacts, outweigh the benefits of the project (e.g., benefits to the counterparties in the precedent agreements). Such an approach could make use of the kinds of information that FERC already collects on projects over the combined course of its NGA need analysis and NEPA environmental review. This perspective is rooted in an understanding that FERC is an economic regulatory agency and that a project’s environmental impacts have economic costs that should be taken into account as part of FERC’s public-interest finding.

FERC’s need analysis should broaden its review of impacts on Relevant Interests. In the 1999 Policy Statement, FERC focuses on whether there are adverse impacts on three core Relevant Interests (i.e., existing customers of the pipeline applicant; competing pipelines and their customers; and affected landowners and communities). This is too narrow a lens in the public-interest context of CPCN decisions. Others—such as states—have an interest in whether a project is developed and put into service: states have their own policy goals which may be advanced or undermined by denial or approval of the project. Also, other factors affect whether a project is in the public interest: for example, are there other alternatives in a region’s energy infrastructure system and markets, or are there adverse impacts on environmental, cultural, and natural resource systems and/or vulnerable populations.

FERC’s 1999 Policy Statement explicitly states that the agency “will consider all relevant factors” to determine need, and yet FERC relies almost exclusively on the existence of precedent agreements to find need. Without additional evidence, such agreements are not enough to demonstrate project need. Such agreements reflect the private interests of two counterparties, and do not necessarily reflect the public interest. FERC should give no special weight to precedent agreements in determining need, and should give little weight to precedent agreements among affiliates without an analysis of whether such agreements result from the exercise of market power. FERC has a history of exercising vigilance in addressing the risk that affiliates will exercise vertical market power in providing non-affiliated parties with non-discriminatory access to needed delivery facilities (e.g., electric and gas transmission). The Commission should bring the same care to its certification of proposed gas facilities.

### *Eminent Domain Considerations Related to FERC’s Certification Decisions*

FERC’s overreliance on precedent agreements is especially problematic in cases where pipeline developers use eminent domain to take land for their projects. Unless FERC modifies its approach to determining need, there is no assurance that the taking of private land *is* for a public purpose, as required by the Constitution. Taking of land cannot be for the purpose of serving private interests. FERC should give great weight to the concerns of landowners in the agency’s need analysis.

Fairness and due-process considerations require FERC to take additional steps to address landowners’ interests. Under FERC’s current approach of issuing “conditional” CPCNs—i.e., CPCNs issued prior to the project applicant obtaining all other federally mandated permits—project applicants can condemn private property and may be permitted to begin significant pre-construction activities (e.g., removing trees, disturbing land), while the project applicant awaits other federally mandated permits. FERC should either refrain from issuing conditional CPCNs or should incorporate language in any conditional CPCN so as to explicitly limit the ability of the pipeline company to disturb landowners’ property for the project until (when and if) all of the required approvals are issued.

### *FERC’s evaluation of the environmental impacts of proposed facilities*

FERC should strengthen its NEPA assessments in many ways, and incorporate these findings into the agency’s need determinations under the NGA. FERC should expand its determination of significant versus non-significant impacts and broaden its identification and consideration of project alternatives. Under the NGA, FERC should recognize that environmental impacts of projects are externalities, whose costs are not reflected in prices and whose effects are typically shifted from parties to a transaction (e.g., signatories to precedent agreements) to others. Economic regulation, in the context of reviewing projects for CPCNs, should take such impacts into account.

FERC should strive to more fully satisfy NEPA’s “hard look” standard. Not only does FERC have obligations under NEPA to examine project alternatives “to the fullest extent possible” (including a no-project alternative), but the agency also has public-interest obligations under the NGA to approve projects only when they are needed, and a serious review of no-project alternatives would inform that question of need.

FERC should give great weight to state policies in considering and weighing environmental impacts. Although the NGA assigns to FERC the responsibility to certificate gas-pipeline proposals, this does not mean that FERC should ignore the policy goals of states affected by pipeline projects. This point—that FERC should factor into its NGA and NEPA decisions on proposed pipelines the implications for states’ ability to satisfy their own climate-related statutes—is critical to assuring that FERC implements both statutes so as to avoid the *disorderly* development of gas-delivery infrastructure that will not be needed to serve markets where much lower GHG emissions will be mandated in the future.

FERC should consider both direct and indirect impacts of proposed facilities and the gas volumes they propose to deliver. Too often in its pipeline reviews, FERC selectively applies its examination of direct, indirect, and cumulative impacts of proposed facilities. FERC often incorporates as benefits the reduction in air emissions associated with use of gas to displace higher-emitting fossil fuels, as well as power-system reliability benefits where more gas is available. And yet, in its 2018 orders relating to the *Sabal Trail* and *New Market* projects, FERC declined to look at GHG emissions from gas use because, the

order stated, the agency does not have authority over them. Other federal agencies have not adopted so narrow a view when they examine the environmental implications of a new infrastructure project (such as a new road or bridge project). Those agencies’ reviews go beyond the anticipated environmental impacts of siting, constructing, and operating the project itself, presumably because its very purpose is to enable its use by parties seeking to drive vehicles on the new facility. These agencies, like FERC, do not have jurisdiction over uses of facilities, but they still assume that the projects are being built for a purpose and take into account the direct and indirect impacts of the project.

FERC should quantify and monetize GHG emissions impacts wherever reasonably feasible to do so. Policymakers increasingly rely on quantitative metrics to evaluate the impact of GHG emissions, including through use of the Social Cost of Carbon. Such emissions impose costs and risks on society—including on peoples’ health and wellbeing, on infrastructure, on the natural environment and economic activity—as discussed extensively in the scientific literature on the impacts of climate change. FERC has deep experience in relying upon quantitative estimates in other areas of its work (e.g., in market-power analyses supporting requests for market-based rate authority) and should not shy away from reviewing records where applicants and others introduce quantitative, monetary estimates of the direct and indirect impacts of pipelines’ GHG emissions.

## **Conclusion**

Most industry commenters have asked FERC to maintain its current approach, because, they say, it is working. But maintaining the status quo does not engender confidence that FERC is approving only those pipeline projects that are truly needed, consistent with the “public convenience and necessity.” This would require FERC to adopt a different test, or for Congress to clarify its intent with regard to the purposes of the NGA going forward.

For the sake of assuring the public’s confidence in its decisions, FERC should conduct considerably more thorough reviews of new pipeline proposals. Stronger instructions from Congress may be required to get it to do so.

I hope that the Subcommittee considers my testimony as it determines what changes may be necessary in the NGA to modernize it to ensure that it better works for everyone.

Thank you for affording me this opportunity to present this information to the Subcommittee.

### **Bio of Susan F. Tierney, Ph.D.**

I am a Senior Advisor at Analysis Group, a 1000-person economic consulting firm headquartered in Boston, with other U.S. offices in California, Colorado, Illinois, New York, Texas, and Washington, D.C.

I have been involved in issues related to public utilities, ratemaking and electric industry regulation, and energy and environmental economics and policy for over 35 years. During this period, I have worked on electric and gas industry issues as a utility regulator and energy/environmental policy maker, consultant, academic, and expert witness. I have been a consultant and advisor to private and publicly owned energy companies, grid operators, government agencies, large and small energy consumers, environmental organizations, foundations, Indian tribes, and other organizations on a variety of economic and policy issues in the energy sector.

Before becoming a consultant, I held several senior governmental policy positions in state and federal government, having been appointed by elected executives from both political parties. I served as the Assistant Secretary for Policy at the U.S. Department of Energy. I held senior positions in the Massachusetts state government as Secretary of Environmental Affairs; Commissioner of the Department of Public Utilities; Executive Director of the Energy Facilities Siting Council; and chair of the Board of the Massachusetts Water Resources Authority.

My Masters degree and Ph.D. in regional planning are from Cornell University. I previously taught at the University of California at Irvine and at MIT. I am a Visiting Fellow in Policy Practice at the University of Chicago's Energy Policy Institute; and a member of the advisory councils at New York University's Institute for Policy Integrity and Duke University's Nicholas School for the Environment.

I currently sit on several non-profit boards and commissions, including as: chair of ClimateWorks Foundation and of Resources for the Future; a trustee of the Barr Foundation; and a director of World Resources Institute and the Energy Foundation. I am a member of the Committee on Modernizing the U.S. Electricity System of the National Academies of Sciences, Engineering, and Medicine, and of the NYISO's Environmental Advisory Council. I recently chaired the U.S. Department of Energy's Electricity Advisory Committee, chaired the National Renewable Energy Laboratory's External Advisory Council, and was a member of the National Academy of Sciences committee on resiliency of the U.S. electric system. I was co-lead convening author of the Energy Supply and Use chapter of the Third National Climate Assessment. I previously served on the Secretary of Energy's Advisory Board, and chaired the Policy Subgroup of the National Petroleum Council's study of the North American natural gas and oil resource base.

After 35 years in Boston, I moved with my husband to his home state of Colorado in 2016.