

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued January 19, 2022

Decided June 28, 2022

No. 20-1427

SIERRA CLUB, ET AL.,
PETITIONERS

v.

FEDERAL ENERGY REGULATORY COMMISSION,
RESPONDENT

MOUNTAIN VALLEY PIPELINE, LLC AND PUBLIC SERVICE
COMPANY OF NORTH CAROLINA, D/B/A DOMINION ENERGY
NORTH CAROLINA,
INTERVENORS

On Petition for Review of Orders of the
Federal Energy Regulatory Commission

Benjamin A. Luckett argued the cause for petitioners. With him on the briefs was *Elizabeth F. Benson*.

Matthew W.S. Estes, Attorney, Federal Energy Regulatory Commission, argued the cause for respondent. On the brief were *Matthew R. Christiansen*, General Counsel, *Robert H. Solomon*, Solicitor, and *Anand R. Viswanathan*, Attorney.

Jeremy C. Marwell argued the cause for respondent-intervenors Mountain Valley Pipeline, LLC and Public Service Company of North Carolina, Inc. With him on the brief were *Matthew Eggerding, Matthew X. Etchemendy, James T. Dawson, Charlotte Taylor, Stephen Petrany, and James Olson.*

Before: SRINIVASAN, *Chief Judge*, WILKINS and WALKER, *Circuit Judges.*

Opinion for the Court filed by *Circuit Judge* WILKINS.

WILKINS, *Circuit Judge.* Petitioners, all environmental organizations, seek to vacate the Federal Energy and Regulatory Commission’s (“FERC” or the “Commission”) order giving the green light to Mountain Valley, LLC to construct a new pipeline. That pipeline, the “Southgate Project,” would extend Mountain Valley’s Mainline System Project, connecting its terminus in Virginia to facilities in North Carolina. Its “newness,” as an extension of the non-operational Mainline System Project, is one of the prime subjects of dispute. Petitioners also request that we vacate the Commission’s denial of rehearing.

Petitioners challenge the Commission’s Certificate Order and its denial of rehearing as arbitrary and capricious on two bases: the approved return on equity rate and the adequacy of the Commission’s Environmental Impact Statement. Because the Commission’s decisions on both scores were reasonable and supported by substantial evidence, we deny the petition for review.

I.

The Natural Gas Act, 52 Stat. 821 (1938) (codified as amended at 15 U.S.C. §§ 717–717z) empowers the

Commission to regulate the interstate transportation and sale of natural gas. Under Section 7 of the Act, a natural gas company cannot construct gas transportation facilities or extend its currently operational facilities without first obtaining a certificate of public convenience and necessity from the Commission. 15 U.S.C. § 717f(c)(1)(A). The Commission will issue a certificate if it finds that the service “is or will be required by the present or future public convenience and necessity.” *Id.* § 717f(e). The applicant must also be “able and willing properly to do the acts and to perform the service proposed and to conform to” the Act’s provisions as well as the Commission’s rules and regulations. *Id.*

The Commission will approve a pipeline’s proposed rate of sale as long as it is “just and reasonable.” *Id.* § 717c(a). If, however, the company is proposing a newly certificated service, the Commission will apply the less exacting “public interest” standard, under Section 7, to set the initial rate a pipeline can charge. *Missouri Pub. Serv. Comm’n v. FERC*, 337 F.3d 1066, 1068 (D.C. Cir. 2003). Such a rate “hold[s] the line” until the Commission can engage in more extensive ratemaking proceedings under Sections 4 and 5 of the Act down the road. *Gulf South Pipeline Co. v. FERC*, 955 F.3d 1001, 1005 (D.C. Cir. 2020) (quoting *Atl. Ref. Co. v. Pub. Serv. Comm’n of State of NY*, 360 U.S. 378, 391–92 (1959)).

Prior to approving a certificate on a proposed pipeline, the National Environmental Policy Act (“NEPA”) requires the Commission to evaluate the action’s environmental impacts. If the agency finds that the action is likely to significantly impact the environment, it must draft an environmental impact statement (“EIS”), detailing the action’s environmental impacts, potential mitigation methods, the action’s cumulative impacts, and reasonable alternatives to the action, including a no-action alternative. 40 C.F.R. §§ 1502.14, 1502.16,

1501.3(a)(3). NEPA requires agencies to “take a ‘hard look’ at the environmental consequences before taking a major action.” *Baltimore Gas & Elec. Co., Inc.*, 462 U.S. 87, 97 (1983).

II.

The Mainline System Project has been plagued with issues since construction commenced in February 2018. Mountain Valley had planned for Mainline to consist of a new 303.5-mile-long pipeline from Wetzel County, West Virginia to an interconnection with a compressor station in Pittsylvania County, Virginia. Following a series of adverse rulings from the Fourth Circuit, construction on the Mainline System has proceeded in fits and starts, culminating in a stop-work order in October 2019. As of June 2020, construction along the project’s right-of-way was 92% complete.

Despite Mainline’s setbacks, on November 6, 2018, Mountain Valley filed an application with the Commission for the Southgate Project, which would connect the Mainline System’s terminus in Pittsylvania County, Virginia to Dominion Energy’s local facilities in Rockingham and Alamance Counties, North Carolina. Consisting of 75.1 miles of an underground natural gas transmission pipeline system, the pipeline would have the capacity to transport 375 million cubic feet of gas per day. Final EIS Executive Summary-1–2. Mountain Valley cites the project as necessary to meet the needs of Dominion Energy, its anchor shipper,¹ which has pressed for additional natural gas transportation services in the

¹ An anchor shipper is “one or a very few shippers with very large, significant volumes of natural gas that will financially support the initial design and cost of a project.” *Regulations Governing the Open Season for Alaska Natural Gas Transportation Projects*, 110 FERC ¶ 61,095, ¶ 12 n.8 (2005).

region. *Id.* at Executive Summary-1. Petitioners jointly filed a protest in opposition to the project.

On June 18, 2020, the Commission issued a certificate of public convenience and necessity, approving Mountain Valley's application to build and operate the Southgate Project. *See Mountain Valley Pipeline, LLC*, 171 FERC ¶ 61,232 (2020) (“*Certificate Order*”). Just over two months later, on August 20, 2020, it denied Petitioners' request for a rehearing. *Mountain Valley Pipeline, LLC*, 172 FERC ¶ 62,100 (2020) (“*Rehearing Order*”). Particularly relevant to Petitioners' claims, the Commission approved Mountain Valley's requested initial rate of return on equity at 14 percent, rather than the typical 10.55 percent, because “[w]ithout cash flows from existing operations and a proven track record,” Southgate's capital funding outlook more closely resembled that of a new pipeline than an extension of an operational one. *Certificate Order*, ¶ 57. As for the project's environmental impacts, the Commission noted that the EIS had fleshed out specific practices to mitigate erosion as well as sedimentation, and evaluated the cumulative impacts arising from its temporal and geographic proximity to the Mainline System. *Id.* ¶¶ 75, 93, 141; *Rehearing Order*, ¶¶ 28–31. Commissioner (now Chairman) Glick partially dissented from the Commission's Certificate Order, opposing the 14 percent return on equity rate and the failure to address the project's greenhouse gas effects. *Certificate Order*, ¶¶ 1–23 (Glick, Comm'r, dissenting).

In October 2020, Petitioners filed a petition for our review.² They urge us to vacate and remand the Commission's

² The Public Service Company of North Carolina, Monacan Indian Nation, Sappony Tribe, and Mountain Valley Pipeline filed motions to intervene in the appeal, all of which were granted. *See Clerk's Order* (Dec. 9, 2020). The Monacan Indian Nation and Sappony Tribe later moved to withdraw as intervenors in August 2021, after

Certificate Order of June 18, 2020, as well as its order of August 20, 2020, denying Petitioners' request for rehearing.

III.

Our jurisdiction over this appeal is secure under the Natural Gas Act. *See* 15 U.S.C. § 717r(b). The Act vests this Court with exclusive jurisdiction to review an objection to a Commission order so long as “such objection . . . [has] been urged before the Commission in the application for rehearing.” *Id.* Petitioners have satisfied this exhaustion requirement—they present the same arguments on appeal as set forth in their rehearing request. *See* J.A. 763 (objecting to return on equity rate); J.A. 764 (adequacy of mitigation measures); J.A. 764–65 (consideration of cumulative impacts). We are similarly assured that Petitioners have met their burden of establishing Article III standing.³ That being settled, we turn to the merits.

they reached an agreement with the Southgate Project's developer. Their motion to withdraw was granted. *See* Clerk's Order (Sept. 3, 2021).

³ To establish associational standing to sue on their members' behalf, as Petitioners seek to do here, they must show: “(1) at least one of its members would have standing to sue in his or her own right; (2) the interests it seeks to protect are germane to the organization's purpose; and (3) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Sierra Club v. FERC*, 827 F.3d 59, 65 (D.C. Cir. 2016) (internal quotation marks and citations omitted). To meet the first prong, Petitioners must demonstrate that: “(1) at least one of its members has suffered an injury-in-fact that is concrete and particularized and actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.” *Id.* (internal quotation marks and citations omitted). We are satisfied that Petitioners have met this burden here.

IV.

We will review both Petitioners' Natural Gas Act and NEPA claims under the arbitrary and capricious standard. *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 378 (1989) (Natural Gas Act); *Minisink Residents for Env'tl. Pres. & Safety v. FERC*, 762 F.3d 97, 106 (D.C. Cir. 2014) (NEPA). In doing so, we ask whether “the Commission’s judgment is supported by substantial evidence and that the methodology used in arriving at that judgment is either consistent with past practice or adequately justified.” *Emera Maine v. FERC*, 854 F.3d 9, 22 (D.C. Cir. 2017) (quoting *Town of Norwood, Mass. v. FERC*, 80 F.3d 526, 533 (D.C. Cir. 1996)). And while the Court cannot review an agency’s environmental analysis to “second-guess substantive decisions committed to the discretion of the agency,” it is clear that “simple, conclusory statements of no impact are not enough to fulfill an agency’s duty under NEPA.” *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014) (internal quotation marks and citation omitted). An arbitrary and capricious agency action in the NEPA context is one that “is not the product of reasoned decisionmaking.” *Id.* at 1313 (internal quotation marks and citation omitted).

A.

In setting “just and reasonable rates” for interstate pipelines under the Natural Gas Act, the Commission must

Sierra Club and Appalachian Voices Member Margaret Whitehead attested that the project would traverse her property, thereby permanently reducing her tree farm area and threatening a small lake. *See* Add. 74–75. A favorable decision by this Court, halting construction on the pipeline, would remedy this stated injury.

balance the interests of the pipeline and its ratepayers. COST-OF-SERVICE RATES MANUAL, FERC 1 (1999). To do so, the Commission typically conducts “cost-of-service ratemaking,” meaning that it sets a rate “based on a pipeline’s cost of providing service including an opportunity for the pipeline to earn a reasonable return on its investment.” *Id.* This rate is also referred to as the “recourse rate.”⁴ But the Commission also allows pipeline companies to charge “negotiated rates,” which permit a pipeline to forgo cost-of-service rates with an individual shipper. *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines*, 74 FERC ¶ 61,076, ¶¶ 61,224–25 (1996).

Zooming in further, the rate of return is made up of two principal components: return on equity and return on debt. *Sierra Club v. FERC*, 867 F.3d 1357, 1376 (D.C. Cir. 2017). The return on equity is “the cost to the utility of raising capital.” *Emera Maine*, 854 F.3d at 20 (internal quotation marks and citations omitted). Because equity investment is riskier than debt investment, equity investors usually earn a higher rate of return than debt investors. *Sierra Club*, 867 F.3d at 1376. If the pipeline is greatly indebted, its equity investors take on more risk and therefore will expect a higher rate of return, and vice versa. *Id.* at 1377. Typically, “greenfield” or new pipelines take on more risk and will accordingly be rewarded with higher rates of return. *PennEast Pipeline Co.*, 162 FERC ¶ 61,053, ¶ 59 (2018).

⁴ The Commission defines a recourse rate as a “cost-of-service based rate for natural gas pipeline service that is on file in a pipeline’s tariff and is available to customers who do not negotiate a rate with the pipeline company.” *Glossary*, FERC (Aug. 31, 2020), <https://www.ferc.gov/about/what-ferc/about/glossary#:~:text=class%20of%20customers,-,Recourse%20Rate,rate%20with%20the%20pipeline%20company>.

Here, Mountain Valley proposed that the Commission treat Southgate as a separate rate zone from the Mainline System so that the project's costs and risks are borne by Mountain Valley and Southgate customers alone, rather than its Mainline System customers. *Certificate Order*, ¶ 25. As a result, it suggested a capital structure of 50 percent debt and 50 percent equity, a proposed cost of debt of 6 percent, a return on equity of 14 percent, and a 5 percent depreciation rate based on a 20-year contract with Dominion. *Id.* ¶ 53. The Commission approved the proposal. *Id.* ¶ 54. While it acknowledged that 14 percent is higher than the typical return on equity for expansion projects, the Commission nonetheless found it reasonable, given that the Mainline System was not yet operational, did not have an existing revenue base, and Mountain Valley had no proven track record. *Id.* ¶ 57. Typically, FERC's policy for expansion projects is to "require a pipeline to use the [return on equity] approved in its last NGA section 4 rate proceeding, or, if the pipeline has not filed a rate case, the [return on equity] from the last litigated NGA section 4 rate case." *Id.* ¶ 22 (Glick, Comm'r, dissenting). Because Mountain Valley had not yet litigated a rate case, the Commission would have applied the return on equity rate authorized in *El Paso Natural Gas Company*, its most recent NGA case, of 10.55 percent. 145 FERC ¶ 61,040, ¶ 686 (2013).

Petitioners challenge the 14 percent return on equity as inadequately supported and, by extension, arbitrary and capricious. In doing so, they fix their gaze on two of the Commission's purported errors.

First, they assert that the Commission did not consider current market conditions or support the authorized return on equity with empirical data. Rather than "closely scrutiniz[ing]"

Mountain Valley’s requested rate, the Commission simply relied on previous rates for new market entrants to approve the 14 percent return on equity here. Pet’rs’ Br. at 20–21. In their view, such a decision risks skewing incentives for building new and unnecessary pipelines. When setting an initial rate under Section 7, the Commission is not required, however, to set a return on equity rate based on market conditions and empirical data. It is true that “[a] rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.” *Bluefield Waterworks & Imp. Co. v. Pub. Serv. Comm’n of West Virginia*, 262 U.S. 679, 693 (1923). But the Natural Gas Act does not compel an explicit consideration of market conditions in all circumstances. *See* 15 U.S.C. § 717c(a). Indeed, the Commission’s typical policy in Section 7 proceedings is to apply the rate determined in the last NGA section 4 proceeding. Petitioners do not challenge this policy, nor do they provide support for the claim that market conditions and empirical data must factor into the Commission’s calculus. Thus, their focus on these factors is unavailing.

Petitioners’ fear that the return on equity presents a market-skewing incentive is similarly misplaced. The Commission explained that Mountain Valley’s precedent agreement for 80 percent of the project’s capacity indicated the need for the project. Precedent agreements are often—though not always—reliable indicators of market need for a pipeline project. *See Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199, at *1 (D.C. Cir. Feb. 19, 2019) (per curiam); *but see Env’tl. Def. Fund v. FERC*, 2 F.4th 953, 973 (D.C. Cir. 2021). Here, the long-term agreement shows an actual need for the Project, not an attempt on Mountain Valley’s part to overbuild purely for profit.

Second, Petitioners argue that the Commission erred in treating Mountain Valley as a new market entrant, in spite of its prior experience with the Mainline System Project. Petitioners rely heavily on Commissioner Glick’s dissent from the Certificate Order in support of this argument. Commissioner Glick characterized the 14 percent return on equity as a break from precedent for incremental expansion projects. *Certificate Order*, ¶ 4 & n.330 (Glick, Comm’r, dissenting). In *Cheyenne Connector, LLC*, for example, the Commission rejected a pipeline company’s proposed return on equity of 13 percent because the project “has more in common with the incremental expansions constructed by existing pipelines than with greenfield pipeline projects.” 168 FERC ¶ 61,180, ¶ 52 (2019). *See also Gulfstream Natural Gas Sys., LLC*, 170 FERC ¶ 61,199, ¶¶ 18–19 (2020) (rejecting a return on equity of 14 percent for existing pipeline’s expansion project); *Cheniere Corpus Christi Pipeline, LP*, 169 FERC ¶ 61,135, ¶¶ 34–35 (2019) (same). Because the Commission already granted Mountain Valley a 14 percent return on equity as a new market entrant for Mainline, Commissioner Glick believed it should not receive such a favorable return on equity the second time around. *Certificate Order*, ¶ 22 (Glick, Comm’r, dissenting). Further, Commissioner Glick would have treated Mountain Valley as an existing pipeline company due to its executed binding service contracts with shippers. *Id.* Those contracts provide a level of revenue security that most greenfield projects do not enjoy. *Id.*

The question of whether the Commission should have treated Mountain Valley and Southgate as a “new market entrant” and “greenfield pipeline,” respectively, depends on whether we take a formalist or functionalist approach. Formally, as Petitioners would have it, Southgate is an extension of a partially constructed pipeline, and this is not Mountain Valley’s first rodeo at the Commission.

Functionally, as the Commission views it, Mountain Valley does not have the track record or revenue stream of existing pipeline operations and should be treated as new to the market. In these circumstances, the Commission’s functional approach was reasonable.

In *City of Oberlin, Ohio v. FERC*, 937 F.3d 599 (D.C. Cir. 2019), we set out a host of factors to consider in determining whether the Commission acted in the public interest in approving a particular return on equity. First, although a “bare citation to precedent” or reflexive use of a past rate will not suffice, invoking precedent to balance consumer and investor interests will aid the Commission’s case. *Id.* at 609 (quoting *Sierra Club*, 867 F.3d at 1378). Second, the Commission can support its approval of a rate by responding to specific objections in its Certificate Order. *Id.* And finally, it should explain the risks the proposed pipeline faces and why that justifies the return on equity. *Id.* What will doom the Commission’s approval of a return on equity is a “fail[ure] to consider an important aspect of the problem, offer[ing] an explanation for its decision that runs counter to the evidence before the agency, or [one that] is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Id.* at 610.

First, in looking to past precedent, the Commission will typically charge the rate set under the last Section 4 proceeding. But it has repeatedly approved higher rates for greenfield projects. See *PennEast Pipeline Co.*, 162 FERC ¶ 58 (approving a 14 percent return on equity for new market entrant, despite the fact that its system capacity was 90 percent subscribed); *Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043, ¶ 84 (2017) (upholding 14 percent return on equity with stipulation that Mountain Valley must shift its capital structure from 40 percent to 50 percent debt); *Appalachian*

Voices, 2019 WL 847199, at *1 (upholding 14 percent return on equity for Mountain Valley’s Mainline System Project); *Corpus Christi LNG, L.P. Cheniere Corpus Christi Pipeline Co.*, 111 FERC ¶ 61,081, ¶ 33 (2005) (approving 14 percent return on equity for a new pipeline with a 50-50 debt to equity ratio).

The Commission’s decision in *Rockies Express Pipeline LLC*, 116 FERC ¶ 61,272 (2006) is particularly instructive. There, the Commission approved a 13 percent return on equity for an expansion project, linking up to a previously authorized, but not yet completely operational, greenfield pipeline. *Id.* ¶¶ 4, 44. The higher rate was warranted, in the Commission’s view, given the attendant risks of a pipeline that size. *Id.* Rather than making a “bare citation” to *Rockies Express*, the Commission invoked that precedent as an example of approving higher initial rates when a project faces greater risks from the outset. By contrast, the pipeline projects Petitioners cite for support concerned expansion proposals for pipelines that had been operational for a year or more.⁵ The Commission acted reasonably in denying the requested 14 percent return on equity in those cases, where the pipeline companies did not face the same risks as non-operational new market entrants.

⁵ *Cheyenne Connector* expanded a pipeline that had been in operation since 2009. *Rockies Express Pipeline*, TALLGRASS LEADING ENERGY SOLUTIONS, https://www.tallgrassenergy.com/Operations_REX.aspx (last visited Feb. 25, 2022). In *Gulfstream Natural Gas System, LLC*, the Commission denied a higher return on equity for a pipeline expansion of a system that had been in service for over 18 years. 170 FERC ¶ 61,199, ¶¶ 18–20. So too in *Cheniere Corpus Christi Pipeline, LP*, the original pipeline had been in service for a year when the Commission denied the higher requested rate for its expansion. *Corpus Christi Pipeline*, CHENIERE, <https://www.cheniere.com/where-we-work/cc-pipeline> (last visited Feb. 25, 2022).

Second, the Commission detailed Petitioners' objections in its Certificate Order and squarely addressed them in explaining its reasoning behind treating Mountain Valley as a new market entrant. It specifically noted that its reasoning for approving lower return on equity rates in extensions of existing pipeline systems did not apply here because those pipelines "obtained revenues for service on their existing systems." *Certificate Order*, ¶ 57.

Finally, the Commission enumerated the specific risks of this project: Mountain Valley was not an established pipeline company; it did not have an existing revenue base or a proven track record; and the Mainline System was not yet operational. *Id.* As a result, FERC found it appropriate to treat Mountain Valley as a new market entrant proposing a greenfield pipeline "because there are no established operations or revenue streams that would reduce the risk to the level experienced by natural gas companies whose existing systems are in service." *Id.* We find that treatment appropriate.

B.

Petitioners also attack the Commission's Environmental Impact Statement as inadequate on two fronts: its discussion of potential mitigation measures and the project's cumulative impacts. Under NEPA's implementing regulations, an EIS must include potential mitigation measures that will "avoid, minimize, or compensate for effects" of the proposed activity. *See* 40 C.F.R. § 1508.1(s); *see also id.* §§ 1502.14(e); 1502.16(a); 1505.3. While NEPA requires an agency to consider mitigation measures, significantly, "it does not mandate the form or adoption of any mitigation." *Id.* § 1508.1(s). NEPA also requires that the Commission's EIS consider the "cumulative impacts" of a proposed project. 40

C.F.R. § 1508.7. A “cumulative impact” is defined as an environmental impact that “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” *Id.*

First, Petitioners contend that the Commission failed to take a “hard look” at the environmental consequences of the Southgate Project in its corresponding EIS, particularly with regard to sedimentation and erosion. Its reliance on measures that proved ineffective for the Mainline System and its failure to discuss the effectiveness of these measures was arbitrary and capricious, in Petitioners’ view. Petitioners rely in part on a report from their own expert hydrogeologist, who criticizes the measures discussed in the EIS—including silt fences, compost socks, water bars, traverse trench drains, and trench breakers to prevent stormwater runoff—as ineffective.

Petitioners’ argument does not accurately reflect the EIS, given that the Commission discussed potential mitigation measures for erosion and runoff in detail. To mitigate both, the Commission noted that Mountain Valley must route water discharged from excavation to vegetated land surfaces. EIS 4-50. Trench breakers (sandbags or foam) would be installed to prevent water movement in the pipeline, thereby working to inhibit erosion. EIS 2-19. Sediment barriers, like silt fences and straw bales, as well as trench plugs would be installed and maintained throughout construction to prevent erosion. EIS 2-22. Mountain Valley would then install “[p]ermanent erosion control features,” like slope breakers, on steep terrain. EIS 2-21. While Petitioners’ expert criticizes the Commission’s reliance on silt fences, she also noted that they are “not effective in steep slope areas,” which is why they had failed for Mainline. J.A. 235. Yet, Southgate will traverse flatter terrain and silt fences may therefore prove effective.

Further, the EIS distinguishes these measures from those that failed for Mountain Valley in the past. Pointing to empirical data, it cites 2018 as a record-breaking year for precipitation in the region. EIS 1-12. The Commission does not expect that precipitation level to repeat and therefore, to cause the same erosion and sediment control issues. *Id.* Still, to avoid experiencing such issues, Mountain Valley proposed monitoring weather conditions during construction and adjusting control measures. *Id.* It will also document the effectiveness of its erosion control measures through weekly reports and allow FERC representatives on-site to enforce compliance. EIS 1-13. Third-party inspectors would have the authority to stop work on the pipeline immediately, if needed. EIS 1-12, 2-30. As a result, the Commission concluded that Mountain Valley's proposed surface water mitigation measures would "adequately avoid or minimize potential impacts on surface water resources." EIS 5-5.

On the whole, Petitioners' criticisms miss the point of the mitigation measure discussion as an "information-forcing" exercise. *Mayo v. Reynolds*, 875 F.3d 11, 15 (D.C. Cir. 2017) (internal quotation marks and citation omitted). Again, NEPA does not mandate that the Commission formulate a specific mitigation plan, only that it discuss mitigation "in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989). This EIS, fulsome in its discussion of potential mitigation measures and differences from the Mainline System, meets NEPA's mark.

Second, Petitioners argue that the Commission failed to consider the cumulative impact of the Southgate and Mainline System on aquatic resources in the affected area. In their account, the Commission purposefully restricted the temporal and geographic area of the project in its cumulative impact

consideration to avoid overlap with the Mainline System Project. Petitioners express particular concern over the increased “turbidity plumes”—cloudy water resulting from sediment—that could result from the projects’ overlap. Sediment resulting from these plumes may have long-term negative impacts on aquatic life and these effects “could be additive, if turbidity plumes settled within common stream segments.” Pet’rs’ Br. at 41 (quoting EIS 4-243). Chief among their concerns is turbidity plumes settling in the Kerr Reservoir, which sits downstream of both projects.

The purpose of the cumulative impact consideration in an EIS is to present a realistic picture of a proposed activity’s impacts. *American Rivers v. FERC*, 895 F.3d 32, 55 (D.C. Cir. 2018). Requiring such a consideration prevents “agencies from gaming the system by artificially segmenting significant actions into piecemeal, and individually insignificant, components.” *Id.* at 54. Where an agency pays scant attention to past actions that have damaged the geographic area at issue or discusses cumulative impacts in conclusory phrases, it has not met NEPA’s standard. *Id.* at 55 (agency “fell far short of the NEPA mark” in failing to consider past actions that damaged the area’s ecosystem); *NRDC v. Hodel*, 865 F.2d 288, 289 (D.C. Cir. 1988) (per curiam) (allowing agency’s boilerplate analysis of cumulative impacts “to pass muster here would eviscerate NEPA”).

As a practical matter, an agency can typically identify the location where cumulative impacts are likely to occur by first choosing a single “ecoregion” or “watershed.”⁶ *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*

⁶ “A watershed is a land area where precipitation collects and funnels to an outlet—usually a stream.” J.A. 85 (internal quotation marks omitted).

4.2, U.S. EPA (1999). Though these boundaries “should not be overly restricted in cumulative impact analysis,” they should also not be so expansive that the “analysis becomes unwieldy and useless for decision-making.” *Id.* Making this selection demands a “high level of technical expertise and is properly left to the informed discretion of the responsible federal agencies.” *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976).

In addition to naming the relevant geographic area, the cumulative impact analysis must identify: “the impact expected in that area; those other actions—past, present, and proposed, and reasonably foreseeable that have had or will have impact in the same area; the effects of those other impacts; and the overall impact that can be expected if the individual impacts are allowed to accumulate.” *Sierra Club v. FERC*, 827 F.3d 36, 49 (D.C. Cir. 2016) (internal quotation marks, citation, and numbering omitted). A cumulative impacts analysis will pass a “hard look” review if it “contain[s] sufficient discussion of the relevant issues and [is] well-considered.” *City of Boston Delegation v. FERC*, 897 F.3d 241, 253 (D.C. Cir. 2018) (internal quotation marks and citation omitted).

The Commission fulfilled that standard. First, the Commission designated “hydrologic unit code-10” (“HUC-10”) as the geographic scope for its cumulative analysis on surface water resources, which averages to about 130,000 acres. EIS 4-227, 4-230. Second, the Commission identified in-stream activities, including dredging and open pipeline crossing techniques, as likely to result in increased turbidity in this area. EIS 4-242. It noted that turbidity plumes could travel downstream for a few miles, but that the impacts would be felt only temporarily, given the limited duration of these in-water activities and the plumes’ tendency to disperse within several days. *Id.* Third, FERC named other actions that would likely have an impact in the same area, with a particular focus on the

Mainline System Project. EIS 4-236. The Southgate Project and Mainline System Project would overlap at two perennial streams and one intermittent stream within the Cherrystone Creek-Banister River HUC-10 watershed. *Id.* But the Commission stipulated that the Projects' stream crossings are three and a half miles apart, the Projects would not share overlapping workspace, and their construction would not take place at the same time. *Id.*; EIS 4-243. Lastly, the Commission maintained that the cumulative impacts of the two projects on turbidity would be limited because of the geographic and spatial distance between the crossings. EIS 4-243. The Commission acknowledged that sediment can accumulate when turbidity plumes settle in a stream, but found this impact unlikely given the projects' spatial separation and the erosion and sediment controls that will be in place. *Id.* Additionally, the Kerr Reservoir is more than 30 miles away from both projects, remains outside the geographic scope of the analysis, and therefore is likely to face only negligibly increased sedimentation as a result. J.A. 886. Thus, in its cumulative analysis, the Commission recognized the pertinent issues and reasonably concluded that the two projects are geographically and temporally separated enough to mitigate any compounded effects.

Such a conclusion aligns with our deference to the Commission on issues that demand its technical and scientific expertise. *Myersville Citizens for a Rural Community, Inc. v. FERC*, 783 F.3d 1301, 1308 (D.C. Cir. 2015) (“when considering FERC’s evaluation of scientific data within its technical expertise, we afford FERC an extreme degree of deference”) (internal quotation marks and citation omitted). What’s more, Petitioners do not marshal compelling evidence to counter the Commission’s cumulative impacts analysis. The City of Roanoke briefing lists downstream sediment as a concern of the Mountain Valley pipeline but does not present

any statistical evidence contradicting FERC's conclusions. J.A. 829–36. Further, the research Petitioners presented in their rehearing request, allegedly demonstrating that fine sediment can travel hundreds of miles and therefore will accumulate between the two Projects, is taken from an environmental product company's website. J.A. 803.⁷ Upon review, the web page in question does not claim that sediment may travel hundreds of miles. These sources thus do not call into question the Commission's analysis.

For the foregoing reasons, we deny the petition for review.

So ordered.

⁷ Petitioners cite *Sediment Transport and Deposition: Fundamentals of Environmental Measurements*, FONDRIEST ENVIRONMENTAL, INC., <https://www.fondriest.com/environmental-measurements/parameters/hydrology/sediment-transport-deposition/#std2> (Dec. 5, 2014).