SAVIOR, VILLAIN, OR VICTIM? CONSIDERING CLIMATE CHANGE IN HYDROPOWER LICENSING

by Zachary Handler

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Hydropower has a fundamental tension: it both is potentially very useful for mitigating climate change and contributes to many other environmental problems. In the United States, hydropower is the second-largest source of renewable electricity generation, creating 27% of renewable generation though only 6% of total U.S. power generation.[1] The U.S. Department of Energy (DOE) in the past has recommended increasing hydropower generation precisely for the purpose of mitigating climate change,[2] and there is momentum for converting existing non-powered dams into hydroelectric generation.[3]

At the same time, hydropower causes serious environmental problems. Dams disrupt fish migration, alter the flow of rivers, and can change water temperature.[4] As a result, environmental groups traditionally have been anti-hydropower, although that is changing somewhat in recent years as they tentatively embrace hydropower for the sake of fighting climate change.[5] However, hydropower dams' negative effects are compounded by climate change.[6] Hydropower facilities in some instances may also produce greenhouse gas (GHG) emissions by releasing methane from their reservoirs.[7]

The Federal Energy Regulatory Commission (FERC), an independent agency led by five commissioners housed within DOE, is the primary hydropower regulator in the United States. Under the Federal Power Act (FPA), FERC licenses and relicenses all hydropower facilities that are not federally owned.[8] It must decide whether each project is in the public interest, which includes weighing the environmental impacts of a project equally with the economic benefits.[9]

In the past two decades, FERC has attracted a great deal of attention and controversy over how it considers climate change impacts when regulating natural gas pipelines. Project opponents started to push FERC to consider climate impacts of natural gas pipelines in 2008.[10] The U.S. Court of Appeals for the District of Columbia (D.C.) Circuit's *Sabal Trail* decision held that FERC should consider climate change when approving pipelines,[11] but in particular cases the D.C. Circuit has held that FERC was justified in not considering climate impacts of specific projects.[12] Richard Glick (who was FERC chairman from January 2021 to January 2023) and Matthew Christiansen (its former general counsel) have argued that FERC has a major role to play as a climate regulator and is required by statute

1. U.S. Energy Information Administration, *Electricity Explained: Electricity in the United States*, https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php (last updated Mar. 26, 2024). Wind is now the largest renewable, at 48% of renewable generation.
2. DOE, Hydropower Vision 31 (2016), https://www.energy.gov/eere/water/articles/hydropower-vision-report-full-report ("Increasing hydropower can simultaneously deliver an array of benefits to the nation that address issues of national concern, including climate change, air quality, public health, economic development, energy diversity, and water security.").
3. *See* Andrew G. Lawson, *Streamlining the Hydropower Licensing Process: What's Up With Dam Licensing?*, 52 Suffolk U. L. Rev. 109, 110 (2019).
4. *See* Joshua H. Viers, *Hydropower Relicensing and Climate Change*, 47 JAWRA 655, 656 (2011).
5. *See* Brad Plumer, *Environmentalists and Dam Operators, at War for Years, Start Making Peace*, N.Y. Times (Oct. 13, 2020), https://www.nytimes.com/2020/10/13/climate/environmentalists-hydropower-dams.html.
6. *See* Kristoffer Tigue, *As the Harms of Hydropower Dams Become Clearer, Some Activists Ask, "Is It Time to Remove Them?,"* Inside Climate News (May 15, 2023), https://insideclimatenews.org/news/15052023/as-the-harms-of-hydropower-dams-become-clearer-some-activists-ask-is-it-time-to-remove-them/:

   > Evidence also suggests the dangers posed by dams will only get worse as the climate warms. Experts, including scientists who worked on the federal government's National Climate Assessment, have warned that many U.S. dams weren't built to withstand the increasingly intense and frequent rainfall and flooding being driven by rising temperatures.

7. *See* Kristoffer Tigue, *"Giant Methane Factories": Hydropower Has Long Been Touted as Clean Energy. But Is It?*, Inside Climate News (July 14, 2023), https://insideclimatenews.org/news/14072023/todays-climate-hydropower-methane-clean-energy/. The Federal Energy Regulatory Commission (FERC) has acknowledged that hydropower facilities produce some GHG emissions. See discussion of *Community of Elfin Cove Non Profit Corp*. and *PacifiCorp*, *infra* Section III.A.
8. *See* FPA §4(e), 16 U.S.C. §797(e) (FERC authorized to license new hydropower facilities); FPA §15(a), 16 U.S.C. §808(a) (FERC authorized to relicense existing hydropower facilities). Federally owned hydropower projects are operated by the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the Tennessee Valley Authority. *See* DOE, *supra* note 2, at 78.
9. *See* FPA §4(e), 16 U.S.C. §797(e). The test is further described *infra* Section I.A.
10. *See* Alison Gocke, *Pipelines and Politics*, 47 Harv. Env't L. Rev. 207, 245 (2023) (citing Bradwood Landing, LLC, 124 FERC ¶¶ 61257, 62306-62307 (2008)).
11. *See* Sierra Club v. Federal Energy Regul. Comm'n (*Sabal Trail*), 867 F.3d 1357, 1371-74 (D.C. Cir. 2017) (discussed *infra* Part II).
12. *See, e.g.*, Birckhead v. Federal Energy Regul. Comm'n, 925 F.3d 510, 519-21 (D.C. Cir. 2019) (holding that environmental nonprofit had not properly raised issue of downstream emissions during licensing).

to consider climate when deciding on pipeline permits.[13] Meanwhile, Prof. Alison Gocke has found that FERC generally has not weighed climate change very highly in its decisions whether or not to approve a pipeline.[14]

In contrast to the large amount of attention that FERC's consideration of climate change in natural gas permitting has received, there has been relatively little paid to how FERC does and should consider climate change in hydropower permitting. There are no federal judicial decisions on this subject, and the only two articles concentrating on it are by Joshua Viers, a scientist who argued that FERC should study the effects of climate change on hydropower facilities[15] and should change licensing requirements in light of climate change.[16] Viers and co-author Daniel Nover have suggested shortening the duration of licenses, increasing performance monitoring, and requiring hydropower operators to maintain escrow accounts to pay for remediation caused by emergencies due to climate change.[17] Several other articles argue for construction of more hydropower as a tool for climate mitigation, including a need to reform aspects of FERC's permitting process.[18]

This Comment fills a gap in the literature by analyzing how FERC considers climate change during permitting for hydropower projects. It looks at FERC orders authorizing hydropower projects, focusing on two considerations: (1) GHG emissions diverted or caused by hydropower, and (2) the effects of climate change on hydropower projects and their surrounding environments. I find that FERC orders have considered climate change since 1989. Throughout the 1990s and 2000s, FERC considered hydropower's ability to mitigate GHG emissions as a positive factor in public interest balancing.

However, beginning around 2010, FERC abandoned specific mentions of GHG emissions. Around the same time, multiple resource agencies and nonprofits began pushing FERC to consider the effects of climate change on hydropower projects in FERC's National Environmental Policy Act (NEPA) analysis. FERC has consistently pushed back against these interventions ever since. In the 2020s, FERC has been more amenable to discussing GHG emissions in hydropower public interest balancing, but still does not do much to analyze the effects that climate change will have on hydropower projects.

The Comment thus builds upon Profs. J.R. DeShazo and Jody Freeman's findings that other agencies successfully "lobbied" FERC in the 1980s and 1990s to include more environmental conditions in hydropower licenses.[19] Agency and nonprofit intervenors have kept the climate conversation alive in hydropower proceedings. However, they have not been very successful at getting FERC to act on their suggestions. FERC has incorporated some conditions related to climate change in hydropower licenses, but they are fairly minor.

Under the Donald Trump Administration, the federal government has largely dropped addressing climate change as a priority. FERC commissioners have declared that climate is not a core function of their agency, and agencies that have historically intervened in FERC proceedings with climate considerations are reversing previous commitments. However, the Administration appears to support the expansion of hydropower, unlike other sources of clean energy.

Moreover, in contrast with natural gas, the hydropower permitting statute includes an explicit requirement to give equal consideration to environmental impacts. Emission increases or decreases from hydropower also happen directly at the project, unlike natural gas, where emissions are largely a downstream effect.[20] Thus, this Comment argues that Trump's FERC may still wish to consider hydropower's effect on carbon emissions to some extent, and that states and advocacy groups may be able to successfully argue and sue for FERC to consider climate change in hydropower permitting.

Part I discusses the relevant laws that FERC follows in hydropower licensing proceedings as well as the process for hydropower licensing. Part II contextualizes this topic by explaining how FERC has handled climate change in natural gas licensing. Part III analyzes FERC hydropower orders that have dealt with climate change in the context of both emissions and impacts.

Part IV offers suggestions for how FERC could better handle this subject, either now or under a future administration, by analyzing the emissions impact of hydropower projects in a more detailed manner, investing more resources in studying the impacts that climate change will have on hydropower projects, and altering its license reopener provisions. Part V examines developments to date under the Trump Administration, and then concludes.

13. Rich Glick & Matthew Christiansen, *FERC and Climate Change*, 40 Energy L.J. 1, 43 (2019). They also discussed how FERC could help fight climate change by improving and expanding the electrical grid. *See id*. at 14-38. Glick and Christiansen spend a few pages on hydropower, noting that it has great potential as a source of clean, renewable power, but also that FERC must balance this potential with hydropower's environmental impacts and the effects that climate change will have on rivers. *Id*. at 44-45.
14. *See* Gocke, *supra* note 10, at 245-46.
15. *See* Viers, *supra* note 4, at 659.
16. *See* Joshua Viers & Daniel Nover, *Too Big to Fail: Limiting Public Risk in Hydropower Licensing*, 24 Hastings Env't L.J. 143, 150-55 (2018).
17. *See id*.
18. *See, e.g.*, Lauren Perkins et al., *Hydropower's Promise: The Opportunities and Challenges of Hydropower for Mitigating Climate-Driven Scarcity*, 13 San Diego J. Climate & Energy L. 37 (2022); Lawson, *supra* note 3.
19. *See* J.R. DeShazo & Jody Freeman, *Public Agencies as Lobbyists*, 105 Colum. L. Rev. 2217 (2005).
20. In the recently decided case of *Seven County Infrastructure Coalition v. Eagle County, Colorado*, the U.S. Supreme Court adopted a similar on-site versus downstream distinction in the context of environmental review under NEPA. Seven Cnty. Infrastructure Coal. v. Eagle Cnty., Colo., No. 23-975, 2025 WL 1520964 (U.S. May 29, 2025). A few potential implications of that decision for FERC permitting are discussed in Parts II and V below.

I. Laws Governing FERC Regulation of Hydropower

A. The Federal Power Act

The FPA is the primary law governing FERC's hydropower licensing. The U.S. Congress passed the original version of the FPA in 1920[21] in order to streamline hydropower licensing, which had previously been fragmented, and to promote the development of hydropower.[22] The Act created the Federal Power Commission (FPC), FERC's predecessor.[23] Under the FPA, all nonfederal hydropower projects must obtain a license before construction and in order to continue operating.[24] The FPA authorizes FERC to issue preliminary permits,[25] to grant original licenses for new hydropower projects for up to 50 years,[26] and to relicense permits.[27]

Environmental considerations were raised early on under the FPA. As amended in 1935, the Act required the FPC to consider whether a proposed project was "best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses including recreational purposes."[28] Based on this language, in 1953, the FPC rejected a proposed hydropower license on environmental grounds,[29] although it never did so again until it was reorganized into FERC.[30]

In 1965, the D.C. Circuit held in *Scenic Hudson Preservation Conference v. Federal Power Commission* that "recreational purposes" included "conservation of natural resources, the maintenance of natural beauty, and the preservation of historic sites."[31] Moreover, the court held that the FPC had to consider these interests in its initial licensing decision and not merely monitor for effects after granting a license.[32] While this was a landmark case, DeShazo and Freeman found that FERC largely ignored *Scenic Hudson* in subsequent hydropower proceedings.[33]

Congress created significant changes after *Scenic Hudson*. The Wild and Scenic Rivers Act of 1968 restricted the FPC from approving hydropower projects on rivers designated as part of the National Wild and Scenic Rivers System.[34] A bevy of environmental laws were passed in the late 1960s and early 1970s, including NEPA[35] and the Clean Water Act (CWA).[36] In 1977, the Department of Energy Organization Act replaced the FPA with FERC.[37] Then in 1986, Congress enacted the most significant environmental change to the FPA with the passage of the Electric Consumers Protection Act (ECPA).[38]

The ECPA added explicit environmental considerations to the FPA in two places. First, the ECPA amended the provision on original licenses, FPA §4(e), so that it now reads:

> [F]or any project, the Commission, in addition to the power and development purposes for which licenses are issued, shall give *equal consideration* to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife . . . the protection of recreational opportunities, and the preservation of other aspects of environmental quality.[39]

Secondly, the ECPA added FPA §10(j), which requires FERC to consult with state and federal environmental and resource agencies before issuing licenses.[40]

DeShazo and Freeman found that the ECPA had a pro-environmental effect on FERC, as environmental conditions in hydropower licenses increased after 1986.[41] They attributed this in particular to FPA §10(j), as agencies with explicit environmental mandates could "lobby" FERC to include environmental conditions in hydropower licenses. The modern statute retains this language, and environmental and resource agencies regularly participate in hydropower licensing.[42]

B. Other Environmental Statutes

In addition to the FPA, FERC must comply with several other environmental laws during hydropower licensing proceedings. Some of these statutes are procedural, while others impose substantive requirements. As discussed in the next section, analysis related to these statutes is integrated into FERC's hydropower licensing process alongside FPA-related analysis.

The most significant of these statutes is NEPA.[43] NEPA was passed in 1970 and created a procedural requirement for federal agencies, including FERC, to conduct environmental analysis before embarking on major projects. NEPA

21. Originally called the Federal Water Power Act, ch. 285, 41 Stat. 1063 (1920).
22. *See* DeShazo & Freeman, *supra* note 19, at 2236-37 ("The Federal Water Power Act (FWPA) was designed to centralize authority over licensing hydropower specifically in order to promote its use.").
23. FWPA, ch. 285, §1, 41 Stat. 1063 (1920).
24. *See* FPA §4(e), 16 U.S.C. §797(e) (license before construction); FPA §15, 16 U.S.C. §808 (relicensing).
25. FPA §4(f), 16 U.S.C. §797(f).
26. FPA §4(e), 16 U.S.C. §797(e).
27. FPA §15, 16 U.S.C. §808.
28. Public Utility Act of 1935, ch. 687, §206, 49 Stat. 803, 842 (1935).
29. *See* David B. Spence, *Managing Delegation Ex Ante: Using Law to Steer Administrative Agencies*, 28 J. Legal Stud. 413, 421 (1999) (citing Namekagon Hydro Co., 35 F.P.C. 203 (1953), *aff'd*, Namekagon Hydro Co. v. Federal Power Comm'n, 216 F.2d 509 (7th Cir. 1954)).
30. *See* DeShazo & Freeman, *supra* note 19, at 2240.
31. 354 F.2d 608, 614 (2d Cir. 1965) (citing *Namekagon*, 216 F.2d at 511-12).
32. *See id.* at 624-25; DeShazo & Freeman, *supra* note 19, at 2246.
33. DeShazo & Freeman, *supra* note 19, at 2246.
34. *See* 16 U.S.C. §1278(a).
35. NEPA, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§4321-4370h).
36. Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§1251-1388).
37. Department of Energy Organization Act, Pub. L. No. 95-91, §204, 91 Stat. 567 (1977).
38. ECPA, Pub. L. No. 99-495, 100 Stat. 1243 (1986).
39. FPA §4(e), 16 U.S.C. §797(e) (emphasis added).
40. *See* FPA §10(j), 16 U.S.C. §803(j).
41. DeShazo & Freeman, *supra* note 19, at 2265.
42. This is shown *infra* Part III.
43. 42 U.S.C. §§4321-4370h.

requires that FERC prepare an environmental assessment (EA) or an environmental impact statement (EIS) detailing the environmental effects of the proposed hydropower project and potential alternatives.[44] As discussed below, FERC conducts NEPA analysis concurrently with FPA analysis. David Spence found that the passage of NEPA increased the probability of FERC making a pro-environment hydropower licensing decision by 27% in the years after its passage.[45]

The CWA[46] imposes the strongest substantive requirements on the hydropower licensing process. Specifically, CWA §401 requires that the applicant for a hydropower license obtain a certification from the relevant state agency administering the CWA that their project will comply with the requirements of the Act.[47] This includes compliance with state-set water quality standards.[48] While state agencies are required to act on requests for certification within one year, they are not required to issue a final certification within that time,[49] and, overall, the process for obtaining a CWA certification can be lengthy.[50]

Besides NEPA and the CWA, there are several other environmental statutes that FERC sometimes considers in hydropower licensing. These include the Endangered Species Act (ESA),[51] the Coastal Zone Management Act (CZMA),[52] the National Historic Preservation Act,[53] and the Magnuson-Stevens Fishery Conservation and Management Act.[54] Whether any of these statutes appear during the licensing process depends on the facts of the particular decision and is informed by FERC's NEPA analysis. Issues related to these statutes may be raised by intervenor agencies.

C. *Current FERC Hydropower Proceedings*

FERC has three types of hydropower licensing proceedings: the integrated licensing process (ILP), the traditional licensing process (TLP), and the alternative licensing process (ALP). A developer must acquire a preliminary permit before starting any of these.[55] The ILP was created by the Energy Policy Act of 2005[56] and allows the applicant for a project to conduct prefiling consultation and NEPA review simultaneously.[57] FERC staff are involved earlier in the process than in the TLP and ALP.[58] The ILP is now the default at FERC.[59]

The other two types of proceedings are less common, and require approval by FERC.[60] In the TLP, FERC does not have much involvement in the initial stages of the application, and the project developer instead guides coordination with relevant agencies.[61] FERC does not conduct NEPA review until after filing, which can lengthen the time to approval.[62] Unlike the TLP, FERC has a key role in the early stages of the ALP.[63] The ALP combines prefiling, NEPA review, and administrative processes of other statutes, and is useful "where a flexible timeframe and greater public participation and support is needed for the proposed project."[64]

Regardless of the type of licensing proceeding, FERC is required to issue a decision that analyzes whether the proposed project is in the public interest under the factors in FPA §4(e), as well as to respond to intervenors' comments on the NEPA analysis and proposed license conditions.[65] FERC frequently delegates authority to the director of the Office of Energy Projects to issue orders approving hydropower projects, although large and contested orders may be resolved by the commissioners themselves.[66] While the FPA allows FERC to grant licenses for up to 50 years, FERC's current policy is to issue licenses for up to 40 years.[67]

When issuing a license, FERC may impose environmental conditions on the dam operator,[68] which often come from the suggestions of intervening environmental and natural resources agencies.[69] Most hydropower projects that FERC licenses have between 20 and 30 environmental conditions, and some have more than 100.[70]

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44. *See* Office of Energy Projects, FERC, Hydropower Primer 20 (2017), https://www.ferc.gov/sites/default/files/2020-04/HydropowerPrimer.pdf [hereinafter Hydropower Primer]. An EA is used where a proposed project would not cause major environmental impacts.
45. Spence, *supra* note 29, at 438.
46. 33 U.S.C. §§1251-1388.
47. *See* CWA §401(a)(1), 33 U.S.C. §1341(a)(1). The Supreme Court held that this provision applied to FERC hydropower licensing in *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, 709 (1994).
48. *See* U.S. Environmental Protection Agency, *Overview of CWA Section 401 Certification*, https://www.epa.gov/cwa-401/overview-cwa-section-401-certification (last updated June 9, 2025):
    > In making decisions to grant, grant with conditions, or deny certification requests, certifying authorities consider whether the federally licensed or permitted activity will comply with applicable water quality requirements, which include water quality standards, effluent limitations, new source performance standards, toxic pollutants restrictions and other appropriate water quality requirements of state or tribal law.
49. *See* Perkins et al., *supra* note 18, at 114 (citing North Carolina Dep't of Env't Quality v. Federal Energy Regul. Comm'n, 3 F.4th 655, 669-70 (4th Cir. 2021)).
50. *See* Lawson, *supra* note 3, at 119.
51. 16 U.S.C. §§1531-1544.
52. *Id.* §§1451-1466.
53. *Id.* §§470a to 470w-6.
54. *Id.* §§1801-1882. For a broader list, see Hydropower Primer, *supra* note 44, at 17-23.
55. Lawson, *supra* note 3, at 122 (citing FPA §4(f), 16 U.S.C. §797(f)).
56. *See* Energy Policy Act of 2005, Pub. L. No. 109-58, §241, 119 Stat. 594, 674.
57. *See* Hydropower Primer, *supra* note 44, at 32.
58. *See* Aaron Levine & Austin Flanagan, National Renewable Energy Laboratory, FERC Hydropower Licensing: A Review of Utilization of the ILP, TLP, and ALP 2 (2019), https://www.nrel.gov/docs/fy19osti/71982.pdf.
59. 18 C.F.R. §5.1(f).
60. *See* FERC, *Licensing Processes*, https://www.ferc.gov/licensing/licensing-processes (last updated May 29, 2024).
61. *See* Levine & Flanagan, *supra* note 58, at 3.
62. *Id.* at 3-4.
63. *Id.* at 4.
64. *Id.*
65. *See* Hydropower Primer, *supra* note 44, at 31, 35.
66. *See id.* at 35.
67. Perkins et al., *supra* note 18, at 100 (citing Policy Statement on Establishing License Terms for Hydroelectric Projects, 161 FERC ¶ 61078, para. 14 (2017)).
68. *See* FPA §6, 16 U.S.C. §799.
69. *See* DeShazo & Freeman, *supra* note 19, at 2227.
70. Perkins et al., *supra* note 18, at 121 (citing Gbadebo Oladosu et al., Oak Ridge National Laboratory, Ornl/Tm-2019/1245, An Assessment of Hydropower Environmental Mitigation Costs 6 (2019)).

FERC has traditionally been afforded a great deal of deference in hydropower licensing decisions, as it is seen as a complex area where FERC has expertise.[71] This could change as a result of the U.S. Supreme Court's recent decision in *Loper Bright Enterprises v. Raimondo*.[72] The traditional deference afforded FERC could be one reason why no one has appealed FERC's decisions on climate change in hydropower proceedings to federal court. It also means that FERC has had wide latitude to decide what factors to consider in hydropower licensing.

II. FERC on Climate Change More Broadly

As discussed in the introduction above, FERC has dedicated more attention to climate considerations regarding natural gas permitting. The D.C. Circuit has made several rulings on FERC's obligations with respect to climate change. To give context to FERC's approach to climate change in hydropower proceedings, this part will present a brief overview of judicial decisions on FERC's climate obligations and how FERC has handled climate change in natural gas proceedings.

The D.C. Circuit has required FERC to consider the climate effects of natural gas pipelines in many situations. In the 2017 *Sabal Trail* case, the court held, for the first time, that FERC could consider the downstream GHG emissions of pipelines in natural gas permitting under the Natural Gas Act (NGA)[73] and that FERC is required to analyze these emissions under NEPA for some natural gas projects.[74] Based on this decision, the D.C. Circuit has reversed some FERC decisions for failing to adequately consider GHG emissions.[75] As recently as July 2024, the D.C. Circuit vacated a FERC order approving a natural gas pipeline in New Jersey because FERC's NEPA analysis failed to categorize the significance of relevant GHG emissions and its balancing analysis under the NGA did not adequately analyze GHG emissions.[76]

In response to these cases and public pressure, FERC tried to create a policy for considering GHG emissions in natural gas proceedings. In 2022, FERC issued an "interim policy statement" describing how it would integrate climate considerations into proceedings under the NGA.[77] The policy said that FERC would calculate direct emissions for all projects, and determine on a case-by-case basis whether upstream and downstream emissions were a "reasonably foreseeable effect" of a process.[78] However, the policy faced political blowback, especially from senators arguing that it would upset energy security in the middle of the Ukraine war.[79] FERC quickly retracted the statement and redesignated it as a draft.[80]

On January 24, 2025, shortly after the second inauguration of President Trump, FERC formally terminated its GHG policy.[81] The Commission found that GHG emissions were better addressed on a case-by-case basis when raised by parties to a proceeding.[82] The three Democratic commissioners joined the majority order and issued a concurrence. In their concurrence, they praised the results of the former policy and said that FERC would continue to consider GHG emissions in natural gas proceedings.[83] However, now that one of the Democratic commissioners has resigned, it is unlikely that this approach will continue.[84]

The Supreme Court's recent decision in *Seven County Infrastructure Coalition v. Eagle County, Colorado*[85] will likely affect FERC's legal requirement to consider climate change in natural gas permitting. The decision imposes new restrictions on the scope of judicial review of NEPA. While *Sabal Trail* was predicated on certain downstream effects being foreseeable enough that agencies must include them in EISs,[86] the Court in *Seven County* explicitly stated that NEPA does not require agencies to consider upstream and downstream effects.[87] The Court further held that agencies are entitled to deference on the contents of their EISs, judged under the Administrative Procedure Act's "arbitrary and capricious" standard.[88] The Court distinguished the NEPA context from the *Chevron* deference overturned in *Loper Bright*, as preparation of an EIS entails building a factual record pursuant to expressly delegated statutory authority, while *Loper Bright* was about the interpretation of statutory language.[89]

However, *Seven County* did not directly overrule *Sabal Trail*, and there is a possibility that FERC could still choose or even be required to undertake some analysis of the climate impacts of pipelines. First, the majority opinion notes that while NEPA analysis should focus on the actual loca-

71. *See* Department of Interior v. Federal Energy Regul. Comm'n, 952 F.2d 538, 543 (D.C. Cir. 1992) (citing Electricity Consumers Res. Council v. Federal Energy Regul. Comm'n, 747 F.2d 1511, 1513 (D.C. Cir. 1984)):
> We defer to the agency's expertise, particularly where the statute prescribes few specific standards for the agency to follow, so long as its decision is supported by "substantial evidence" in the record and reached by "reasoned decisionmaking," including an examination of the relevant data and a reasoned explanation supported by a stated connection between the facts found and the choice made.

72. 603 U.S. 369 (2024).
73. *See Sabal Trail*, 867 F.3d 1357, 1373-74 (D.C. Cir. 2017).
74. *Id.* at 1371-74.
75. *See, e.g.*, Food & Water Watch v. Federal Energy Regul. Comm'n, 28 F.4th 277, 292 (D.C. Cir. 2022) (remanding FERC pipeline approval because FERC inadequately analyzed downstream effects of proposed pipeline).
76. *See* New Jersey Conservation Found. v. Federal Energy Regul. Comm'n, 111 F.4th 42, 56, 63 (D.C. Cir. 2024).
77. Consideration of Greenhouse Gas Emissions in Nat. Gas Infrastructure Project Revs., 178 FERC ¶ 61108 (2022).
78. *Id.* at ¶ 61725.
79. *See* Gocke, *supra* note 10, at 212.
80. *See id.*
81. *See* Consideration of Greenhouse Gas Emissions in Nat. Gas Infrastructure Project Revs., 190 FERC ¶ 61049 (2025).
82. *Id.*
83. *Id.*
84. See discussion *infra* Part V.
85. No. 23-975, 2025 WL 1520964 (U.S. May 29, 2025).
86. *See Sabal Trail*, 867 F.3d 1357, 1374-75 (D.C. Cir. 2017).
87. *Seven Cnty.*, 2025 WL 1520964, at *12 (citing Department of Transp. v. Public Citizen, 541 U.S. 752, 770 (2004)) ("An agency may decline to evaluate environmental effects from separate projects upstream or downstream from the project at issue.").
88. *Id.* at *6-7.
89. *Id.* at *6 (citing Loper Bright Enters. v. Raimondo, 603 U.S. 369, 391-92 (2024)).

tion of the project itself and not upstream or downstream effects, it also says that "environmental effects of the project at issue may fall within NEPA even if those effects might extend outside the geographical territory of the project or might materialize later in time."[90] One example that the opinion gives is "emissions that travel downwind and predictably pollute other areas,"[91] which has obvious relevance for the climate change context.

Second, *Seven County* says that an agency's NEPA analysis must be informed by the scope of that agency's regulatory authority.[92] FERC is actively empowered by the NGA to reject projects on environmental grounds.[93] As early as the 1960s, the Commission denied licenses to projects that would increase air pollution.[94] In that same decade, before the enactment of NEPA, the Supreme Court held that FERC could take the end use of fuels into account during certificate proceedings.[95] Thus, FERC's NEPA analysis for pipelines is already in service of a fairly broad regulatory authority.

As discussed in Part V, the current composition of the Commission means that FERC is unlikely to try to use the ambiguities of *Seven County* to continue to analyze climate impacts. The full scope of FERC's obligations to consider climate change under the NGA might have to wait for litigation by project opponents.

III. FERC Hydropower Decisions Involving Climate

This part considers hydropower licensing decisions made both by agency officials, such as the director of the Office of Energy Projects, and decisions made by the commissioners. Decisions made by the commissioners are usually noted as such, because their decisions have more precedential value.

A. Emissions

FERC hydropower licensing decisions from the 1990s weighed avoidance of GHG emissions positively as a balancing factor, although usually without much sophistication. The earliest FERC decision in this regard is *Allegheny Electric Cooperative* in 1989, which noted that certain proposed mitigation measures for a project would result in lower power generation, which would cause the loss of the benefits from that generation, including "the displacement of fossil fuel generation" by increased hydropower generation.[96] The decision stated that "these benefits are noteworthy in light of growing concerns about stratospheric ozone depletion and global warming."[97] Subsequent decisions repeated similar language about "concerns" over global warming,[98] and some decisions calculated the amount of carbon dioxide that was saved by not building a fossil fuel plant of equivalent electrical generation capacity.[99]

These early decisions were written by FERC office directors, but the commissioners soon joined in. In a footnote in 1993, the commissioners noted that a coal plant alternative to a hydropower project would contribute to global warming.[100] More substantive engagement came the next year in *City of Leclaire*.[101] When evaluating alternatives to the proposed project, the commissioners wrote, "[W]e conclude that the only appropriate alternative to the proposed action is denial of the project license. Denial of the license would deprive the public of an opportunity to conserve fossil fuels and to reduce atmospheric pollution and global warming."[102]

The commissioners thus cited hydropower's climate mitigation effects as one of the main reasons to not select a no-action alternative.[103] Commissioner Vicky Bailey concurred, noting that the William Clinton Administration had released its Climate Change Action Plan in December 1993 calling for more hydropower development.[104] Additionally, Bailey expressed concern that a license provision providing that FERC could add requirements for additional studies, financial assurance, or decommissioning at any time would disincentivize the development of hydropower and thus disincentivize efforts to combat climate change.[105]

Thus, relatively soon after Congress passed the ECPA in 1986, FERC, including the commissioners, was citing climate mitigation as a reason to approve hydropower licenses. None of these early decisions mention any pushback on this issue from involved parties.[106] This approach continued at FERC into the 2000s.[107]

FERC's approach toward emissions changed in the 2010s. Beginning in 2011, FERC started using new standard language, stating that a project alternative was selected because the increased energy generation came "from a renewable resource that does not contribute to

90. *Id.* at *10.
91. *Id.*
92. *Id.* at *11-12.
93. *See Sabal Trail*, 867 F.3d 1357, 1373 (D.C. Cir. 2017) (citing 15 U.S.C. §717f(e)).
94. *See* Gocke, *supra* note 10, at 225-26 (citing In re Transcontinental Gas Pipe Line Corp., 38 F.P.C. 906 (1967)).
95. *See id.* at 226 (citing Federal Power Comm'n v. Transcontinental Gas Pipe Line Corp., 365 U.S. 1 (1961)).
96. 48 FERC ¶¶ 61363, 62362 (1989).
97. *Id.*
98. *See, e.g.*, H&H Props., 60 FERC ¶¶ 62058, 63092 (1992).
99. *See, e.g.*, French Paper Co., 54 FERC ¶¶ 62134, 63217 (1991) ("The production of power from a coal plant equivalent to that produced by French Paper's generators would release, into the atmosphere, about 2.5 tons of sulfur dioxide, 20.9 tons of nitrous oxides, 2.1 tons of carbon monoxide, and 12,662 tons of carbon dioxide annually.").
100. *See* Marysville Hydro, 63 FERC ¶¶ 61271, 62744 n.64 (1993).
101. 66 FERC ¶ 61270 (1994).
102. *Id.* at ¶ 61683.
103. *See id.*
104. *Id.* at ¶ 61723.
105. *See id.*
106. I have not found any secondary sources that discuss FERC's early consideration of climate change in this context. None of the secondary sources that LEXIS shows cite *City of Leclaire* reference its discussion of climate change, and I do not have access to any of the Westlaw secondary sources.
107. *See, e.g.*, S.D. Warren Co., 105 FERC ¶¶ 61009, 61036 (2003) ("The project would displace existing and planned nonrenewable fossil-fueled generation, which contributes to the production of nitrous oxides and sulfurous oxides that contribute to air pollution, as well as carbon dioxide, which contributes to the phenomenon of global warming.").

atmospheric pollution."[108] This language has continued to appear in FERC licensing decisions through 2025,[109] and seems to have completely replaced any specific mention of avoided carbon dioxide or any other pollutants as a reason for selecting a project.[110] It is unclear why this change happened.

One strong possibility is that this language was adopted to reduce demands for FERC to consider climate change's effect on hydrology. As described in the next section, FERC faced a great deal of demand in the early 2010s to consider the effect that climate change would have on rivers.[111] By continuing to tout the benefits of hydropower for fighting climate change but refusing to consider the effects that climate change would have on the rivers where hydropower facilities were located, the Commission would appear hypocritical. Changing the language it used to a vaguer mention of not contributing to "atmospheric pollution" would make this stance seem less hypocritical.

Despite FERC replacing specific descriptions of carbon dioxide avoided with the language of "atmospheric pollution" reductions, government and nonprofit third-party intervenors have continually raised the issue of GHG emissions in licensing proceedings since 2011.[112] They have even raised the potential for hydropower projects to cause *increased* GHG emissions. Before 2024, when third parties raised the issue of the potential for a project to cause increased GHG emissions, like when a project could potentially use electricity from fossil fuels to power pumped storage, FERC rejected the concerns as too preliminary.[113]

FERC began to do more substantive analysis of GHG emissions in 2024. In the two Office of Energy Projects director decisions with more substantive analysis, the U.S. Environmental Protection Agency (EPA) raised issues related to emissions. In *Community of Elfin Cove Non Profit Corp.*, EPA recommended that FERC's NEPA analysis incorporate the Council on Environmental Quality's (CEQ's) interim climate impact guidance in order to determine GHG emissions from the project and how it conformed with national and local GHG emission-reduction goals.[114]

In response, FERC used numbers from the National Renewable Energy Laboratory to determine that initial construction of the project would result in one-time emissions of 1.8 tons of carbon dioxide equivalent and continued operation would result in yearly emissions of 0.5 tons of carbon dioxide equivalent.[115] However, FERC noted that the community currently had its electricity provided by diesel generators.[116] The decision then went on to calculate that replacing diesel generation with hydropower would stop the emission of about 290 tons of carbon dioxide equivalent each year and therefore represented a positive decrease in GHG emissions.[117]

FERC performed similar in-depth analysis of GHG emissions in response to a request by EPA in *PacifiCorp*.[118] This licensing proceeding involved a request by the operator to decommission one dam and expand another.[119] EPA recommended that (1) the operator reuse concrete or dispose of it at a recycling facility instead of burying it on-site; (2) the decommissioning plans should specify how electrical equipment containing the GHG sulfur hexafluoride would be handled; and (3) FERC provide an estimate of GHG emissions from increasing capacity at the remaining facility.[120]

FERC rejected the first proposal, stating that any emissions reduction from recycling would be offset by emissions from transporting the concrete.[121] It accepted the second proposal, requiring the licensee to develop a handling plan with the relevant state agency.[122] Regarding the third suggestion, it noted that "[p]athways for GHG emissions to occur from hydropower facilities include from the surface of the reservoir (diffusion) or when water passes from the reservoir through a facility's turbines or the downstream river channel (degassing)," and that GHG emissions from hydropower facilities are greatest within the first 20 years of operation and decline afterwards.[123] As the remaining facility was constructed more than 100 years ago, FERC concluded that increasing capacity would not result in a net increase in GHG emissions.[124]

Community of Elfin Cove and *PacifiCorp* show that FERC is capable of performing in-depth analysis of GHG emissions, including of negative climate effects from hydropower projects. This analysis is more intensive than what FERC performed during the 1990s. However, it is not standard in licensing decisions now like it was in the 1990s.[125] *Community of Elfin Cove* still used the language of selecting the project alternative because the energy generated comes "from a renewable resource that does not con-

108. According to a LEXIS search for this phrase in FERC decisions, it was first used when approving a new 20-kilowatt project in *City of Ouray*, 136 FERC ¶¶ 62015, 64038 (2011).
109. *See, e.g.*, Winooski Hydroelectric Co., 191 FERC ¶¶ 62021, 64091 (2025).
110. None of the LEXIS searches I conducted turned up any FERC decisions more recent than 2010 that have a specific discussion of pollutants instead of the language of not contributing to "atmospheric pollution."
111. *Infra* Section III.B.
112. *See, e.g.*, Eagle Crest Energy Co., 153 FERC ¶¶ 61058, 61416 (2015).
113. Note, however, that the reasons why FERC rejected GHG emissions analysis are case-specific. *See Eagle Crest Energy Co.*, 153 FERC at ¶ 61416 (rejecting environmental nonprofit's contention that NEPA analysis for pumped storage project should include potential emissions from using fossil fuels when it was not certain what electrical generation the project would use); Ortus Power Res. Colo., LLC, 179 FERC ¶¶ 62103, 64191 (2022) (rejecting concerns of Colorado Parks and Wildlife and the U.S. Department of the Interior regarding GHG emissions because project at preliminary permit stage, which does not yet permit construction and therefore concerns were premature).
114. *See* 186 FERC ¶¶ 62030, 64102 (2024).
115. *See id.*
116. *Id.*
117. *Id.*
118. 188 FERC ¶ 62102 (2024).
119. *Id.* at ¶ 64233.
120. *Id.* at ¶¶ 64237, 64240-64241.
121. *Id.* at ¶ 64237.
122. *Id.* at ¶ 64241.
123. *Id.*
124. *Id.*
125. *See, e.g.*, Watson Assocs., L.P., 187 FERC ¶ 62056 (2024) (2024 hydropower decision without any mention of GHG emissions or specific discussion of climate change regarding the project).

tribute to atmospheric pollution."[126] Still, FERC has done more to consider GHG emissions than to consider the effects of climate change *on* hydropower projects.

B. Effects of Climate Change

A 2013 decision by the FERC commissioners on *Alaska Energy Authority* set the general pattern for how FERC considers the effects of climate change on hydropower projects and the surrounding environment: it mostly does not.[127] This decision entirely concerned the extent of climate studies that the Alaska Energy Authority (AEA), the project licensee, should have to perform. During project consultation, the National Marine Fisheries Service (NMFS) requested that AEA study "the potential effects of climate change on glacier wastage and retreat and the corresponding effects on streamflow entering the proposed reservoir, and to evaluate the effects of glacial surges on sediment delivery to the reservoir."[128]

The director of the Office of Energy Projects twice rejected the portions of the study related to climate change, including after holding a dispute resolution panel at the request of NMFS, on the grounds that the study would be too costly (a minimum of $1 million) and that the results of any study would be too inconclusive to base decisions upon.[129] The director determined that standard hydrological studies would suffice and pointed to a standard license reopener provision that would allow for additional studies if conditions changed.[130] NMFS was not satisfied, and appealed to the commissioners for a rehearing.[131]

On appeal, the commissioners upheld the director's decision. The commissioners said that they agreed climate impacts were important here, but that standard hydrological studies could capture some of those impacts.[132] They agreed with the director that NMFS' proposed studies were too expensive and too speculative.[133] They pointed to their standard reopener provision, allowing FERC to impose new license conditions, as sufficient to deal with any changes that might arise from climate change. Commissioner John R. Norris concurred, writing that, at some point in the future, climate modeling might develop to be certain enough to be useful for FERC decisionmaking.[134]

That future has seemingly not arrived, and FERC continues to make decisions that mostly fall along the lines of the majority opinion in *Alaska Energy Authority*. The Commission has by and large rejected requests for extensive climate modeling in its NEPA analysis, including requests made by EPA[135] and the U.S. Army Corps of Engineers.[136] Sometimes FERC's environmental analysis will include a small discussion of climate impacts, but it is usually in quite general terms, or it depends upon preexisting information instead of new studies.[137]

FERC frequently says that proposed climate studies are too speculative.[138] The commissioners have pointed out that NEPA and the CEQ regulations give them discretion to determine the usefulness of studies.[139] FERC typically dismisses requests for studies by noting the standard reopener provision, as it did in *Alaska Energy Authority*, saying that if conditions change, it will be able to conduct more studies.[140]

While FERC has mostly rejected studying climate impacts during NEPA review, it has imposed some license conditions related to climate change. However, these conditions tend to be minor and to overlap with other environmental concerns. For example, in *City of Nashua*, the project license contained a condition for additional water quality monitoring, and this was justified in part because of potential climate change effects.[141]

However, the broader reason was that existing studies were five years old and inconclusive on certain points, so climate change was effectively tacked on.[142] In other licenses, the licensee is required to report on climate change effects during annual meetings with resource agencies and local Indian nations, which cover a broad range of topics.[143] Other times, climate change is merely one of several justifications given for a condition, such as surface water monitoring.[144]

While FERC acknowledges that climate change will have environmental consequences on the rivers that hydropower facilities operate on, it has overall shown little enthusiasm for studying or mitigating these effects in advance. This is despite the efforts of government agencies and nonprofits over the years to have FERC conduct this type of analysis. While FERC says that it can reopen licenses at any point should a changing climate warrant it, this seems yet to have happened.

126. Community of Elfin Cove Non Profit Corp., 186 FERC ¶¶ 62030, 64106 (2024).
127. 144 FERC ¶ 61040 (2013).
128. *Id.* at ¶ 61198.
129. *Id.* at ¶¶ 61198-61200.
130. *Id.* at ¶¶ 61198-61199.
131. A nonprofit called the Center for Water Advocacy also appealed, but the commissioners dismissed the appeal on standing grounds. *Id.* at ¶ 61200 ("As an initial matter, we note that the Center did not file the study request at issue and, indeed, is not an entity entitled to file for dispute resolution. Accordingly, it lacks standing to seek review of the study dispute determination, and we reject its request for rehearing.").
132. *See id.* at ¶¶ 61201-61202.
133. *See id.* at ¶ 61201.
134. *See id.* at ¶ 61202.
135. *See* Clean River Power MR-3, LLC, 153 FERC ¶¶ 62257, 64924 (2015).
136. *See* FFP Mo. 12, LLC, 158 FERC ¶¶ 62190, 64512 (2017).
137. *See, e.g.*, French Hydro LLC, 174 FERC ¶¶ 62134, 64369 (2021) (EPA raised concerns about project resiliency to climate change, so FERC looked at historic data for the river, but did not conduct new studies).
138. *See, e.g.*, Eagle Crest Energy Co., 153 FERC ¶¶ 61058, 61415 (2015).
139. *See id.* at ¶¶ 61415-61416.
140. *See, e.g.*, Community of Elfin Cove Non Profit Corp., 186 FERC ¶¶ 62030, 64102 (2024).
141. *See* 182 FERC ¶¶ 62009, 64040 (2023).
142. *See id.*
143. *See, e.g.*, Black Bear Hydro Partners, LLC, 140 FERC ¶¶ 62194, 62061-62088 (2012).
144. *See* Brookfield White Pine Hydro, LLC, 185 FERC ¶ 62074, app. (2023): This condition is necessary to assure that the discharges from the proposed Project will comply with the Surface Water Quality Standards because dissolved oxygen, pH, and temperature are among the Surface Water Quality Standards to be impacted by the Project . . . . For example, an increase in the frequency and magnitude of lower river flows and higher temperatures caused by climate change could result in an increase in the frequency and magnitude of dissolved oxygen and pH excursions and higher water temperatures.

IV. Recommendations for the Future

This part provides recommendations on how FERC could change its approach to considering climate in hydropower licensing. While, as discussed in the next part, FERC is unlikely to make significant efforts to address climate during the Trump Administration, a future Commission has great potential to implement reform. The previous part showed that FERC generally considers climate change sparingly, despite substantial pressure by federal and state agencies and nonprofits to do more.

FERC's approach to date has been somewhat haphazard, with certain decisions considering climate change more and some less. Much appears to depend on the strength of "lobbying" by intervenors.[145] While DeShazo argued that this type of lobbying was intentional in ECPA and showed that it led to increased environmental consideration, it has not proven as effective in this context. This part therefore offers suggestions for how FERC can improve its climate analyses and make decisions more consistently.

FERC should perform more detailed analysis of the GHG emissions that hydropower projects save or cause. It is clearly possible for FERC to perform this type of analysis. In the 1990s and 2000s, the Commission was able to quantify the number of tons of carbon dioxide equivalent that a project would save. In *Community of Elfin Cove* and *PacifiCorp*, it showed that it is now able to analyze GHG emissions resulting from hydropower projects.[146]

As part of this, FERC should stop using stock language around hydropower projects not contributing to "atmospheric pollution." There are two reasons for this. First, the Commission should specify the amount and types of atmospheric pollution avoided, especially in reference to local conditions, such as existing power plants.[147] Second, in *Community of Elfin Cove* and *PacifiCorp*, FERC acknowledged that hydropower projects do cause some GHG emissions, so it is inconsistent to say that they do not contribute at all to atmospheric pollution.

Thus, FERC should not assume that hydropower always has a positive effect on GHG emissions. Glick and Christiansen proposed that FERC should analyze where some natural gas pipelines might have beneficial impacts on GHG emissions, for example by displacing existing coal plants, as opposed to when other pipelines have negative impacts.[148] This type of analysis should apply to hydropower as well.

Similarly to what Glick and Christiansen argued, FERC should pay attention to existing sources of power in an area. Where existing sources are heavy GHG emitters, there would be more reason to build hydropower. But where existing sources are renewables, there is less reason to build hydropower. This analysis might also depend upon climate modeling: there is less rationale to build hydropower on a river that climate change will cause to significantly dry up.

FERC should do more to facilitate the use of climate modeling in its environmental analysis. Arguably, climate modeling is already sufficiently developed to yield usable information for FERC,[149] despite its consistent statements to the contrary. If FERC is dissatisfied with existing modeling, it could also invest more resources into developing usable climate modeling on its own.

FERC should adapt its licenses for the climate change era. Viers and Nover proposed shortening hydropower licenses to 30 years.[150] While this shortened timeline may present challenges for project operators, it may also be necessary with how quickly climate change is affecting riverine conditions. Additionally or alternatively, FERC could include more definite language around its reopener provisions. It consistently points to these as a reason it does not have to do more climate monitoring now. These reopener provisions state:

> The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.[151]

Similarly:

> In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.[152]

These reopeners do not mention climate change and do not have specific triggers. FERC could create a more climate-focused reopener provision, potentially stating that action must be taken if certain criteria are met.

145. *See generally* DeShazo & Freeman, *supra* note 19.
146. Discussed *supra* Section III.A.
147. FERC did an admirable job of this in *Community of Elfin Cove*, discussed *supra* Section III.A, where it compared emissions from the proposed hydropower project to those from diesel generators that currently supplied power to the local community.
148. *See* Glick & Christiansen, *supra* note 13, at 43 ("[I]t may even be the case that a [particular] pipeline has a net positive environmental effect if, for example, it facilitates the displacement of a significant number of higher emitting coal-fired power plants.").
149. *See* Viers, *supra* note 4, at 657.
150. *See* Viers & Nover, *supra* note 16, at 150-51.
151. FERC Form L-17, Terms and Conditions of License for Unconstructed Minor Project Affecting Lands of the United States art. 11 (1975), https://www.ferc.gov/sites/default/files/2020-04/FormL-17.pdf. These provisions were cited in *Community of Elfin Cove Non Profit Corp.*, 186 FERC ¶¶ 62030, 64115 (2024).
152. FERC Form L-17, *supra* note 151, art. 14.

V. Conclusion

FERC has engaged with climate in its hydropower licensing process, but much less than it could. It pointed out specific GHG emissions reductions from hydropower projects in the 1990s and 2000s, but generally stopped describing the climate mitigation effects of hydropower in the 2010s. This trend also correlates with climate change becoming a more prominent and polarized issue.[153] In 2024, FERC made good progress in describing the specific emissions benefits and negative effects, as shown in *Community of Elfin Cove* and *PacifiCorp*. It remains to be seen whether the Commission will continue this trend and potentially build upon it.

This Comment builds upon DeShazo and Freeman's findings that agencies, by "lobbying" FERC, play a major role in pushing environmental considerations. However, while these authors showed how agencies succeeded at incorporating increased environmental conditions into hydropower licenses, the present research shows that agencies have been less successful at getting FERC to consider climate change. This is particularly apparent in climate effects on projects and the surrounding environment, where the commissioners' 2013 decision in *Alaska Energy Authority* that specific climate modeling was too speculative to perform as part of NEPA analysis has dominated hydropower licensing to this date. So far, FERC has resisted requests to study particular climate impacts under NEPA analysis, although it has included some small climate provisions in license conditions.

The Supreme Court's decision in *Seven County* will probably not greatly affect the consideration of climate change in hydropower licensing. Unlike the railroad at issue in *Seven County* or the natural gas pipelines that the D.C. Circuit has analyzed, hydropower facilities are not carrying products that will be burned elsewhere, and their analysis is not about "upstream" or "downstream" effects. The emissions (or lack thereof) and the effects on rivers and ecosystems happen directly where the project is located.

Seven County emphasizes that the correct scope of required NEPA analysis is the location of the relevant project, which clearly applies here.[154] Moreover, the FPA gives FERC an explicit mandate to consider environmental factors in hydropower permitting. *Seven County* reaffirmed that an agency's substantive statutes affect the scope of required NEPA analysis.[155] The FPA's broad environmental mandate means that FERC still retains authority to consider climate change throughout hydropower permitting.

FERC is substantially less likely to improve its consideration of climate change now that President Trump is back in office. After facing pressure from the White House, Democratic Commissioner Willie Phillips resigned on April 22, 2025.[156] This was more than one year before his term was due to end on June 30, 2026.[157] With Phillips' resignation, FERC went from a 3-2 Democratic commissioner majority to a likely 3-2 Republican majority once President Trump appoints a replacement.

President Trump is reshaping the composition of the Commission even further, having recently appointed Laura Swett to replace the seat held by current Republican Chairman Mark Christie.[158] It is expected that the Trump Administration will exercise much more control over FERC than is traditional.[159] Additionally, FERC currently faces a legal challenge to its existence as an independent agency.[160] The Supreme Court's recent decision to stay court orders blocking President Trump from firing members of the similarly constituted National Labor Relations Board and the Merit Systems Protection Board could indicate that FERC's days as an independent agency are numbered.[161]

While FERC revoked its draft policy on climate change in natural gas permitting during the beginning of the Trump Administration, it is still possible that the Commission could incorporate climate considerations in hydropower licensing. The Administration has touted emissions reductions in particular contexts.[162] Trump's first-day Executive Order, Unleashing American Energy, specifically discussed promoting hydropower by removing regulations.[163] Continuing to evaluate emissions in hydropower would be less controversial than any moves regarding natural gas,

153. *See* Brian Mastroianni, *How Climate Change Became So Politicized*, CBS News (Dec. 3, 2015), https://www.cbsnews.com/news/how-climate-change-became-so-politicized/.

154. *See* Seven Cnty. Infrastructure Coal. v. Eagle Cnty., Colo., No. 23-975, 2025 WL 1520964, at *10-11 (U.S. May 29, 2025).

155. *See id.* at *11.

156. *FERC Chairman Mark C. Christie's Statement on the Resignation of Commissioner Willie L. Phillips*, FERC (Apr. 22, 2025), https://www.ferc.gov/news-events/news/ferc-chairman-mark-c-christies-statement-resignation-commissioner-willie-l. The White House initially requested that Philipps resign in April 2025. *See* Shayna Greene, *FERC Member Shakeup Likely to Provoke Ripples Instead of Waves*, Bloomberg L. (May 6, 2025), https://news.bloomberglaw.com/product/blaw/bloomberglawnews/exp/eyJpZCI6IjAwMDAwMTk2LTg4MzEtZGE5MC1hZGJmLWNkMzFjZWM4MDAwMCIsImN0eHQiOiJORVZFIiwidXVpZCI6ImRPRG51dmJjVnBzNjU3bVJmTk1sWFE9PVAvcy9kajBIYzFiUmxZckpBTkI1b3c9PSIsInRpbWUiOiIxNzQ2NTI5OTUyMDMzIiwic2lnIjoiaXd4QWpRR09BQkp5TWo4ZWxxb0pEN2NORXpVPSIsInYiOiIxIn0.

157. *See Democrat Phillips Resigns From US Energy Regulatory Panel*, Reuters (Apr. 22, 2025), https://www.reuters.com/world/us/democrat-phillips-resigns-us-energy-regulatory-panel-2025-04-22/.

158. *See* Ethan Howland, *White House Names Energy Attorney Swett to Replace FERC's Christie*, Util. Dive (June 3, 2025), https://www.utilitydive.com/news/white-house-laura-swett-ferc-christie-gas-oil/749641/.

159. *See id.*

160. *See* Lisa Sorg, *Is FERC's Future at Stake in Its Titanic Clash With American Efficient?*, Inside Climate News (Mar. 23, 2025), https://insideclimatenews.org/news/23032025/ferc-challenges-american-efficient-energy-claims-electric-grid/.

161. *See* Niina H. Farah & Francisco "A.J." Camacho, *How the Supreme Court Could Undercut FERC Independence*, E&E News (May 29, 2025), https://www.eenews.net/articles/how-the-supreme-court-could-undercut-ferc-independence/; Trump v. Wilcox, No. 24A966 (U.S. May 22, 2025).

162. *See, e.g.*, *On Earth Day, We Finally Have a President Who Follows Science*, White House (Apr. 22, 2025), https://www.whitehouse.gov/articles/2025/04/on-earth-day-we-finally-have-a-president-who-follows-science/ ("Moreover, by ending the Biden-era pause on liquefied natural gas export approvals, the U.S. is sharing cleaner energy with allies, reducing global emissions, and creating American jobs. . . .").

163. Exec. Order No. 14154, §3(a), 90 Fed. Reg. 8353 (Jan. 29, 2025) ("The heads of all agencies shall review all existing regulations, orders, guidance documents, policies, settlements, consent orders, and any other agency actions . . . to identify those agency actions that impose an undue burden on the identification, development, or use of domestic energy resources—with particular attention to . . . hydropower.").

and could even help the Administration promote hydropower by strengthening the statutorily required public factors balancing.

FERC is less likely to further the consideration of emissions increases from hydropower or to venture into the effects that climate change will have on hydropower projects and affected rivers. These factors, unlike emissions reductions, weigh against hydropower. FERC has less reason to invoke the specter of climate change when it weighs against administration priorities.

Moreover, the consideration of emissions caused by hydropower came as a result of EPA intervention, but EPA has dropped climate change as a priority. The most striking example of this shift in priorities is from the Agency's decision to reconsider the greenhouse gas endangerment finding.[164] Because EPA's interventions on emissions produced by hydropower were a very recent development (although EPA has intervened with other concerns for decades), there is less institutional pressure to keep these interventions. EPA will likely stop recommending detailed emissions calculations in future proceedings.

While EPA will no longer drive FERC's analysis of GHG emissions, this leaves space for nongovernmental organizations (NGOs) and states to take up the torch. Although interagency consultation is most effective for getting FERC to take environmental action,[165] the Commission still listens to NGOs and states. When evaluating the emissions from the hydropower project in *Community of Elfin Cove*, FERC used a study from the National Renewable Energy Laboratory that has standard numbers for emissions from hydropower construction per gigawatt hour.[166] That study is still readily available online.[167] An NGO or state intervenor could easily point to this study and *Community of Elfin Cove* as examples of what FERC can do. The FPA has specific statutory language about equally considering environmental factors, so intervenors could even potentially appeal a refusal to consider emissions to the D.C. Circuit.

FERC has varied in its approach to evaluating the relationship between hydropower and climate change since 1989. In 2024, it made good progress toward improving the way it evaluates GHG emissions from hydropower projects, but this development is not likely to continue under the second Trump Administration. Still, as the effects of climate change continue to accelerate, the need for hydropower's clean energy potential, as well as the risks that drying rivers pose to hydropower, mean that this conversation will continue to be relevant. As long as FERC continues to regulate hydropower, the need for it to conduct a rigorous assessment of climate impacts will remain.

164. *See* Press Release, U.S. EPA, Trump EPA Kicks Off Formal Reconsideration of Endangerment Finding With Agency Partners (Mar. 12, 2025), https://www.epa.gov/newsreleases/trump-epa-kicks-formal-reconsideration-endangerment-finding-agency-partners.

165. *See* DeShazo & Freeman, *supra* note 19.

166. *See* 186 FERC ¶¶ 62030, 64102 (2024) (citing National Renewable Energy Laboratory, Life Cycle Greenhouse Gas Emissions From Electricity Generation: Update (2021), https://docs.nrel.gov/docs/fy21osti/80580.pdf).

167. National Renewable Energy Laboratory, *supra* note 166.