

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

SOLAR ENERGY INDUSTRIES
ASSOCIATION,

Petitioner,

NEWSUN ENERGY LLC; ONE
ENERGY ENTERPRISES LLC,

Petitioners-Intervenors,

v.

FEDERAL ENERGY
REGULATORY COMMISSION,

Respondent,

NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
[NRECA]; AMERICAN PUBLIC
POWER ASSOCIATION; LARGE
PUBLIC POWER COUNCIL;
EDISON ELECTRIC INSTITUTE
INC.,

Respondents-Intervenors,

No. 20-72788

FERC Nos.
RM19-15-000
AD16-16-000

OPINION

AMERICAN FOREST & PAPER
ASSOCIATION,

Intervenor.

MONTANA ENVIRONMENTAL
INFORMATION CENTER; SIERRA
CLUB; CENTER FOR BIOLOGICAL
DIVERSITY; VOTE SOLAR;
COMMUNITY RENEWABLE
ENERGY ASSOCIATION;
APPALACHIAN VOICES;
ALABAMA CENTER FOR
SUSTAINABLE ENERGY, d/b/a
Energy Alabama; GEORGIA
INTERFAITH POWER & LIGHT
INC.; NORTH CAROLINA
SUSTAINABLE ENERGY
ASSOCIATION; UPSTATE
FOREVER,

Petitioners,

ONE ENERGY ENTERPRISES LLC,

Petitioner-Intervenor,

v.

FEDERAL ENERGY
REGULATORY COMMISSION,

No. 20-73375

FERC No.
RM19-15-000

Respondent,

NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
[NRECA]; EDISON ELECTRIC
INSTITUTE INC.; AMERICAN
PUBLIC POWER ASSOCIATION;
LARGE PUBLIC POWER
COUNCIL,

Respondents-Intervenors,

AMERICAN FOREST & PAPER
ASSOCIATION,

Intervenor.

MONTANA ENVIRONMENTAL
INFORMATION CENTER; SIERRA
CLUB; CENTER FOR BIOLOGICAL
DIVERSITY; VOTE SOLAR;
COMMUNITY RENEWABLE
ENERGY ASSOCIATION;
APPALACHIAN VOICES;
ALABAMA CENTER FOR
SUSTAINABLE ENERGY, d/b/a
Energy Alabama; GEORGIA
INTERFAITH POWER & LIGHT
INC.; NORTH CAROLINA
SUSTAINABLE ENERGY
ASSOCIATION; UPSTATE

No. 21-70083

FERC No.
RM19-15-001

FOREVER,

Petitioners,

ONE ENERGY ENTERPRISES LLC,

Petitioner-Intervenor,

v.

FEDERAL ENERGY
REGULATORY COMMISSION,

Respondent,

NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
[NRECA]; AMERICAN PUBLIC
POWER ASSOCIATION; EDISON
ELECTRIC INSTITUTE INC.;
LARGE PUBLIC POWER
COUNCIL,

Respondents-Intervenors.

SOLAR ENERGY INDUSTRIES
ASSOCIATION,

Petitioner,

ONE ENERGY ENTERPRISES LLC,

No. 21-70113

FERC Nos.
RM19-15-001
AD16-16-001

Petitioner-Intervenor,

v.

FEDERAL ENERGY
REGULATORY COMMISSION,

Respondent,

NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
[NRECA]; AMERICAN PUBLIC
POWER ASSOCIATION; EDISON
ELECTRIC INSTITUTE INC.;
LARGE PUBLIC POWER
COUNCIL,

Respondents-Intervenors.

On Petition for Review of an Order of the
Federal Energy Regulatory Commission

Argued and Submitted March 8, 2022
Seattle, Washington

Filed September 5, 2023

Before: Jacqueline H. Nguyen, Eric D. Miller, and Patrick
J. Bumatay, Circuit Judges.

Opinion by Judge Miller;
Concurrence by Judge Miller;
Partial Concurrence and Partial Dissent by Judge Bumatay

SUMMARY*

**Federal Energy Regulatory Commission /
Environmental Law**

The panel granted in part and denied in part a petition for review brought by the Solar Energy Industries Association and several environmental organizations challenging Orders 872 and 872-A (collectively, “Order 872”), rules adopted by the Federal Energy Regulatory Commission (FERC) that alter which facilities qualify for benefits under the Public Utility Regulatory Policy Act (PURPA) and how those facilities are compensated.

Congress enacted PURPA to encourage the development of a new class of independent, non-utility-owned energy producers known as “Qualifying Facilities,” or “QFs.” Order 872 makes it more difficult for a facility to qualify for treatment as a QF, and makes QF status less advantageous.

The panel rejected petitioners’ argument that Order 872 as a whole is inconsistent with PURPA’s directive that FERC “encourage” the development of QFs. Applying the two-step framework of *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984), the panel held that (1) PURPA on its face gives FERC broad discretion to evaluate which rules are necessary to encourage QFs and which are not, and (2) FERC’s interpretation was not unreasonable.

* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

Next, the panel rejected petitioners' challenges to four specific provisions of Order 872. First, the panel held that the modified Site Rule—which modified the rules for determining when facilities are deemed to be located at the same or separate sites—survives *Chevron*, is not arbitrary and capricious under the Administrative Procedure Act (APA), and is not unlawfully retroactive. Second, the panel held that the modified Fixed-Rate Rule—which modified the rates paid to QFs—survives *Chevron* and is not arbitrary or capricious under the APA. Third, the panel held that the provision allowing States to adopt a rebuttable presumption that, for utilities located within certain organized energy markets, the locational market price represents the purchasing utility's avoided costs, is not arbitrary or capricious under the APA. Fourth, the panel held that the provision reducing the threshold that terminates an electric utility's obligation to purchase from a QF if the QF has nondiscriminatory access to certain organized markets is not arbitrary or capricious under the APA.

Finally, the panel addressed the environmental organizations' claim that FERC violated the National Environmental Policy Act (NEPA) by failing to prepare an environmental assessment (EA) before issuing Order 872. The panel held that the environmental organizations had Article III standing because they adequately documented the concrete harms that Order 872 could cause their members, and had prudential standing because they demonstrated that the harms they fear fall within NEPA's zone of interests.

On the merits, the panel held that FERC violated NEPA by failing to prepare, at minimum, an EA. First, the panel held that the more substantive elements of Order 872 fall outside NEPA's categorical exclusion for rules that do not

substantially change the effect of the rules being amended. Second, the panel rejected FERC's argument that it was not required to prepare an EA because any potential environmental impacts from Order 872 are not reasonably foreseeable. The panel stated that it was not aware of any case approving an agency's decision not to engage in any environmental analysis for rulemaking of the magnitude of Order 872, and held that the lack of reasonably foreseeable environmental impacts cannot relieve an agency of its obligation to prepare an EA.

The panel determined that the appropriate remedy for FERC's NEPA violation was to remand to the agency without vacatur. Although FERC's failure to prepare an EA is a serious violation, Order 872 does not suffer from fundamental flaws making it unlikely that FERC could adopt the same rule on remand, and the disruptive consequences of vacatur would be significant.

Concurring, Judge Miller, joined by Judge Nguyen, joined the court's opinion in full and wrote separately to respond to Judge Bumatay's discussion of *Chevron* in his concurrence and dissent.

Concurring in part and dissenting in part, Judge Bumatay concurred with denying the petition challenging the enactment of FERC's revised rules, but would rely on the text of PURPA instead of on *Chevron* deference. With respect to the NEPA claim, he would hold that the environmental organizations lack standing because they have not alleged that they will suffer an environmental harm sufficient to confer NEPA standing.

COUNSEL

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OPINION

MILLER, Circuit Judge:

This case involves rules adopted by the Federal Energy Regulatory Commission to implement the Public Utility Regulatory Policies Act of 1978 (PURPA), Pub. L. No. 95-617, 92 Stat. 3117. Congress enacted PURPA to encourage the development of a new class of independent, non-utility-owned energy producers known as “Qualifying Facilities,” or “QFs.” PURPA tasks FERC with promulgating rules to implement the statute. In 2020, FERC revised its rules to alter which facilities qualify for PURPA’s benefits and how those facilities are compensated. The new rules make it more difficult to qualify for treatment as a QF, and they also make QF status less advantageous.

We are asked to decide whether FERC’s new rules are consistent with PURPA and satisfy the requirements of the Administrative Procedure Act. In resolving those questions, we address challenges to discrete components of the new rules as well as challenges to the lawfulness of the rules as a whole. We must also decide whether FERC violated the National Environmental Policy Act of 1969 (NEPA), Pub. L. No. 91-190, 83 Stat. 852 (1970), by failing to prepare an environmental assessment or environmental impact statement. We hold that FERC’s revised rules are consistent with both PURPA and the APA, but that FERC violated NEPA by failing to prepare, at minimum, an environmental assessment. In light of the extraordinary disruptive consequences that would accompany vacatur, we decline to vacate the rules. We grant the petition for review in part and remand without vacatur.

I

A

In response to the energy crises of the 1970s, Congress enacted PURPA to promote energy conservation, improve energy efficiency, lower consumer costs, and decrease reliance on foreign oil. *See FERC v. Mississippi*, 456 U.S. 742, 745–46, 756–57 (1982); *Independent Energy Producers Ass’n, Inc. v. California Pub. Utils. Comm’n*, 36 F.3d 848, 850 (9th Cir. 1994). In enacting PURPA, “Congress sought to eliminate two significant barriers to the development of alternative energy sources: (1) the reluctance of traditional electric utilities to purchase power from and sell power to non-traditional facilities, and (2) the financial burdens imposed upon alternative energy sources by state and federal utility authorities.” *Independent Energy Producers Ass’n*, 36 F.3d at 850.

PURPA directs FERC to “prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage” the development of Qualifying Facilities. 16 U.S.C. § 824a-3(a). There are two types of QFs. First, a “small power production facility” uses an alternative energy source—often a renewable source like solar or wind—to produce electricity. 16 U.S.C. § 796(17). As its name suggests, such a facility must be “small”: It cannot have a power production capacity that, “together with any other facilities located at the same site (as determined by the Commission),” exceeds 80 megawatts. *Id.* § 796(17)(A)(ii). Second, a “cogeneration facility” typically uses traditional fossil fuels to produce both electric energy and a useful form of thermal energy (like steam) in a manner that is more efficient than producing each kind of energy separately. *Id.*

§ 796(18); 18 C.F.R. § 292.205; S. Rep. No. 95-442, at 21 (1977).

PURPA provides QFs with certain benefits. Of particular relevance here, PURPA imposes a mandatory-purchase obligation on electric utilities, which must purchase electricity from QFs at rates established by FERC. 16 U.S.C. § 824a-3(a)(2), (b). Those rates must be “just and reasonable to the electric consumers,” must be “in the public interest,” and may not “discriminate against” QFs. *Id.* § 824a-3(b). PURPA also sets an upper bound on rates: No rule “shall provide for a rate which exceeds the incremental cost to the electric utility of alternative electric energy.” *Id.* A utility’s “incremental cost”—commonly referred to as its “avoided cost”—is defined as “the cost to the electric utility of the electric energy which, but for the purchase from [a QF], such utility would generate or purchase from another source.” *Id.* § 824a-3(d); *see also American Paper Inst., Inc. v. American Elec. Power Serv. Corp.*, 461 U.S. 402, 406 (1983).

While PURPA tasks FERC with the development of national rules and standards, States play a prominent role in PURPA’s regulatory structure. Under PURPA, state regulatory authorities are primarily responsible for implementing FERC’s rules. 16 U.S.C. § 824a-3(f)(1). For example, while FERC establishes, in broad terms, the rate to be used in the mandatory transactions described above, States are responsible for calculating and applying that rate for individual utilities and QFs.

Some utilities are not subject to a state regulatory authority, and PURPA requires those “nonregulated electric utilit[ies]” to implement and apply FERC’s rules in the same manner as States. 16 U.S.C. § 824a-3(f)(2). For our

purposes, the distinction does not matter, so we refer to States and nonregulated utilities collectively as “States.”

B

In 1980, in accordance with its statutory mandate to promulgate rules implementing PURPA, *see* 16 U.S.C. § 824a-3(a), FERC issued Orders 69 and 70 (collectively, the 1980 Orders or 1980 Rules). *Small Power Production and Cogeneration Facilities; Regulations Implementing Section 210 of the Public Utility Regulatory Policies Act of 1978*, Order 69, 45 Fed. Reg. 12,214 (Feb. 25, 1980); *Small Power Production and Cogeneration Facilities—Qualifying Status*, Order 70, 45 Fed. Reg. 17,959 (Mar. 20, 1980).

The 1980 Orders clarified which facilities qualify as “small power production facilit[ies],” which, together with “any other facilities located at the same site (as determined by the Commission),” may not have a power production capacity of more than 80 megawatts. 16 U.S.C. § 796(17)(A). To determine whether two facilities were “located at the same site,” FERC developed a one-mile rule. If two facilities were “located within one mile of each other,” “use[d] the same energy resource,” and were “owned by the same person,” they were considered to be “located at the same site.” Order 70, 45 Fed. Reg. at 17,965. And if two facilities were located at the same site, their power outputs had to be added together for purposes of the 80-megawatt size cap. *Id.* By contrast, facilities located more than one mile apart were considered separate sites, and thus did not need to add together their power capacities. We refer to this as the “1980 Site Rule.”

The 1980 Orders also established the rate that a utility would pay a QF when purchasing energy under its mandatory-purchase obligation. *See* 16 U.S.C. § 824a-3(b).

FERC set the rate for sales by QFs equal to the purchasing utility's full avoided costs—the maximum rate permitted by PURPA. Order 69, 45 Fed. Reg. at 12,222–23; *American Paper*, 461 U.S. at 406–07. FERC explained that a rate based on a utility's full avoided costs was appropriate to provide adequate incentives for the development of QFs, and that any lower rate would not provide significant savings for the utilities' ratepayers. *See American Paper*, 461 U.S. at 406–07, 412–18 (upholding FERC's avoided-cost rule); Order 69, 45 Fed. Reg. at 12,222–23.

The 1980 Orders offered QFs the choice of two rate-calculation methods. *See Winding Creek Solar LLC v. Peterman*, 932 F.3d 861, 863 (9th Cir. 2019). First, a QF could elect to sell its energy at a rate calculated at the time the energy was delivered (often referred to as the “as-available” rate). Order 69, 45 Fed. Reg. at 12,224. Second, a QF could elect to sell its energy using a rate based on the utility's avoided costs calculated and *fixed* at the time the contractual obligation was incurred (commonly referred to as the “Fixed-Rate Rule”). *Id.* Under the Fixed-Rate Rule, a QF could receive a fixed rate for both the utility's energy costs (the variable costs associated with the production of energy, such as the cost of fuel) as well as the utility's capacity costs (the “costs associated with providing the capacity to deliver energy,” consisting “primarily of the capital costs of facilities”). Order 69, 45 Fed. Reg. at 12,216.

In 2005, Congress enacted the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594. In the Energy Policy Act, “Congress acknowledged that QFs no longer faced the same barriers that prompted PURPA.” *Californians for Renewable Energy v. California Pub. Utils. Comm'n*, 922 F.3d 929, 933 (9th Cir. 2019). It therefore amended PURPA by limiting the scope of PURPA's

mandatory-purchase requirement. Under the amended statute, a utility is not required to purchase energy from a given QF if the Commission finds that the QF has “nondiscriminatory access” to one of several specified energy markets. 16 U.S.C. § 824a-3(m)(1). Those markets generally correspond to the markets operated by regional transmission organizations and independent system operators (known as “regional markets” or “organized markets”).

To implement this new statutory language, FERC issued Order 688. *New PURPA Section 210(m) Regulations Available to Small Power Production and Cogeneration Facilities*, Order 688, 71 Fed. Reg. 64,342 (Nov. 1, 2006); *New PURPA Section 210(m) Regulations Applicable to Small Power Production and Cogeneration Facilities*, Order 688-A, 72 Fed. Reg. 35,872 (June 29, 2007). Order 688 established a rebuttable presumption that “small” facilities—defined as those with a power capacity less than or equal to 20 megawatts—lack non-discriminatory market access, whereas “large” facilities with a capacity exceeding 20 megawatts have adequate market access. Order 688, 71 Fed. Reg. at 64,343–44, 64,352–54. The Commission acknowledged that no single threshold would perfectly distinguish between those facilities with nondiscriminatory access to markets and those without such access, but it determined that a 20-megawatt threshold would be “reasonable and administratively workable.” *Id.* at 64,352–53; *see also American Forest & Paper Ass’n v. FERC*, 550 F.3d 1179, 1183 (D.C. Cir. 2008) (upholding Order 688’s interpretation of the 2005 statutory amendment).

C

In 2016, FERC began to consider revising the PURPA regulations. In 2019, after holding a technical conference and soliciting public comments, it issued a notice of proposed rulemaking. *Qualifying Facility Rates and Requirements; Implementation Issues Under the Public Utility Regulatory Policies Act of 1978*, 84 Fed. Reg. 53,246 (proposed Oct. 4, 2019) (2019 NPRM). The next year, a divided Commission issued Order 872. *Qualifying Facility Rates and Requirements Implementation Issues Under the Public Utility Regulatory Policies Act of 1978*, Order 872, 85 Fed. Reg. 54,638 (Sept. 2, 2020). In response to requests for rehearing, the Commission issued Order 872-A, largely reaffirming the conclusions and reasoning of Order 872. *Qualifying Facility Rates and Requirements Implementation Issues Under the Public Utility Regulatory Policies Act of 1978*, Order 872-A, 85 Fed. Reg. 86,656 (Dec. 30, 2020) (We refer to both orders collectively as “Order 872”). Then-Commissioner Glick dissented in part, arguing that the revised PURPA rules “gutted” PURPA and defied Congress’s intent to encourage QFs. Order 872-A, 85 Fed. Reg. at 86,750 (Glick, Cmm’r, dissenting in part).

FERC explained that revision of its PURPA regulations was appropriate considering the dramatic changes that have reshaped the energy industry since the Commission first issued its regulations in 1980. Order 872, 85 Fed. Reg. at 54,647–48. For example, FERC found that technological advances and the declining cost of facility development have transformed the once-nascent renewable-energy sector into a mature and growing industry. *Id.* The Commission also observed that energy markets have become more competitive and efficient, driven by the creation of new market structures and the rise of competitive independent

power facilities. *Id.* at 54,648; *see also FERC v. Electric Power Supply Ass’n*, 577 U.S. 260, 267 (2016) (observing that market conditions have changed dramatically in the past several decades, moving from a market dominated by local, vertically integrated monopolies to a market where “[i]ndependent power plants . . . abound” and energy flows “through an interconnected ‘grid’ of near-nationwide scope” (quoting *New York v. FERC*, 535 U.S. 1, 7 (2002))). In light of those changes, the Commission concluded that the revised regulations would better comply with PURPA’s statutory requirements. Order 872, 85 Fed. Reg. at 54,643. And so, consistent with PURPA’s requirement that FERC revise its regulations “from time to time,” 16 U.S.C. § 824a-3(a), the Commission amended its PURPA regulations. Order 872, 85 Fed. Reg. at 54,648.

Order 872 makes several significant changes to the PURPA regulations, four of which are relevant here.

First, Order 872 modifies the 1980 Site Rule. Order 872 does not change the rule for affiliated facilities located within one mile of each other: As before, there is an irrebuttable presumption that affiliated facilities that are within one mile of each other and that use the same energy resource are “located at the same site.” 18 C.F.R. § 292.204(a)(2)(i)(A); Order 872, 85 Fed. Reg. at 54,696. But Order 872 modifies the rule for facilities located more than one mile apart. Under the new site rule, there is an irrebuttable presumption of separateness only when affiliated facilities using the same energy resource are located ten miles or more apart. 18 C.F.R. § 292.204(a)(2)(i)(B); Order 872, 85 Fed. Reg. at 54,696. When affiliated facilities using the same energy resource are located more than one mile but less than ten miles apart, there is a *rebuttable* presumption that those facilities are

located at separate sites. 18 C.F.R. § 292.204(a)(2)(i)(C); Order 872, 85 Fed. Reg. at 54,696. The Commission summarized its new rule as follows: Under the new rule, “electric utilities, state regulatory authorities, and other interested parties” may now demonstrate that “affiliated small power production facilities that use the same energy resource and are more than one mile apart and less than 10 miles apart actually are at the same site (with distances one mile or less apart still irrebuttably at the same site and distances 10 miles or more apart irrebuttably at separate sites).” Order 872, 85 Fed. Reg. at 54,696.

The rule sets out a non-exhaustive list of factors that may be used to rebut the presumption of separateness, such as whether the facilities share common physical characteristics, common ownership and control, and shared contracts. Order 872, 85 Fed. Reg. at 54,701. The new site rule applies to all QFs that seek certification or recertification on or after December 31, 2020, 18 C.F.R. § 292.204(a)(2), but an existing QF’s recertification is not subject to protest unless the QF undergoes “substantive changes,” Order 872, 85 Fed. Reg. at 54,706–07. We refer to the new site requirements as the “2020 Site Rule.”

Second, Order 872 modifies the Fixed-Rate Rule applicable to power-sales contracts between QFs and electric utilities. Under the 1980 Rules, a QF was entitled to receive a rate equal to the electric utility’s full avoided costs, and it could choose to receive either an as-available rate calculated at the time of delivery, or a rate calculated and fixed at the time that a contractual obligation was incurred. *See Winding Creek Solar*, 932 F.3d at 863. Order 872 retains the requirement that QFs receive a rate equal to the utility’s full avoided costs. Order 872, 85 Fed. Reg. at 54,650. But Order 872 grants States the option, if they deem it appropriate, to

eliminate the Fixed-Rate Rule and instead require that the avoided energy cost portion of a QF's contract vary based on the as-available rate calculated at the time of delivery. 18 C.F.R. § 292.304(d)(2); Order 872, 85 Fed. Reg. at 54,648. Order 872 still requires that QFs be given the option to receive avoided capacity costs at fixed rates. *Id.* These capacity rates compensate a QF for the fact that its existence spares the utility certain fixed costs, such as the cost of building and financing generating plants of its own. *Id.* at 54,645–46, 54,655–56.

Third, Order 872 provides States additional flexibility to use various market prices when calculating a utility's avoided costs. As relevant here, Order 872 allows States to adopt a rebuttable presumption that, for utilities located within certain organized energy markets, the "locational marginal price," or "LMP," reflects the purchasing utility's avoided costs. *See* 18 C.F.R. § 292.304(b)(6). Within those organized energy markets, LMP represents "the least-cost of meeting an incremental megawatt-hour of demand at each location on the grid, and thus prices vary based on location and time." *Sacramento Mun. Util. Dist. v. FERC*, 616 F.3d 520, 524 (D.C. Cir. 2010) (*per curiam*); *see also Electric Power Supply Ass'n*, 577 U.S. at 268–69 (explaining how LMP is calculated). The Commission concluded that LMP "reflect[s] the true marginal cost of production of energy, taking into account all physical system constraints," and that LMP "accurately represents the purchasing electric utility's avoided energy cost at the time the energy is delivered." Order 872, 85 Fed. Reg. at 54,660–61. But the Commission also recognized that LMP may sometimes deviate from actual avoided costs. Order 872 therefore rejects the categorical rule that the Commission had considered in the notice of proposed rulemaking—which would have allowed

States to use LMP as a per se appropriate measure of avoided costs—and instead allows States to adopt a rebuttable presumption that LMP reflects a utility’s avoided costs. *Id.* at 54,659.

Fourth, Order 872 revises the provision of Order 688 that terminates an electric utility’s obligation to purchase from a QF if the QF has nondiscriminatory access to certain organized markets. 16 U.S.C. § 824a-3(m). Order 688 established a rebuttable presumption that QFs with a net power capacity of less than or equal to 20 megawatts do not have adequate, nondiscriminatory access to markets. In the 2019 notice of proposed rulemaking, the Commission considered reducing that threshold to one megawatt, but it decided not to do so, noting that commenters had demonstrated that market-access barriers are “more acute for smaller QFs at or near the 1 MW threshold.” Order 872, 85 Fed. Reg. at 54,716. Instead, the Commission reduced the threshold to five megawatts. 18 C.F.R. § 292.309(d)(2); Order 872, 85 Fed. Reg. at 54,715. Under the new rule, “small power production facilities with a net power production capacity at or below 5 MW will be presumed not to have nondiscriminatory access to markets, and, conversely, small power production facilities with a net power production capacity over 5 MW will be presumed to have nondiscriminatory access to markets.” Order 872, 85 Fed. Reg. at 54,715.

FERC determined that it was not required to conduct an environmental analysis of Order 872 under NEPA. Order 872, 85 Fed. Reg. at 54,725. It gave two justifications for its conclusion. First, FERC determined that Order 872 fell within a “categorical exclusion” to NEPA for rules that are “clarifying, corrective, or procedural” in nature. *Id.* at 54,727 n.1090 (quoting 18 C.F.R. § 380.4(a)(2)(ii)). Second, FERC

stated that any downstream environmental effects of Order 872 were too uncertain and speculative to trigger NEPA review. *Id.* at 54,727. For those reasons, FERC determined that neither an environmental assessment nor an environmental impact statement was required.

D

The Solar Energy Industries Association (Solar Association) and a group of environmental organizations (Environmental Organizations) petition for review of Order 872. Each party presents slightly different challenges, but for the sake of simplicity, we refer to them collectively as “petitioners” unless otherwise noted. FERC opposes the petitions for review, and a group of electric utilities and utility-related interest groups (Utility-Intervenors) have intervened in support of FERC.

A renewable facility developer, NewSun Energy, LLC, has also intervened in support of the petitioners. Utility-Intervenors urge us not to consider several arguments raised by NewSun. Utility-Intervenors correctly observe that we typically will not consider issues raised exclusively by an intervenor. *See Washington Utils. & Transp. Comm’n v. FERC*, 26 F.3d 935, 941–42 (9th Cir. 1994). But here, the issues raised in NewSun’s brief are, with just one exception, coextensive with those addressed by the petitioners. The exception is NewSun’s argument that it was arbitrary and capricious for FERC to decline to establish a minimum contract length for agreements between QFs and electric utilities. Because no petitioner raised that issue, we strike that portion of NewSun’s brief. *See id.*

We have jurisdiction to review the petitions under 16 U.S.C. § 8251(b). Although that provision gives us jurisdiction to review final orders of the Commission, it

prohibits us from considering any objection “unless such objection shall have been urged before the Commission in the application for rehearing.” *Id.* Both the Environmental Organizations and the Solar Association filed petitions for rehearing, and although Utility-Intervenors (but not FERC) question the sufficiency of those petitions, we conclude that the petitions adequately raised the challenges to Order 872 that petitioners now advance. *See Bangor Hydro-Elec. Co. v. FERC*, 925 F.2d 465, 467 n.* (D.C. Cir. 1991) (per curiam).

II

Before addressing petitioners’ challenges to individual provisions of Order 872, we consider their argument that the order as a whole is inconsistent with PURPA’s directive that FERC “encourage” the development of QFs.

We review an agency’s interpretation of a statute under the framework of *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984); *see Pacific Choice Seafood Co. v. Ross*, 976 F.3d 932, 940 (9th Cir. 2020). “[W]hen an agency is authorized by Congress to issue regulations and promulgates a regulation interpreting a statute it enforces, the interpretation receives deference if the statute is ambiguous and if the agency’s interpretation is reasonable.” *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 220 (2016). Petitioners argue that Order 872 fails at step one of *Chevron* because it is contrary to the unambiguous terms of PURPA and at step two because it reflects an unreasonable interpretation of the statute.

PURPA provides that FERC “shall prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage cogeneration and small power production.” 16 U.S.C. § 824a-3(a). According to

petitioners, Order 872 “rescinded longstanding policies that had enabled the development of Qualifying Facilities,” replacing them with “new policies that were *not* designed to encourage the development of Qualifying Facilities.” Because Order 872 provides less support to QFs than the status quo under the 1980 Rules—“discouraging” them relative to that baseline—petitioners contend that Order 872 violates the statute.

The principal flaw in petitioners’ argument is that PURPA does not simply task FERC with prescribing rules “to encourage” QFs. Rather, it requires FERC to prescribe “such rules as *it determines* necessary to encourage” QFs, and it directs FERC to “from time to time thereafter revise” those rules. 16 U.S.C. § 824a-3(a) (emphasis added). On its face, the statute gives FERC broad discretion to evaluate which rules are necessary to encourage QFs and which are not. It also gives FERC discretion to reevaluate its rules and alter them in light of experience. The encouragement provision represents an “express delegation of authority to the agency to elucidate a specific provision of the statute by regulation.” *Chevron*, 467 U.S. at 843–44. It does not impose a ratchet under which every FERC rule must encourage QFs to a greater extent than the rule that came before it.

Nor is FERC’s interpretation unreasonable under step two. FERC determined that the encouragement provision is satisfied so long as FERC’s regulations—viewed as a whole—continue to encourage QFs. Order 872, 85 Fed. Reg. at 54,650. In Order 872, FERC found that that is exactly what the regulations do. The Commission explained that Order 872 “may end up encouraging QF development differently from the current PURPA Regulations, but the Commission’s regulations continue to encourage QF development, as contemplated by PURPA.” *Id.* Most

importantly, the revised PURPA regulations “continue to require that QF rates be set at full avoided costs, a provision the Supreme Court described as ‘provid[ing] the maximum incentive for the development of cogeneration and small power production.’” *Id.* (quoting *American Paper*, 461 U.S. at 418). FERC also observed that its new rules retain many elements of the 1980 Rules that provided support for QFs (such as the requirement that utilities provide interconnection) and that Order 872 supports QFs in new ways (by adding, for example, the competitive-solicitation rules that renewable resource developers, like the Solar Association, suggested). *Id.* at 54,644, 54,650–51.

Of course, it is easy to imagine ways in which FERC could have provided even more encouragement to QFs. But PURPA does not require FERC to encourage QFs to the maximum extent possible, regardless of any countervailing interests. To the contrary, the statute makes clear that FERC must take into account at least some other considerations. To take just one example, PURPA prohibits FERC from setting a rate for power from QFs “which exceeds the incremental cost to the electric utility of alternative electric energy.” 16 U.S.C. § 824a-3(b). The Commission’s exercise of discretion was not unreasonable simply because it balanced the need to encourage QFs against other competing interests.

III

We now turn to petitioners’ challenges to specific provisions of Order 872. Petitioners challenge four components of the order: (1) the modified Site Rule, (2) the modified Fixed-Rate Rule, (3) the creation of the LMP rebuttable presumption, and (4) the revised market-access presumption. Petitioners argue that those components of

Order 872 conflict with PURPA or are arbitrary and capricious, or both.

A

Under PURPA, a “small power production facility” (one of the two types of QFs) must have a power production capacity “which, together with any other facilities located at the same site (as determined by the Commission), is not greater than 80 megawatts.” 16 U.S.C. § 796(17)(A)(ii). The 1980 Site Rule provided that facilities were “located at the same site” if they were within one mile of each other, “use[d] the same energy resource,” and were “owned by the same person.” Order 70, 45 Fed. Reg. at 17,965. Facilities that were more than one mile apart were deemed to be located at separate sites.

The 2020 Site Rule kept in place the rule for facilities within one mile of each other, but it adopted a new approach for facilities located more than one mile apart. Under the new rule, there is an irrebuttable presumption that facilities more than ten miles apart are located at separate sites, but only a rebuttable presumption that affiliated facilities that use the same energy resource and are located between one and ten miles apart are at separate sites. Order 872, 85 Fed. Reg. at 54,696. The presumption of separateness may be rebutted using a non-exhaustive list of factors, such as whether the facilities share common physical characteristics, common ownership and control, and shared contracts. *Id.* at 54,701. The new rule makes it more likely that two facilities will be deemed to be at the same site, and, accordingly, that their production capacity will exceed the 80-megawatt threshold, making them ineligible for QF status. Petitioners advance several different challenges to the 2020 Site Rule, but we find none persuasive.

1

Petitioners argue that Order 872’s new definition of “at the same site” defies the plain meaning of the statutory text. In their view, the term “site” is clear and unambiguous: “Site” is a geographic term that refers to “[a] place or location; esp., a piece of property set aside for a specific use.” Black’s Law Dictionary 1667 (11th ed. 2019). The geographic nature of the term is reinforced, they say, by the prepositional phrase “located at.” Petitioners argue that by relying on non-geographic factors (such as shared physical characteristics and common ownership) to determine whether facilities between one and ten miles apart are located at the same site, the Commission adopted an unreasonable interpretation of the statute.

Petitioners’ argument under *Chevron* step one fails because Congress did not “directly address[] the precise question” of how the Commission should determine whether two facilities are located at the same site. *Chevron*, 467 U.S. at 843. To the contrary, Congress expressly delegated that task to FERC by requiring aggregation of power production capacity for facilities “located at the same site (*as determined by the Commission*).” 16 U.S.C. § 796(17)(A)(ii) (emphasis added). That language gives FERC broad discretion to define the meaning of the phrase “located at the same site.” *See Lindeen v. SEC*, 825 F.3d 646, 653 (D.C. Cir. 2016) (“The explicit grant of definitional authority manifests that the Congress intended the [agency] to enjoy broad discretion.”). Accordingly, we move to step two to determine whether the agency employed that discretion to adopt a reasonable definition.

Congress’s use of the word “site” does not prohibit FERC from considering factors other than location and

physical proximity. See *Rush Univ. Med. Ctr. v. Burwell*, 763 F.3d 754, 760 (7th Cir. 2014) (“When a statute specifically authorizes an agency to define a term, there is no need to consider whether the term is ambiguous and thus left to agency delegation.”). Although we agree that the word “site” typically carries some location-based connotation, ordinary usage of the word often takes account of non-locational factors as well. For example, one would not normally refer to a zoo and a reservoir that are just over a mile apart as being located at the same site. But if one were referring to the Central Park Zoo and the Central Park Reservoir in New York City, it would be natural to describe them as located at a single site: Central Park. What constitutes a “site” depends on more than simply physical distance.

Because Congress did not unambiguously foreclose FERC’s interpretation, we must defer to that interpretation as long as it is reasonable. *National Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 980 (2005). Petitioners emphasize that the new rule disqualifies more facilities than the prior rule, but the approach reflected in the 1980 Site Rule was not the only permissible interpretation of the statute. In any event, even the 1980 Site Rule took account of non-locational factors. Under the 1980 Site Rule, FERC considered not only physical proximity, but also whether the facilities were “owned by the same person” and “use[d] the same energy resource,” to determine whether two facilities within one mile of each other were located at the same site. Order 70, 45 Fed. Reg. at 17,965. The 2020 Site Rule relies on similar non-locational factors to guide the Commission’s classification of facilities between one and ten miles apart. Although facilities located between one and ten miles apart are presumed to be separate, the presumption

may be rebutted by showing, for example, that two facilities share common physical characteristics, common ownership and control, and shared contracts. Order 872, 85 Fed. Reg. at 54,701. That is a permissible exercise of the discretion that Congress granted the Commission.

2

Petitioners also challenge the 2020 Site Rule under the APA. We will set aside the agency’s action if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). For an agency’s decision to survive review, “the agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)). A “satisfactory explanation” need not be the best possible explanation. Whether or not we would have made the same choice as the agency, we must uphold the agency’s action so long as it is “reasonable and reasonably explained.” *FCC v. Prometheus Radio Project*, 141 S. Ct. 1150, 1158 (2021).

In Order 872, the Commission found “that some large facilities were disaggregating into smaller facilities and strategically spacing themselves slightly more than one mile apart in order to be able to qualify as separate small power production facilities.” Order 872-A, 85 Fed. Reg. at 86,690. The Commission determined that this practice of strategic disaggregation “contradict[ed] the spirit and purpose of PURPA” because it allowed large facilities to skirt PURPA’s 80-megawatt size cap, and that the revised rule would help combat this practice. *Id.* at 86,691. FERC recognized that

strategic circumvention of the prior site rule was not necessarily an everyday occurrence. Order 872, 85 Fed. Reg. at 54,697. But it provided specific examples of projects that, in its view, had improperly taken advantage of the 1980 Site Rule in order to avoid PURPA's size limitation. Order 872-A, 85 Fed. Reg. at 86,690. The revised rule addresses that problem. Because FERC's decision to modify the Site Rule was "reasonable and reasonably explained," it satisfies our "deferential" standard of review under the APA. *Prometheus Radio Project*, 141 S. Ct. at 1158.

Petitioners argue that the rule is nevertheless arbitrary and capricious in three different ways.

First, petitioners argue that the choice of a ten-mile threshold is arbitrary because FERC might just as well have promulgated a three-mile rule, a five-mile rule, or a seventeen-mile rule. In some sense of the word "arbitrary," petitioners have a point: As FERC acknowledged when initially implementing its 1980 Site Rule, even the one-mile rule was "essentially arbitrary." *Windfarms, Ltd.*, 13 F.E.R.C. ¶ 61,017, 61,032 (1980). But that does not make the rule arbitrary in the sense contemplated by the APA.

The problem that FERC confronted is one that arises frequently in administrative rulemaking. In order to design a clear, manageable regulation, agencies often must select a single quantitative threshold from among a range of reasonable options. We have explained that when an agency "'had to choose some number from a broad range' and selected a 'reasonable figure,'" its choice satisfies the arbitrary-and-capricious standard even if there are other reasonable values that the agency could have chosen. *Pacific Choice Seafood Co.*, 976 F.3d at 943 (quoting *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 616

(9th Cir. 2014)). A 55-mile-per-hour speed limit is not “arbitrary” just because 50 miles per hour, or 60 miles per hour, would work equally well. *See Air N. Am. v. Department of Transp.*, 937 F.2d 1427, 1431–32 (9th Cir. 1991) (“[W]hen the language and policy of a statute permit a range of alternative approaches to a particular problem, the courts must allow the agency charged with implementing the statute to choose the alternative that the agency prefers.”).

Here, FERC determined that a one-mile threshold allowed large facilities to skirt PURPA’s size limitation. To combat that practice, FERC needed to pick a greater threshold. As FERC recognized, “[t]en miles need not be the only possible choice under the statute in order for it to be considered reasonable.” Order 872-A, 85 Fed. Reg. at 86,692. But FERC nevertheless concluded that a ten-mile cutoff is “qualitatively a large enough distance to serve as the inflection point beyond which it is safe to irrebuttably presume separate sites.” *Id.* We see no reason to conclude that its choice of a ten-mile threshold was arbitrary or capricious.

Second, petitioners argue that the revised site rule disregards FERC’s long-held preference for a bright-line rule. Whereas the 1980 Site Rule relied on a bright-line, one-mile threshold, the new rule relies on a rebuttable presumption and case-by-case evaluation, which petitioners say represents an unjustified departure from FERC’s historical practice.

That argument misunderstands an administrative agency’s authority to change policies over time. The APA does not require “regulatory agencies [to] establish rules of conduct to last forever,” and agencies may “adapt their rules and policies to the demands of changing circumstances.”

State Farm, 463 U.S. at 43 (first quoting *American Trucking Ass’n v. Atchison, Topeka, & Santa Fe Ry. Co.*, 387 U.S. 397, 416 (1967); and then quoting *Permian Basin Area Rate Cases*, 390 U.S. 747, 784 (1968)). An agency may change its position for any number of reasons, such as a change in factual circumstances or a shift in its policy priorities. See *Organized Vill. of Kake v. USDA*, 795 F.3d 956, 968 (9th Cir. 2015) (en banc). And when an agency changes course, “it need not demonstrate to a court’s satisfaction that the reasons for the new policy are *better* than the reasons for the old one.” *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Rather, as long as the agency “display[s] awareness that it is changing position,” then “it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better.” *Id.* (emphasis omitted).

Petitioners are correct that when it adopted the one-mile rule, FERC stated that a rebuttable presumption would be “burdensome and confusing.” Order 70, 45 Fed. Reg. at 17,965. And FERC repeatedly rejected proposals to modify the rule, explaining that “[c]onstruing the one-mile rule as merely a rebuttable presumption . . . and the litigation that would inevitably follow, would hardly be consistent” with the intent of Congress to encourage the development of QFs. *Northern Laramie Range All.*, 139 F.E.R.C. ¶ 61,190, 62,316 n.56 (2012).

But FERC was not required to maintain that position forever. In Order 872, FERC provided “good reasons” for its decision to abandon the bright-line, one-mile rule. *Fox*, 556 U.S. at 515. FERC recognized that the new site rule and related certification procedures could produce additional administrative burden and litigation risk for QFs. Order 872, 85 Fed. Reg. at 54,706. Nevertheless, it reasonably

concluded that the benefits of the new rule—ensuring that PURPA’s benefits flow only to small facilities, not to large facilities masquerading as small ones through strategic facility placement—outweighed those costs. *Id.* FERC determined that the revised site rule and its accompanying regulatory requirements struck “an appropriate balance between the need to address improper circumvention and the need to avoid unduly burdening small power production QFs.” Order 872-A, 85 Fed. Reg. at 86,701.

That explanation satisfies the APA. Even though FERC had rejected this calculus when it opted to keep in place the previous bright-line rule, FERC was entitled to prioritize its concerns about improper aggregation over concerns about administrative uncertainty, even if doing so represented a departure from a long-held determination by the agency. *See Organized Vill. of Kake*, 795 F.3d at 968 (explaining that an agency may reprioritize some concerns over others it previously deemed more important, “even on precisely the same record”); *State Farm*, 463 U.S. at 57 (“An agency’s view of what is in the public interest may change, either with or without a change in circumstances.” (quoting *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970))); *accord National Ass’n of Home Builders v. EPA*, 682 F.3d 1032, 1038 (D.C. Cir. 2012).

Third, petitioners argue that FERC failed to consider the reliance interests engendered by the prior rule. Since 1980, developers relied on the prior one-mile rule when deciding where to build a given facility—so long as the facility was more than one mile apart from another affiliated facility, developers could safely assume that the facilities would be deemed separate sites. But under the new site rule, there is no longer such a guarantee. And because the new rules apply to recertifications filed by existing facilities, an existing QF

faces the risk that it will lose its eligibility for PURPA's benefits if it is deemed to be at the same site as another facility.

As we have explained, an agency is generally free to change policy without offering a more substantial explanation than would be required if it were writing on a blank slate. Sometimes, however, “a more detailed justification” is required. *Fox*, 556 U.S. at 515. In particular, when the prior policy “has engendered serious reliance interests,” then “[i]t would be arbitrary or capricious to ignore such matters.” *Id.*; accord *Encino Motorcars*, 579 U.S. at 221–22. In that situation, a “reasoned explanation is needed” for disregarding the interests “engendered by the prior policy.” *Fox*, 556 U.S. at 515. An agency must “assess whether there were reliance interests” in the prior rule, determine whether those interests “were significant,” and weigh them “against competing policy concerns.” *Department of Homeland Sec. v. Regents of the Univ. of Cal.*, 140 S. Ct. 1891, 1915 (2020).

In Order 872, FERC acknowledged the reliance interests engendered by the 1980 Site Rule, recognizing that some parties had relied on the prior rule when developing QFs. *See, e.g.*, Order 872-A, 85 Fed. Reg. at 86,698–99, 86,701–03. But an agency “may determine, in the particular context before it, that other interests and policy concerns outweigh any reliance interests.” *Regents of the Univ. of Cal.*, 140 S. Ct. at 1914; *see Encino Motorcars*, 579 U.S. at 226 (Ginsburg, J., concurring) (“[R]eliance does not overwhelm good reasons for a policy change.”). FERC reasoned that preventing strategic circumvention of the site rule was more important than any reliance interests, particularly when many of the facilities that adversely relied on the old rule had

engaged in the very disaggregation practices that FERC now seeks to prevent. Order 872-A, 85 Fed. Reg. at 86,702.

Importantly, FERC not only recognized the existence of reliance interests but also took at least some measures to mitigate the harm to relying parties. FERC emphasized that “the new regulations do not apply to an existing facility unless and until it makes *substantive* changes.” Order 872-A, 85 Fed. Reg. at 86,702. FERC reasoned that “[w]hen the existing QF makes a substantive change, it is no longer the same facility it was before,” justifying application of the new rule. *Id.* Order 872 provided examples of the kind of changes that the Commission considers substantive: If, for example, a facility’s power production capacity changes by at least one megawatt or five percent, or its ownership changes by at least ten percent, the new rules would apply. Order 872, 85 Fed. Reg. at 54,706. By acknowledging the existence of reliance interests and incorporating measures to limit the harm to the relying parties, FERC satisfied the APA.

3

Finally, petitioners contend that the 2020 Site Rule is unlawfully retroactive. An administrative agency generally may not promulgate retroactive regulations “unless that power is conveyed by Congress in express terms.” *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988). No party contends that FERC is authorized by statute to engage in retroactive rulemaking. The only question, then, is whether FERC’s new site rule is retroactive.

A provision operates retroactively when it would “impair rights a party possessed when he acted, increase a party’s liability for past conduct, or impose new duties with respect to transactions already completed.” *Landgraf v. USI Film Prods.*, 511 U.S. 244, 280 (1994); *see Bahr v. Regan*, 6 F.4th

1059, 1072 (9th Cir. 2021) (applying the principles of *Landgraf* to the analysis of regulatory retroactivity); *National Mining Ass’n v. Department of Labor*, 292 F.3d 849, 859 (D.C. Cir. 2002) (same). The critical question is “whether the new provision attaches new legal consequences to events completed before its enactment.” *Landgraf*, 511 U.S. at 270; *see also Bowen*, 488 U.S. at 219 (Scalia, J., concurring) (explaining that an administrative rule is impermissible when it “alter[s] the *past* legal consequences of past actions”).

The new site rule does not operate retroactively. It applies to new facilities seeking initial certification and to existing facilities seeking recertification, but only if that certification or recertification is sought *after* the rule’s effective date of December 31, 2020. 18 C.F.R. § 292.204(a)(2)(B)–(C); Order 872, 85 Fed. Reg. at 54,649. The rule applies to recertification of an existing QF only when there have been “substantive changes” to that facility, such as when a facility’s power production capacity changes by at least five percent, or its ownership changes by at least ten percent. Order 872, 85 Fed. Reg. at 54,706. In other words, so long as an already-certified facility does not undergo a substantive change, the old rule applies, and the new rule poses no threat to its qualifying status.

Petitioners do not take issue with the rule’s application to initial certifications of new facilities. Instead, they focus on the application of the rule to recertifications of already-existing facilities. They argue that the new rule is retroactive because it threatens to strip an already-qualified facility of its PURPA eligibility based on what they consider to be “minor” changes to the facility. But even if the triggering event requiring recertification is “minor,” a previously certified QF does not possess any sort of “vested rights” to

PURPA eligibility in perpetuity. *Landgraf*, 511 U.S. at 269 (quoting *Society for the Propagation of the Gospel v. Wheeler*, 22 F. Cas. 756, 767 (C.C.N.H. 1814) (No. 13,156)). Thus, even if a facility were to lose its PURPA eligibility in the future under the new site rule, the rule would not “impair rights a party possessed when [it] acted.” *Id.* at 280. Nor does the rule “attach[] new legal consequences to events completed before its enactment.” *Id.* at 270. Rather, it potentially creates new legal consequences—the loss of qualifying status—only for “events” that occur in the *future*: recertifications that take place after the rule’s effective date, and only if the facility undergoes a substantive change.

At bottom, petitioners’ theory is that the rule is retroactive because QFs were built in reliance on the old site rule, and the new rule could result in the loss of qualifying status. But a rule is not retroactive merely because it “upsets expectations based in prior law” or “is applied in a case arising from conduct antedating the statute’s enactment.” *Landgraf*, 511 U.S. at 269. “Even uncontroversially prospective statutes” can do that. *Id.* at 269 n.24. For example, “a new property tax or zoning regulation may upset the reasonable expectations that prompted those affected to acquire property; a new law banning gambling harms the person who had begun to construct a casino before the law’s enactment or spent his life learning to count cards.” *Id.* The 2020 Site Rule is not unlawfully retroactive under the APA.

B

We now turn to petitioners’ challenges to Order 872’s revision of the Fixed-Rate Rule.

PURPA requires that the rates paid to QFs (1) “shall be just and reasonable to the electric consumers of the electric utility,” (2) shall be “in the public interest,” and (3) “shall

not discriminate against” QFs. 16 U.S.C. § 824a-3(b). Of particular relevance here, it also states that no rule “shall provide for a rate which exceeds the incremental cost to the electric utility of alternative electric energy.” *Id.* Under that provision, the rate paid to a QF may not exceed the cost to the utility “of the electric energy which, but for the purchase from [the QF], such utility would generate or purchase from another source.” *Id.* § 824a-3(d).

In its 1980 Rules, FERC set the rate at the utility’s full avoided cost. Order 69, 45 Fed. Reg. at 12,222–23. The 1980 Rules provided two methods for calculating avoided cost. QFs could choose a rate determined by the utility’s avoided cost calculated at the time of delivery, or, alternatively, a rate calculated and fixed based on an estimate of the utility’s avoided cost over the life of the contract. *See Winding Creek Solar*, 932 F.3d at 863. FERC recognized in 1980 that “a contract with avoided costs calculated at the time a [contract] is incurred could exceed the electric utility’s avoided costs at the time of delivery in the future, thereby seemingly violating PURPA’s requirement that QFs not be paid more than an electric utility’s avoided costs.” Order 872-A, 85 Fed. Reg. at 86,664. Nevertheless, FERC determined that PURPA’s rate cap did not require a “minute-by-minute evaluation of costs which would be checked against rates established in long term contracts.” Order 69, 45 Fed. Reg. at 12,224. FERC explained that “in the long run, ‘overestimations’ and ‘underestimations’ of avoided costs will balance out,” and that allowing rates to be fixed in long-term contracts was necessary to provide enough certainty to allow QFs to obtain financing. *Id.*

Order 872 modifies the Fixed-Rate Rule by allowing (but not requiring) States to eliminate fixed-contract *energy* rates. 18 C.F.R. § 292.304(d)(2). The rules require that States

maintain the right of QFs to elect fixed-contract *capacity* rates. *Id.* § 292.304(d)(1)(ii).

Petitioners argue that FERC unreasonably interpreted PURPA’s rate-related provisions and that the revised rule violates PURPA’s “non-discrimination” provision. They also argue that the new rule is arbitrary and capricious. We find neither theory persuasive.

1

Petitioners argue that FERC’s modification of the Fixed-Rate Rule reflects a misreading of PURPA. Petitioners acknowledge, and FERC agrees, that Congress did not speak to the precise question of how “avoided costs” should be calculated, instead granting FERC broad discretion to set rates, subject to the statute’s avoided-cost limitation. *See* 16 U.S.C. § 824a-3(b). And they correctly observe that PURPA does not *require* that avoided cost be measured by reference to short-run costs calculated at the time of delivery. The Commission did not suggest otherwise. To the contrary, it recognized that PURPA does not demand any particular avoided-cost calculation method; as the Commission observed, it “could have imposed a variable energy contract requirement when it promulgated the PURPA Regulations in 1980 instead of requiring fixed energy contract rates.” Order 872-A, 85 Fed. Reg. at 86,672.

FERC’s position thus survives *Chevron* step one. Under *Chevron* step two, it is a reasonable interpretation of the statute. FERC determined that States should have the option to require measurement of avoided costs at the time of delivery because—in the Commission’s view—that approach better comports with the principles of PURPA’s avoided-cost provision: “[A] variable energy avoided cost approach is a more accurate way to ensure that payments to

QFs equal, but do not exceed, avoided costs.” Order 872, 85 Fed. Reg. at 54,672. FERC was entitled to “justify its policy choice by explaining why that policy ‘is more consistent with statutory language’ than alternative policies.” *Encino Motorcars*, 579 U.S. at 223 (quoting *Long Island Care at Home, Ltd. v. Coke*, 551 U.S. 158, 175 (2007)).

Petitioners argue that the new rate rule violates PURPA’s requirement that rates “shall not discriminate against” QFs. 16 U.S.C. § 824a-3(b)(2). They point out that QFs now must accept a variable, uncertain rate (at least in those States that choose to eliminate fixed rates), whereas utilities are guaranteed the long-term recovery of their costs and a return on investment, even when their costs exceed short-term energy prices. Because QFs now face financial risks that utilities do not, petitioners believe that the new rule sets a rate that violates PURPA’s nondiscrimination requirement.

PURPA’s nondiscrimination provision cannot support that interpretation. Under PURPA, the compensation regime for QFs is fundamentally different from that used for utilities. *See American Paper*, 461 U.S. at 414 (“Congress did not intend to impose traditional ratemaking concepts [used by utilities] on sales by qualifying facilities to utilities.”). The Supreme Court explained in *American Paper* that “the full-avoided-cost rule plainly satisfies the nondiscrimination requirement.” *Id.* at 413; *see* Order 872, 85 Fed. Reg. at 54,651 (“If the purchasing utility is paying the same rate to a QF for power that it otherwise would have paid for incremental power, by definition such a rate could not be discriminatory.”). Nothing in the Court’s analysis suggests that the nondiscrimination requirement demands fixed-rate, rather than variable-rate, assessment of avoided costs. After all, the statute requires that “rates . . . shall not discriminate” against QFs; it does not require that they be set

in such a way as to offset any other disadvantages that QFs might face in the market. 16 U.S.C. § 824a-3(b)(2). Order 872 requires that QFs receive a rate equal to full avoided costs, and that is sufficient to satisfy the nondiscrimination requirement.

2

Petitioners argue that the Fixed-Rate Rule is arbitrary and capricious for two reasons. First, they claim that FERC changed its interpretation of PURPA without “display[ing] awareness that it [was] changing position.” *Fox*, 556 U.S. at 515. Second, they argue that FERC lacked data to support its conclusions and failed to recognize important elements of the problem.

The parties debate whether FERC has changed its interpretation of the statute to justify its rule change, but we need not resolve that debate because FERC expressly and unambiguously acknowledged that it was changing its *policy* in partially eliminating the Fixed-Rate Rule. FERC stated that “because the Commission’s revision to the fixed energy rate requirement is based on changed circumstances since the issuance of the PURPA Regulations in 1980, we must provide ‘a reasoned explanation . . . for disregarding facts and circumstances that underlay or were engendered by the policy.’” Order 872-A, 85 Fed. Reg. at 86,672 (quoting *Fox*, 556 U.S. at 516). That satisfies the concern in *Fox Television* that agencies not “depart from a prior policy *sub silentio* or simply disregard rules that are still on the books.” 556 U.S. at 515.

FERC also explained why it was changing policy. FERC had initially justified the Fixed-Rate Rule on the theory that “in the long run, ‘overestimations’ and ‘underestimations’ of avoided costs will balance out.” Order 69, 45 Fed. Reg. at

12,224. But in Order 872, it determined, based on new evidence, that “it is not necessarily the case that overestimations and underestimations of avoided energy costs will balance out.” Order 872, 85 Fed. Reg. at 54,677. More specifically, it found that “[b]road price declines over time throughout the energy industry show that long-term fixed price QF contracts likely exceeded the avoided energy costs at the time of delivery for extended periods of time.” Order 872-A, 85 Fed. Reg. at 86,672. A finding of regular, routine overestimations not balanced out by underestimations would fully justify a change in policy.

Petitioners argue that there is no record evidence suggesting that the prior Fixed-Rate Rule actually resulted in contracts above market prices. They say that FERC analyzed only a relatively short period during which energy prices precipitously declined, calling into question the conclusion that over- and under-estimations will not balance out over time. Petitioners further argue that FERC relied on unreliable reports of over-cost contracts—often from utility companies themselves—without assessing the underlying data.

But reliance on imperfect data is “not unusual in day-to-day agency decisionmaking,” and an agency does not err by making reasonable judgments “based on the evidence it had.” *Prometheus Radio Project*, 141 S. Ct. at 1160; see *Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1308 (D.C. Cir. 2015) (recognizing that courts must “afford FERC ‘an extreme degree of deference’” when it makes judgments “within its technical expertise” (quoting *Washington Gas Light Co. v. FERC*, 532 F.3d 928, 930 (D.C. Cir. 2008))). FERC reasonably relied on several comments suggesting that PURPA contracts exceed avoided costs somewhat often and by large margins. Order 872-A, 85

Fed. Reg. at 86,668 n.147. Those comments were not facially unreliable, and even if the drop in prices represented an anomalous circumstance, the anomaly supports the Commission's finding that, "at least in some circumstances, long-term fixed avoided cost energy rates have been well above the purchasing utility's avoided costs for energy." Order 872, 85 Fed. Reg. at 54,676. The Commission could reasonably conclude that the problem called for a remedy.

Petitioners object that FERC ignored concerns that state commissions—which are granted new flexibility under the new Fixed-Rate Rule—have previously violated the due process rights of QFs in their implementation of PURPA regulations. FERC did not ignore the concern; it explained that the rule reflected "the expectation that the states will fulfill their legal obligation to implement the Commission's PURPA Regulations as revised." Order 872, 85 Fed. Reg. at 54,647. To the extent that any State fails to do so, the Commission explained, Congress has provided a remedy in 16 U.S.C. § 824a-3(h). *Id.*

Petitioners also argue that FERC minimized concerns about the ability of QFs to secure financing without the certainty of a fixed rate, especially outside of organized markets. FERC acknowledged that "fixed rates are beneficial for obtaining financing for QF projects," but it determined that its reforms would not "materially affect[] the ability of QFs to obtain financing." Order 872, 85 Fed. Reg. at 54,670. That determination was not arbitrary and capricious.

First, FERC explained that because QFs are still entitled to a fixed capacity rate, it believed that the potential receipt of some steady cashflows will typically be sufficient to encourage financing. As the Commission observed, "the

variable energy rate/fixed capacity rate construct . . . is the standard rate structure used throughout the electric industry for power sales agreements that include the sale of capacity.” Order 872, 85 Fed. Reg. at 54,645. And it concluded that a “fixed capacity rate . . . should typically be sufficient to recover the QF’s financing costs and should therefore continue to facilitate QF financing.” *Id.*

Second, FERC relied on data that non-PURPA independent facilities have been successful—as demonstrated by an almost 700 percent increase in independent renewable generation between 2005 and 2018, most of it outside of PURPA—and received adequate financing without PURPA’s mandatory fixed rate. Order 872, 85 Fed. Reg. at 54,682. From this, FERC concluded that QFs will similarly be able to obtain financing. FERC reasonably relied on non-PURPA data to make “a reasonable predictive judgment based on the evidence it had.” *Prometheus*, 141 S. Ct. at 1160.

More importantly, FERC determined that the benefits of its new approach—better compliance with the statutory requirement that rates not exceed avoided costs—exceed the harms that it may inflict on QFs. Order 872-A, 85 Fed. Reg. at 86,672–73; see *Encino Motorcars*, 579 U.S. at 223–24 (“[A]n agency may justify its policy choice by explaining why that policy ‘is more consistent with statutory language’ than alternative policies.” (quoting *Long Island Care*, 551 U.S. at 175)). Given the broad discretion that PURPA provides FERC in setting rates, that was a permissible judgment.

C

Order 872 permits (but does not require) States to adopt a rebuttable presumption that locational marginal price

represents a utility's avoided costs in certain organized markets. 18 C.F.R. § 292.304(b)(6). Petitioners contend that the LMP rebuttable presumption is arbitrary and capricious. Relying on the two-part test articulated by the D.C. Circuit in *Cablevision Sys. Corp. v. FCC*, 649 F.3d 695 (D.C. Cir. 2011), petitioners argue that the APA permits an agency to adopt an evidentiary presumption only if the presumption (1) is "rational," and (2) "shift[s] the burden of production and not the burden of persuasion." *Id.* at 716. Petitioners contend that the LMP presumption satisfies neither element of the *Cablevision* test.

By its terms, the *Cablevision* test governs presumptions adopted by a federal agency to govern its own proceedings. But the LMP presumption does not govern proceedings before the Commission; it is a presumption that States may choose to apply (or not) in proceedings that they conduct. We have not previously held that *Cablevision* applies in that context. We need not explore that question further because the parties agree that *Cablevision* applies, so we will assume, without deciding, that they are correct. Under that test, petitioners' argument fails because the LMP presumption is rational and does not impermissibly shift the burden of persuasion.

First, the LMP presumption is rational. "[A]n evidentiary presumption is only permissible if there is a sound and rational connection between the proved and inferred facts, and when proof of one fact renders the existence of another fact so probable that it is sensible and timesaving to assume the truth of [the inferred] fact . . . until the adversary disproves it." *Cablevision*, 649 F.3d at 716 (second alteration in original) (quoting *National Mining Ass'n v. Department of Interior*, 177 F.3d 1, 6 (D.C. Cir. 1999)). In assessing that "rational connection," we "defer to the

agency’s judgment.” *Id.* (quoting *National Mining Ass’n*, 177 F.3d at 6).

Petitioners argue that electric utilities purchasing from QFs may have avoided costs that exceed LMP. For example, utilities that obtain energy outside of the market auction—whether from their own plants or through bilateral contracts—might incur costs that exceed LMP. As petitioners put it, LMP reflects a utility’s costs only “if the utility’s own generation is bid at its full cost of production and the utility’s marginal (most expensive) energy is purchased through the market.”

Granting the point that LMP does not always describe avoided costs, there is nevertheless a “sound and rational connection” between the LMP presumption and a utility’s avoided costs. *Cablevision*, 649 F.3d at 716. In an organized market, LMP reflects the marginal cost of providing an additional megawatt-hour of energy at a given time and location within the grid, as determined by competitive auctions. Order 872, 85 Fed. Reg. at 54,656; Federal Energy Regulatory Comm’n, *Energy Primer* 60 (Nov. 2015); *Electric Power Supply Ass’n*, 577 U.S. at 267–68. FERC explained that this price often provides a reasonable proxy for a utility’s avoided costs. LMP takes into account “all physical system constraints” and thus “reflect[s] the true marginal cost of production of energy.” Order 872, 85 Fed. Reg. at 54,660. For a utility that purchases its marginal energy through the market, then, LMP will, by definition, equal the utility’s avoided energy costs. And because LMP is location-specific, it more accurately measures a utility’s avoided energy costs than would a system-wide cost measure. *Id.* “Because LMP is likely to reflect the true marginal cost of energy in the vast majority of cases,” FERC said, “it is ‘so probable that it is sensible and timesaving to

assume’ that LMP for a particular utility is an appropriate measure of the utility’s avoided costs for as-available energy.” Order 872-A, 85 Fed. Reg. at 86,666 (footnote omitted) (quoting *National Mining Ass’n*, 177 F.3d at 6).

FERC nevertheless recognized that LMP might “not always reflect a purchasing utility’s actual avoided energy costs.” Order 872, 85 Fed. Reg. at 54,659. For that reason, FERC built flexibility into the rule. FERC’s notice of proposed rulemaking had suggested adopting a per se rule, which would have allowed States to adopt LMP as a measure of avoided costs without providing QFs the opportunity to demonstrate why LMP is inappropriate in a particular case. 2019 NPRM, 84 Fed. Reg. at 53,253. In response to comments, FERC abandoned that approach and instead adopted a rebuttable presumption. Order 872, 85 Fed. Reg. at 54,659. If a utility’s actual avoided costs exceed LMP for any of the reasons identified by petitioners, a QF can rebut the presumption; at the end of the day, the QF is still entitled to receive the utility’s full avoided costs. Moreover, no State is obligated to adopt the rebuttable presumption if it determines that LMP does not reflect actual avoided costs. This alleviates concerns about the accuracy of LMP in regional markets that are not sufficiently competitive.

Second, FERC did not impermissibly shift the burden of persuasion. *See Cablevision*, 649 F.3d at 716. After a State establishes a rate, that rate can be challenged before a state regulatory authority, and then before the Commission or in federal court. Order 872, 85 Fed. Reg. at 54,659–60; *Pioneer Wind Park I, LLC*, 145 F.E.R.C. ¶ 61,215, 62,169 (2013) (noting that if the QF objects to the State’s avoided-cost rates, “it should first pursue such concerns at the [state] Commission,” and then can file a petition before FERC or in federal court); 16 U.S.C. § 824a-3(g), (h)(2). But in those

proceedings, the challenger *always* bears the burden of persuasion—just as it did before the issuance of Order 872—to demonstrate that the State’s rate choice does not accurately reflect a utility’s actual avoided costs. As FERC explained, nothing in Order 872 shifts the burden of persuasion in that proceeding: “Requiring an entity challenging the state’s use of the presumption in the first instance to show why the state was wrong does not negate the legal requirement that, unless the parties agree to another rate, the rates for purchases in a QF contract must equal a purchasing utility’s avoided costs.” Order 872-A, 85 Fed. Reg. at 86,666. In such a proceeding, “a state would need to address the challenging entity’s arguments in order to demonstrate that LMP represents the purchasing utility’s avoided costs,” and Order 872 does “not shift the burden of persuasion, only the burden of production.” *Id.*

D

Petitioners argue that FERC’s adjustment of the market-access presumption from 20 megawatts to five megawatts was arbitrary and capricious.

As we have already explained, the APA ordinarily does not demand that an agency justify a policy change with reasons more substantial than would be required to adopt that same policy in the first instance. *See Fox*, 556 U.S. at 514–15. But when a “new policy rests upon factual findings that contradict those which underlay its prior policy,” an agency must provide “a more detailed justification than what would suffice for a new policy created on a blank slate.” *Id.* at 515. In such cases, the agency must give a “reasoned explanation” for “disregarding facts and circumstances that underlay . . . the prior policy.” *Id.* at 516.

In Order 688, the Commission concluded that, as a product of their size, “small” QFs may have difficulty accessing markets. Order 688, 71 Fed. Reg. at 64,352; Order 688-A, 72 Fed. Reg. at 35,884. It therefore determined that it was reasonable to adopt a rebuttable presumption that small QFs lack nondiscriminatory market access. Faced with competing comments about how to define a “small” QF, the Commission acknowledged that “there is no unique and distinct megawatt size that uniquely determines if a generator is small.” Order 688-A, 72 Fed. Reg. at 35,884; *see* Order 688, 71 Fed. Reg. at 64,353 (“[N]o single per-MW demarcation is perfect.”). Nevertheless, the Commission concluded that a 20-megawatt threshold would be “reasonable and administratively workable.” Order 688, 71 Fed. Reg. at 64,352. The Commission noted that it had used a 20-megawatt threshold in other rulemaking contexts, such as its interconnection rules, which subjected small generators of less than 20 megawatts to different rules than large generators. *Id.* at 64,352–53. But because the Commission recognized that there was no perfect demarcation, it emphasized that it was creating only a rebuttable presumption rather than a per se rule. *Id.*

In Order 872, FERC cited changed circumstances since the issuance of Order 688 to justify its downward revision of the market-access presumption from 20 megawatts to five megawatts. Order 872, 85 Fed. Reg. at 54,715. Because FERC’s revision of the presumption was based on “factual findings that contradict those which underlay its prior policy,” it was required to provide a “reasoned explanation” for its policy change. *Fox*, 556 U.S. at 515–16.

The Commission did so by explaining that at the time it issued Order 688, organized markets had been in existence for only a few years. Order 872, 85 Fed. Reg. at 54,712. But

in the years since then, “markets have matured,” and “market participants have gained a better understanding of the mechanics of such markets,” enabling facilities with capacities of less than 20 megawatts to participate in those markets in ways that they could not before. *Id.* at 54,716. Indeed, as FERC noted, the Commission’s own rules have enabled greater market access for small QFs, such as its rule requiring that regional markets use tariff schedules that accommodate resources as small as 100 kilowatts. Order 872-A, 85 Fed. Reg. at 86,707. These rules “provide greater opportunities for small power production facilities to participate in wholesale organized markets” than were available when FERC issued Order 688. *Id.* And in the years since it issued Order 688, FERC observed “multiple examples of small power production facilities under 20 MW participating in . . . energy markets.” Order 872, 85 Fed. Reg. at 54,715.

Taking this evidence into account, FERC found that it was “reasonable to presume that access to the [regional markets] has improved and that it is appropriate to update the presumption for smaller production facilities.” Order 872, 85 Fed. Reg. at 54,716. As in Order 688, FERC acknowledged in Order 872 that no single size threshold would perfectly distinguish facilities that lack adequate market access from those that have adequate market access. *Id.* And just as it did when issuing Order 688, FERC looked to the cutoffs used in other rules to guide its revision to the market-access presumption, such as its rules requiring that utilities increase the availability of “Fast-Track” interconnection procedures for projects up to five megawatts in size. *Id.* In the end, after considering an even lower threshold of one megawatt, FERC settled on a five-megawatt threshold. It concluded that “5 MW represents a reasonable

new threshold that accounts for the change of circumstances indicating that 20 MW no longer is appropriate but also accommodates commenters' concerns that a 1 MW threshold would be too low." *Id.*

FERC provided a "reasoned explanation" for its revision of the rebuttable presumption, and its decision survives review under the APA. *Fox*, 556 U.S. at 516. The Commission's determination that market conditions have improved considerably for small facilities since the issuance of Order 688 implicates its "technical understanding and policy judgment" about the state and operation of energy markets, and thus we are particularly careful not to "substitute our own judgment for that of the Commission." *Electric Power Supply Ass'n*, 577 U.S. at 295, 292. Given FERC's reasonable determination that market conditions had changed, FERC's choice of a five-megawatt threshold was not arbitrary and capricious.

IV

That leaves the NEPA challenge, which is asserted only by the Environmental Organizations. FERC provided two independent grounds for its conclusion that it was not required to prepare an environmental assessment (EA) or environmental impact statement (EIS). First, FERC claimed that Order 872 falls within a "categorical exclusion" to NEPA. Order 872, 85 Fed. Reg. at 54,725–27. Second, FERC asserted that any downstream environmental impacts of Order 872 are too uncertain and unforeseeable to trigger NEPA review. *Id.* Reviewing FERC's NEPA conclusions under the APA's arbitrary-and-capricious standard, *see Environmental Def. Ctr. v. Bureau of Ocean Energy Mgmt.*, 36 F.4th 850, 871–72 (9th Cir. 2022), we reject both justifications. FERC was required to prepare an EA before

issuing Order 872. But because of the extraordinary disruptive consequences of vacating the rules, we decline to order vacatur.

A

Before we turn to the merits of the NEPA claims, we consider whether we have jurisdiction. Utility-Intervenors (but not FERC) contend that the Environmental Organizations lack both Article III and prudential standing. We disagree.

In order to establish Article III standing, “a plaintiff must show (1) it has suffered an ‘injury in fact’ that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.” *Association of Irrigated Residents v. EPA*, 10 F.4th 937, 943 (9th Cir. 2021) (quoting *Friends of the Earth, Inc. v. Laidlaw Env’t Servs. (TOC), Inc.*, 528 U.S. 167, 180–81 (2000)). We have explained that when a plaintiff alleges a “procedural injury”—such as the failure to comply with NEPA—the “‘normal standards for . . . [the] immediacy’ of the injury are relaxed.” *Navajo Nation v. Department of the Interior*, 876 F.3d 1144, 1160 (9th Cir. 2017) (alterations in original) (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992)). Although “injury in fact requires a likelihood that the challenged action, if ultimately taken, would threaten a plaintiff’s interests,” *id.* at 1161, we do not require the plaintiff to show that the agency would necessarily have reached a different decision had it complied with NEPA. *Lujan*, 504 U.S. at 572 n.7.

The Environmental Organizations have Article III standing. In their briefing and supplemental declarations, the Organizations adequately document the concrete harms that Order 872 could cause their members. According to the Organizations, Order 872 will reduce the incentives provided to QFs, many of which use renewable energy sources. This, in turn, could shift the mix of power generation in the United States away from renewable generation and toward fossil-fuel generation. This undeniably harms the economic interests of the Organizations' members, many of which own QFs, and the environmental interests of the Organizations' members, many of whose missions involve the promotion of renewable energy development. The Organizations' members also live near facilities that burn fossil fuels, and if those facilities burn more fossil fuels, members will suffer greater air pollution. The threat of those concrete harms confers Article III standing.

Utility-Intervenors suggest that the alleged harms “rest[] on a speculative chain of future possibilities,” depriving the Organizations of standing. (quoting *Center for Biological Diversity v. Bernhardt*, 946 F.3d 553, 560 (9th Cir. 2019)). But although Utility-Intervenors argue that the alleged environmental harms of Order 872 are not foreseeable because they depend on the subsequent, independent choices made by each State, even “a contingent ‘chain of events’ can create a ‘reasonably probable’ threat to a plaintiff’s interests.” *Navajo Nation*, 876 F.3d at 1161; cf. *California ex rel. Lockyer v. United States Dep’t of Agric.*, 575 F.3d 999, 1010–11 (9th Cir. 2009) (concluding that a NEPA challenge was ripe for adjudication, even though any alleged harms from the challenged rule would not materialize without subsequent action by individual States). And state

implementation of Order 872 is far from speculative. To the contrary, multiple States in which the Organizations' members live have already begun to implement the order. We conclude that there is at least a "reasonable probability" that FERC's alleged NEPA violation will lead to concrete harm to the Organizations' members. *Navajo Nation*, 876 F.3d at 1161 (citation omitted).

To be sure, the harm will be caused by third parties rather than directly by FERC itself. But that does not defeat the Organizations' standing. Although "speculation about the decisions of independent actors" is not an adequate basis for standing, the relevant actors here are not genuinely independent. *Clapper v. Amnesty Int'l, USA*, 568 U.S. 398, 414 (2013). Rather, they are the entities directly regulated by the regime established in Order 872, and as we have already explained, their responses to that order are hardly a matter of speculation. In the NEPA context, we have repeatedly held that predictable "third-party responses to agency action [are] sufficient to confer standing." *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1515 (9th Cir. 1992).

In addition to Article III standing, a plaintiff challenging an agency's compliance with NEPA must establish prudential standing by demonstrating that its injury falls "within the zone of interests to be protected by the statute." *Ranchers Cattlemen Action Legal Fund United Stockgrowers of Am. v. United States Dep't of Agric.*, 415 F.3d 1078, 1103 (9th Cir. 2005) (quoting *Nevada Land Action Ass'n v. United States Forest Serv.*, 8 F.3d 713, 715–16 (9th Cir. 1993)). As its name makes clear, NEPA is an environmental statute, and thus "to assert a claim under NEPA, a plaintiff must allege injury to the environment; economic injury will not suffice." *Id.* But although a *purely* economic injury does not fall within NEPA's zone of

interests, a plaintiff can nevertheless satisfy NEPA’s zone-of-interests requirement even “if his or her interest is primarily economic, as long as he or she also alleges an environmental interest or economic injuries that are ‘causally related to an act within NEPA’s embrace.’” *Id.* (quoting *Port of Astoria, Or. v. Hodel*, 595 F.2d 467, 476 (9th Cir. 1979)).

The Environmental Organizations satisfy NEPA’s zone-of-interests test. The environmental harms that they fear—namely, an increase in pollution and greenhouse-gas emissions resulting from reduced incentives provided to renewable sources—undoubtedly fall within NEPA’s zone of interests. Given the specific renewable-energy-promoting purposes of the Organizations, their interest is also clearly “distinct from the interest held by the public at large.” *Navajo Nation*, 876 F.3d at 1164 (quoting *Cantrell v. City of Long Beach*, 241 F.3d 674, 681 (9th Cir. 2001)). Further, the Organizations have expressly environmental missions, and thus they have a “direct interest” in ensuring that FERC complies with NEPA’s requirements. *See Western Watersheds Project*, 632 F.3d at 485–86 (concluding that a non-profit organization with a “direct interest” in seeing that the agency adequately evaluates the environmental effects of a proposed action fell within NEPA’s zone of interests). Because that interest is sufficient for prudential standing, we need not consider whether the economic harms that the Organizations’ members fear also fall within NEPA’s zone of interests.

B

NEPA “imposes procedural requirements designed to force agencies to take a ‘hard look’ at environmental consequences” of their actions. *Center for Cmty. Action &*

Env't Just. v. FAA, 18 F.4th 592, 598 (9th Cir. 2021) (quoting *Earth Island Inst. v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003)). To that end, NEPA requires agencies to prepare a detailed EIS for any “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). The threshold for NEPA analysis “is relatively low: ‘It is enough for the plaintiff to raise substantial questions whether a project may have a significant effect on the environment.’” *Lockyer*, 575 F.3d at 1012 (citation omitted).

Under NEPA’s implementing regulations, before an agency decides to prepare an EIS, it may prepare an EA, which is a “concise public document” designed to “provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. § 1508.9(a) (2020). An EA “is intended to help an agency decide if an EIS is warranted.” *Environmental Def. Ctr.*, 36 F.4th 850, 872 (9th Cir. 2022). If, after the completion of an EA, there remain “‘substantial questions’ about whether an agency action will have a significant effect,” an EIS is required. *Bark v. United States Forest Serv.*, 958 F.3d 865, 868 (9th Cir. 2020) (citation omitted). Otherwise, the agency “may issue a finding of no significant impact (‘FONSI’) in lieu of preparing an EIS.” *Id.* (citation omitted).

But an agency is not required to prepare an EA or EIS if the proposed action falls within a “categorical exclusion.” 40 C.F.R. § 1508.4; see *Save Our Skies LA v. FAA*, 50 F.4th 854, 859–60 (9th Cir. 2022). Agencies may establish categorical exclusions for “actions which do not individually or cumulatively have a significant effect on the human environment.” 40 C.F.R. § 1508.4; see *id.* § 1507.3(e)(2)(ii). When a categorical exclusion applies, “neither an

environmental assessment nor an environmental impact statement is required” unless “extraordinary circumstances” are present. *Id.* § 1508.4.

C

We start with FERC’s contention that Order 872 falls within a categorical exclusion to NEPA. FERC established a categorical exclusion for rules that are “clarifying, corrective, or procedural, or that do not substantially change the effect of . . . regulations being amended.” 18 C.F.R. § 380.4(a)(2)(ii). When that categorical exclusion applies, “neither an environmental assessment nor an environmental impact statement” is required. *Id.* § 380.4(a).

We agree with FERC that some elements of Order 872, considered on their own, might fall into the categorical exclusion for clarifying, corrective, or procedural rules. For example, Order 872’s update to Form 556—used by QFs when applying for certification—can reasonably be described as a “procedural” change. Order 872, 85 Fed. Reg. at 54,728. Likewise, its revision to the definition of the term “electrical generating equipment” can reasonably be characterized as “clarifying” whether particular kinds of equipment (such as wind turbines or solar panels) fall within the term’s scope. *Id.* at 54,703.

We reject FERC’s contention, however, that the more substantive elements of Order 872 fall within the categorical exclusion. FERC interpreted the “corrective” portion of its categorical exclusion as “including changes needed in order to ensure that a regulation conforms to the requirements of the statutory provisions being implemented by the regulation.” Order 872, 85 Fed. Reg. at 54,728. FERC characterized three of Order 872’s rule changes as “corrective”: (1) modification of the Site Rule, (2)

modification of the Fixed-Rate Rule, and (3) modification of the presumption of non-discriminatory access. *Id.* In FERC’s view, because it adopted those changes in order to better conform to PURPA’s statutory text, the revisions were corrective in nature and thus fit within the categorical exclusion. *Id.*

Although we owe some deference to FERC’s interpretation of its own regulation, *see Kisor v. Wilkie*, 139 S. Ct. 2400 (2019), the “corrective” component of the categorical exclusion cannot reasonably be read so broadly. Agencies regularly adjust their policies to better comply with a statute. *See Encino Motorcars*, 579 U.S. at 222–24. That is especially so where, as here, a statute provides an agency with broad discretion to fulfill its obligations in any number of reasonable and permissible ways. *See* 16 U.S.C. § 824a-3(a). But when an agency adopts broad, transformative, and substantive changes to its regulations, it cannot sidestep NEPA’s requirements by claiming that it was motivated by its desire to better conform to the statute and then applying a “corrective” label. A regulatory change as significant as Order 872 is not corrective merely because the agency expresses some interest in better statutory compliance. If it were, nearly any regulatory change could evade NEPA review. *See* Order 872-A, 85 Fed. Reg. at 86,754 (Glick, Comm’r, dissenting in part).

FERC’s own NEPA implementing regulations provide additional support for our conclusion. Even if Order 872 could reasonably be characterized as creating “corrective” rules, and therefore as falling within a categorical exclusion, FERC’s regulations state that when a rule would otherwise fall within a categorical exclusion but “the environmental effects are uncertain,” the Commission will generally

prepare an EA or EIS regardless. 18 C.F.R. §§ 380.4(b)(1)(ii), (b)(2)(vii).

In support of its application of the categorical exclusion, FERC relies on *Department of Transportation v. Public Citizen*, 541 U.S. 752 (2004). In that case, the Supreme Court rejected an argument that the Federal Motor Carrier Safety Administration had violated NEPA because the EA accompanying certain regulations failed to consider the potential environmental effects of increased cross-border travel by Mexican motor carriers. *Id.* at 755. The Court observed that only the President, not the agency, “could authorize (or not authorize) cross-border operations from Mexican motor carriers.” *Id.* at 770. Thus, because the agency had “no discretion to prevent the entry of Mexican trucks, its EA did not need to consider the environmental effects arising from the entry.” *Id.*

Drawing on *Public Citizen*, FERC argues that it had “no discretion” to keep the prior rules in effect once it determined that “certain of the 1980 PURPA Regulations conflicted with PURPA’s statutory mandates.” And, FERC says, because it had no option but to issue the “corrective” rules of Order 872, it “did not need to consider the environmental effects arising from” its revisions and could therefore apply the categorical exclusion. *Public Citizen*, 541 U.S. at 770. In fact, as FERC emphasized throughout the rulemaking process, PURPA provides FERC with broad discretion. For example, as explained above, FERC reasonably determined that its new Site Rule better served the “spirit and purpose of PURPA.” Order 872-A, 85 Fed. Reg. at 86,691. But that does not mean that the 2020 Site Rule was the *only* permissible implementation of FERC’s authority to define whether two facilities are located “at the same the site,” or that such a change was mandated by the

statute. The same is true of FERC's modification of the market-access presumption. While FERC reasonably concluded in Order 872 that facilities with a power production capacity exceeding five megawatts could be rebuttably presumed to possess non-discriminatory market access, 85 Fed. Reg. at 54,716, we cannot say that this was the only threshold that FERC could have chosen. Even if FERC issued Order 872, in part, to better conform to its interpretation of PURPA's statutory language, FERC nevertheless retained discretion in carrying out its statutory mandate. That discretion distinguishes this case from *Public Citizen* and makes FERC's reliance on the categorical exclusion unreasonable.

D

FERC also concluded that it was not required to prepare an EA or EIS because "any potential environmental impacts from the final rule are not reasonably foreseeable." Order 872-A, 85 Fed. Reg. at 86,716. According to FERC, Order 872 "does not involve a particular project that define[s] fairly precisely the scope and limits of the proposed development." *Id.* (citation and quotation marks omitted). Rather, its rules merely provide state regulatory authorities with expanded discretion in administering PURPA. *Id.* at 86,717. Thus, it was "impossible to know what the states may choose to do in response to the final rule, whether they will make changes in their current practices or not, and how those state choices would impact QF development and the environment." *Id.*

FERC misunderstands NEPA's requirements. Both the applicable regulations and our case law make clear that, in the ordinary course, an agency "*shall* . . . prepare an environmental assessment" for a major agency action unless

the proposed action is one that “normally . . . do[es] not have a significant effect on the human environment” and therefore falls within a categorical exclusion. 40 C.F.R. § 1501.4 (emphasis added); see *Klamath Siskiyou Wildlands Ctr. v. Boody*, 468 F.3d 549, 562 (9th Cir. 2006) (“[I]f the proposed action does not categorically require the preparation of an EIS, the agency *must* prepare an EA to determine whether the action will have a significant effect on the environment.”) (alteration in original) (emphasis added) (quoting *Kern v. Bureau of Land Mgmt.*, 284 F.3d 1062, 1066 (9th Cir. 2002)); *Lockyer*, 575 F.3d at 1012 (requiring an EIS, EA, or categorical exclusion to comply with NEPA); *Steamboaters v. FERC*, 759 F.2d 1382, 1393 (9th Cir. 1985) (noting that the “only exception” to the requirement that an agency prepare at least an EA is when the proposed action falls within a categorical exclusion). And FERC’s own regulations state that “[a]n environmental assessment will normally be prepared” for regulations not covered by a categorical exclusion. 18 C.F.R. §§ 380.5(a), (b)(12).

Relying on *Center for Biological Diversity v. Ilano*, 928 F.3d 774 (9th Cir. 2019), FERC argues that Order 872 did not authorize “a particular project” requiring environmental analysis. *Id.* at 780. In *Ilano*, we upheld the United States Forest Service’s determination that no EA or EIS was required before the Service designated forest land as a “landscape-scale area” under the Healthy Forests Restoration Act because such a designation did not “change the status quo,” authorize a “particular project,” or “foreseeably impact the environment,” but instead merely identified forest areas suffering from threats like insect infestation and disease. *Id.* at 774, 780–81 (quoting *Northcoast Env’t Ctr. v. Glickman*, 136 F.3d 660, 668 (9th Cir. 1998)). We explained that no NEPA analysis was

necessary because NEPA does not require an agency to “consider the environmental effects that speculative or future projects might have.” *Id.* at 781 (quoting *Northcoast Env’t Ctr.*, 136 F.3d at 668).

FERC suggests that any environmental assessment of Order 872 would be similarly speculative. Order 872, it says, merely provides States with new policy options, which they can choose to embrace or not; it does not authorize any particular project. But while the designation in *Ilano* did not “change the status quo” or “foreseeably impact the environment,” the same cannot be said of FERC’s overhaul of its longstanding PURPA regulations. Even if Order 872 did not authorize any particular project, it was eminently foreseeable that a regulatory change of this magnitude could produce significant environmental effects. It was a near-certainty, for example, that at least some QFs could lose their status under the 2020 Site Rule, or that at least some States would eliminate the fixed-rate option for the calculation of avoided costs. *Cf. Lockyer*, 575 F.3d 999 (requiring NEPA analysis when replacing a nationwide rule with a varied, state-by-state rule).

The effects of those actions differ from the environmental harms in *Ilano*, which were necessarily location- and project-specific. At the designation stage, it was impossible for the Forest Service to predict the relevant environmental concerns—for instance, the effect of the designation on the California spotted owl—without knowing the location and type of the forest-treatment projects that would later be implemented. We agree with FERC that it could not reasonably consider the local effects of Order 872 on, say, vegetation, water quality, and wildlife because it could not predict which States would adopt which components of Order 872. Order 872-A, 85 Fed. Reg. at

86,717. But unlike in *Ilano*, the most significant environmental impact of Order 872 is the possible effect on greenhouse-gas emissions, which does not require any location- or project-specific analysis.

FERC also contends that it had no meaningful way to model or predict the effects of Order 872. Order 872, 85 Fed. Reg. at 54,728–29. As FERC put it in the order, “any consideration of whether the final rule could potentially have significant environmental impacts would be so speculative as to render meaningless any environmental analysis of these hypothetical impacts.” Order 872-A, 85 Fed. Reg. at 86,718.

We acknowledge that NEPA does not require an agency to “peer into a crystal ball,” “engage in speculative analysis,” or “do the impractical, if not enough information is available to permit meaningful consideration.” *Northern Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1078–79 (9th Cir. 2011) (quoting *Environmental Prot. Info. Ctr. v. United States Forest Serv.*, 451 F.3d 1005, 1014 (9th Cir. 2006)). At the same time, we have recognized that the “effects [of a proposed action] may be difficult to measure and may be determined ultimately to be too imprecise to influence the [action], but this is precisely the type of determination that only can be intelligently made after the preparation of at least an EA.” *California Wilderness Coal. v. United States Dep’t of Energy*, 631 F.3d 1072, 1103 (9th Cir. 2011). Thus, when an agency is uncertain about the possible environmental effects of a proposed action, the proper course is to prepare an EA to the best of the agency’s ability, not to avoid environmental analysis altogether. Because at least some degree of “speculation . . . is implicit in NEPA,” agencies may not “shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry.” *Northern*

Plains Res. Council, 668 F.3d at 1079 (quoting *Selkirk Conservation All. v. Forsgren*, 336 F.3d 944, 962 (9th Cir. 2003) (omission in original)); see also *Sierra Club v. FERC*, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (“NEPA analysis necessarily involves some ‘reasonable forecasting,’ and . . . agencies may sometimes need to make educated assumptions about an uncertain future.” (quoting *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1310 (D.C. Cir. 2014))).

Here, the public raised “substantial questions” as to whether Order 872 would produce significant environmental impacts. *Lockyer*, 575 F.3d at 1018. Commenters pointed out that FERC’s sweeping overhaul of its PURPA rules would reduce the incentives provided to QFs—a consequence of Order 872 that no one seriously disputes. See, e.g., Order 872-A, 85 Fed. Reg. at 86,753 (Glick, Comm’r, dissenting in part). And because many QFs rely on renewable power sources, it takes little imagination to see that a reduction in the incentives provided to QFs could, in turn, alter the mix of energy production, shifting production away from renewable production and toward fossil-fuel production. See 2019 NPRM, 84 Fed. Reg. at 53,249 (noting that even after the expanded development of non-PURPA renewable facilities since 2005, QFs have accounted for “10 to 20 percent of all renewable resource capacity in service in the United States”).

Those effects were “reasonably foreseeable” in that they were “sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision.” *Sierra Club*, 867 F.3d at 1371 (alteration in original) (quoting *EarthReports, Inc. v. FERC*, 828 F.3d 949, 955 (D.C. Cir. 2016)). They were enough to trigger FERC’s obligation to conduct, or at least attempt to conduct,

environmental analysis in the form of an EA. The possibility of environmental effects was not so remote that the Commission was entitled to throw up its hands and forgo environmental analysis altogether. *Cf. California Wilderness Coal.*, 631 F.3d at 1097 (“[A]n agency cannot merely assert that its decision will have an insignificant effect on the environment, but ‘must adequately explain its decision.’” (quoting *Alaska Ctr. for Env’t v. United States Forest Serv.*, 189 F.3d 851, 859 (9th Cir. 1999))).

Significantly, FERC has previously modeled the potential environmental effects of other major rules affecting electricity markets. *See, e.g., Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, Order 888, 61 Fed. Reg. 21,540, 21,542 (May 10, 1996) (noting that the Commission prepared an EIS). Most relevantly, before it adopted its original PURPA rules in 1980, the Commission produced an EA using “market penetration analyses.” Order 70, 45 Fed. Reg. at 17,964. Even though the EA concluded that the 1980 Rules, as a whole, would not significantly affect the environment, FERC nevertheless prepared a full EIS to evaluate the effects of certain diesel cogeneration QFs. *Id.* at 17,965. In preparing its 1980 NEPA review, the Commission confronted—and overcame—the very same analytical obstacles that it now claims prevent it from conducting environmental review. The 1980 NEPA analysis, for example, noted that the Commission’s rules did not “authorize or fund any particular projects” or “authorize or forbid the use of certain fuels,” but rather “provide[d] certain economic incentives to, and remove[d] other disincentives, . . . from certain classes of technologies.” *Id.* at 17,964. FERC also observed that “identifying the levels of the environmental effects associated with the programmatic

encouragement and deregulation of various types of technologies” is difficult, and that any environmental analysis would necessarily contain “a great number of uncertainties.” *Id.* at 17,965.

FERC argues that the simplifying assumptions that enabled the 1980 EA are not replicable here. For example, the 1980 analysis could assume a simpler market structure than could be used today (because there was virtually no independent power development in 1980), and could assume that the States would implement the 1980 Rules uniformly (without the many optional elements provided by Order 872). Order 872-A, 85 Fed. Reg. at 86,722–23. We share the dissenting Commissioner’s skepticism that FERC’s modeling capabilities “have not improved dramatically over the course of the last four decades” such that at least some environmental review would nevertheless be possible. *Id.* at 86,753 (Glick, Comm’r, dissenting in part); *see also Sierra Club*, 867 F.3d at 1374 (noting that an agency’s inability to provide precise quantitative estimates of downstream greenhouse-gas emissions did not excuse its wholesale failure to discuss them, even though any such analysis “depend[ed] on several uncertain variables”).

But we need not evaluate FERC’s various explanations for its inability to model the environmental impacts of Order 872. When an agency has concerns about its technical ability to evaluate the environmental effects of a rule, it must fully explore those concerns in an EA. *See California Wilderness Coal.*, 631 F.3d at 1103. Perhaps more fundamentally, FERC’s explanation in Order 872 is flawed because it does not indicate that the agency took the “hard look” that NEPA requires. Whatever can be said of FERC’s various arguments, the dissenting Commissioner was correct to observe that “the Commission’s assertion that Order No.

872's effects are overly speculative is tough to square with the fact that it has not undertaken any effort whatsoever to assess those effects." Order 872-A, 85 Fed. Reg. at 86,753 (Glick, Comm'r, dissenting in part). FERC did not produce a single sentence of environmental analysis before issuing sweeping changes to its PURPA regulations. Nor did FERC attempt—in even the most rudimentary or non-quantitative manner—to predict the environmental consequences of Order 872.

This is not a case in which the agency “engaged in significant environmental analysis before reaching a decision but failed to comply precisely with NEPA procedures.” *See Nevada v. Department of Energy*, 457 F.3d 78, 90 (D.C. Cir. 2006) (noting that the court had previously excused an agency’s failure to prepare an EA because the agency had thoroughly considered the environmental consequences during the rulemaking). Indeed, we are aware of no case approving an agency’s decision not to engage in any environmental analysis for a rulemaking of this magnitude. And while the lack of reasonably foreseeable environmental impacts may justify an agency’s decision not to complete an EIS, it cannot relieve an agency of its obligation to produce an EA.

E

Having concluded that FERC violated NEPA by failing to prepare an EA, we must determine the appropriate remedy. When an agency violates NEPA, the presumptive remedy is vacatur of the deficient action. *Alliance for the Wild Rockies v. United States Forest Serv.*, 907 F.3d 1105, 1121 (9th Cir. 2018). But we are not without discretion: “When equity demands,” we may leave the action in place on remand while the agency reconsiders the action or cures

a procedural defect. *Id.*; see *California Cmty. Against Toxics v. EPA*, 688 F.3d 989, 992 (9th Cir. 2012) (per curiam) (“A flawed rule need not be vacated.”).

In deciding whether to vacate a defective agency action, we apply the two-factor balancing test prescribed in *Allied-Signal, Inc. v. United States Nuclear Regulatory Commission*, 988 F.2d 146 (D.C. Cir. 1993). Under that test, “[w]e weigh the seriousness of the agency’s errors against ‘the disruptive consequences of an interim change that may itself be changed.’” *Center for Food Safety v. Regan*, 56 F.4th 648, 663 (9th Cir. 2022) (quoting *Allied-Signal*, 988 F.2d at 150–51). Here, although the agency’s errors are significant, the disruptive consequences are great enough to warrant remand without vacatur.

As to the seriousness of the error, we recognize that the failure to produce an EA is a serious omission. NEPA makes producing an EA “fundamental” to the decision-making process because an EA helps the agency determine whether an EIS is necessary. *Klamath Siskiyou Wildlands Ctr.*, 468 F.3d at 562 (quoting *Metcalfe v. Daley*, 214 F.3d 1135, 1143 (9th Cir. 2000)). But when considering whether to vacate an order, we do not evaluate the seriousness of the agency’s error in the abstract. Instead, we ask “whether the agency would likely be able to offer better reasoning or whether by complying with procedural rules, it could adopt the same rule on remand, or whether such fundamental flaws in the agency’s decision make it unlikely that the same rule would be adopted on remand.” *Pollinator Stewardship Council v. EPA*, 806 F.3d 520, 532 (9th Cir. 2015).

We do not believe that Order 872 suffers from “fundamental flaws” making it unlikely that FERC could adopt the same rule on remand. While FERC’s

environmental analysis was deficient, we have been given no reason to believe that the agency would be unable to cure those deficiencies on remand. Although we hold that FERC should have conducted an EA—and must do so on remand—we acknowledge that, given the manner in which Order 872 operates, any environmental analysis may well determine that the effects of the order are difficult to forecast and subject to considerable uncertainty. And if FERC were to conduct an EA, its understanding of its own modeling capability would be entitled to deference. *See Sierra Club*, 867 F.3d at 199 (D.C. Cir. 2017). So while we are skeptical of FERC’s current unsupported claim that the impacts of Order 872 are impossible to forecast, it is possible that FERC could reach the same conclusion about its forecasting limitations in a NEPA-compliant EA.

On the other hand, the disruptive consequences of vacatur would be significant. *See California Cmty. Against Toxics*, 688 F.3d at 993 (remanding without vacatur because the “delay and trouble vacatur would cause are severe”). Order 872 has been in effect since December 31, 2020. Since then, FERC, various States, and regulated parties have all begun to implement it. For example, the Commission has already relied upon Order 872 to determine whether a given facility qualifies as a small power production facility under the revised site rule. Several States have initiated proceedings to modify their PURPA rules in response to Order 872. And using the revised market-access presumption, several utilities have already applied for—and received—relief from their mandatory-purchase obligations when dealing with facilities between five and 20 megawatts in size. Were we to vacate Order 872, the investments that States and the regulated community have made in complying with the rules could not easily be undone—and if they were,

they might then need to be repeated if FERC were to readopt the rules after completing its NEPA analysis. Our decision not to vacate the rules thus avoids “the disruptive consequences of an interim change that may itself be changed.” *Center for Food Safety*, 56 F.4th at 663 (quoting *California Cmty. Against Toxics*, 688 F.3d at 992); *see also American Great Lakes Ports Ass’n v. Schultz*, 962 F.3d 510, 519 (D.C. Cir. 2020) (“[A] quintessential disruptive consequence arises when an agency cannot easily unravel a past transaction in order to impose a new outcome.”); *Sugar Cane Growers Co-op. of Fla. v. Veneman*, 289 F.3d 89, 97 (D.C. Cir. 2002) (“The egg has been scrambled and there is no apparent way to restore the status quo ante.”).

We recognize that because NEPA is a “purely procedural statute,” routinely excusing an agency’s deficient NEPA analysis would “vitiate” the statute. *Oglala Sioux Tribe v. United States Nuclear Regul. Comm’n*, 896 F.3d 520, 536 (D.C. Cir. 2018). In many cases—indeed, in most cases—an agency’s failure to prepare an EA or attempt environmental analysis will require vacatur. But in light of the significant disruptive consequences of vacatur—affecting not only FERC, but also state agencies and regulated entities—we remand to FERC without vacating Order 872. *See, e.g., id.* at 538 (remanding without vacatur despite a “significant deficiency” in the agency’s NEPA compliance); *Vecinos para el Bienestar de la Comunidad Costera v. FERC*, 6 F.4th 1321, 1332 (D.C. Cir. 2021) (remanding without vacatur).

**PETITION GRANTED in part and DENIED in part;
REMANDED.**

MILLER, Circuit Judge, with whom NGUYEN, Circuit Judge, joins, concurring:

I join the court’s opinion in full and write separately to respond to Judge Bumatay’s concurrence and dissent.

Judge Bumatay observes that *Chevron* “has been criticized”—by critics with whom he evidently agrees—“as ahistorical and violative of the separation of powers.” The relevance of that observation to this case is unclear, for as Judge Bumatay recognizes, “[w]hether the *Chevron* project continues is up to the Supreme Court and falls outside of our court’s purview.” Quite so. The Supreme Court has repeatedly instructed us that “[i]f a precedent of [the Supreme] Court has direct application in a case, yet appears to rest on reasons rejected in some other line of decisions, the Court of Appeals should follow the case which directly controls.” *Rodriguez de Quijas v. Shearson/Am. Express, Inc.*, 490 U.S. 477, 484 (1989); *accord Tenet v. Doe*, 544 U.S. 1, 10–11 (2005); *State Oil Co. v. Khan*, 522 U.S. 3, 20 (1997).

According to Judge Bumatay, “[t]his case should not be about *Chevron* deference,” and we should instead “rely on PURPA’s plain language in evaluating whether FERC’s rules complied with the law.” But that is precisely what the court’s opinion does. At step one of *Chevron*, a court must ask whether Congress “directly addressed the precise question” presented. *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837, 843 (1984). With respect to each of the statutory issues that Judge Bumatay mentions, the court’s opinion examines the plain text of the statute and concludes that Congress did not directly address the questions but instead left their resolution to FERC’s discretion.

For example, in considering the “encouragement” provision of 16 U.S.C. § 824a-3(a), the court’s opinion concludes, at *Chevron* step one, that “the statute gives FERC broad discretion to evaluate which rules are necessary to encourage QFs and which are not.” Judge Bumatay says almost exactly the same thing: He describes the statute as “a broad delegation of authority to FERC to make rules that ‘encourage’ Qualifying Facilities as it sees fit.” Then, at *Chevron* step two, the court’s opinion confirms that FERC’s interpretation of that broad discretion is not unreasonable. Judge Bumatay does the same analysis without naming it, explaining how FERC’s approach is not “contrary to this statutory guidance.” So why the complaint that “circuit courts have been over eager to reach *Chevron*’s second step” by “glid[ing] past step one too readily”? Whether or not that is true in general, on Judge Bumatay’s own view, it does not seem to be true in this case.

In short, Judge Bumatay would reach the same conclusion as the court, and for essentially the same reasons. The only difference in approach is that he would do so without admitting that he is following *Chevron*, instead treating that decision—which, it bears repeating, remains binding Supreme Court precedent—as the Case-That-Must-Not-Be-Named. The Supreme Court has “the prerogative of overruling its own decisions,” whether expressly or *sub silentio*. *Rodriguez de Quijas*, 490 U.S. at 484. We do not.

BUMATAY, J., concurring in part and dissenting in part:

Because the Federal Energy Regulatory Commission was well within its statutory authority to revise its rules for encouraging independent energy producers under the Public Utility Regulatory Policies Act of 1978 (“PURPA”), I concur with denying the petition challenging the enactment of those revised rules. But given PURPA’s clear text, I would not rely on *Chevron* deference to reach this conclusion. I write separately to show why we should have applied the traditional tools of statutory interpretation to resolve the challenges to FERC’s rules.

As for the claim that FERC violated the National Environmental Policy Act of 1969 (“NEPA”) in enacting these rules without an environmental assessment, I would hold that no petitioner has standing to bring a NEPA claim. I thus would deny the petition on NEPA grounds as well.

I join the majority opinion in all other respects.

I.

This case should not be about *Chevron* deference. By now, most legal observers are familiar with the *Chevron* framework—although not necessarily for positive reasons. Under that doctrine, courts conduct a two-step inquiry to determine whether to defer to an agency’s interpretation of a federal statute. At step one, we ask “whether Congress has directly spoken to the precise question at issue.” *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council*, 467 U.S. 837, 842 (1984). If so, “that is the end of the matter” and we apply the law as written. *Id.* If, however, we find that “the statute is silent or ambiguous with respect to the specific issue,” we proceed to step two and ask whether the agency’s interpretation of the text is a “permissible” one. *Id.* at 843.

So long as an agency’s reading of a statute is “reasonable,” we are told that we should defer to the agency’s position. *Id.* at 845. At its most extreme, we are even told that *Chevron* requires courts to treat the agency as “speak[ing] with the force of law when it addresses ambiguity in the statute or fills a space in the enacted law.” *United States v. Mead Corp.*, 533 U.S. 218, 229 (2001).

In more recent times, the *Chevron* framework has been criticized as ahistorical and violative of the separation of powers. *See, e.g., Buffington v. McDonough*, 143 S. Ct. 14, 16–22 (2022) (Gorsuch, J., dissenting from the denial of certiorari); Aditya Bamzai, *The Origins of Judicial Deference to Executive Interpretation*, 126 Yale L. J. 908, 987–90 (2017); Douglas H. Ginsburg & Steven Menashi, *Our Illiberal Administrative Law*, 10 N.Y.U. J.L. & Liberty 475, 491–95 (2016). Whether the *Chevron* project continues is up to the Supreme Court and falls outside of our court’s purview.

But before resorting to *Chevron* deference, we should pay close attention to how the Supreme Court has told us to apply it. The Court has repeatedly instructed us not to glide past step one too readily—accepting any hint of possible ambiguity as a way to defer to an agency. Deference is “called for only when the devices of judicial construction have been tried and yield no clear sense of congressional intent.” *Gen. Dynamics Land Sys., Inc. v. Cline*, 540 U.S. 581, 600 (2004). Thus, “we must ‘exhaust all the traditional tools of construction’ before we ‘wave the ambiguity flag.’” *Medina Tovar v. Zuchowski*, 982 F.3d 631, 634 (9th Cir. 2020) (en banc) (quoting *Kisor v. Wilkie*, 139 S. Ct. 2400, 2415 (2019)).

Unfortunately, circuit courts have been over-eager to reach *Chevron*'s second step. According to one study, from 2003 to 2013, circuit courts jumped to *Chevron* step two in 70.0% of cases applying the *Chevron* framework. Kent H. Barnett & Christopher J. Walker, *Chevron in the Circuit Courts*, 116 Mich. L. Rev. 1, 5–6 (2017). And the consequence of that interpretive move is significant. The government prevailed 93.8% of the time at *Chevron* step two—compared to the government's win rate of only 39.0% at *Chevron* step one. *Id.* These numbers, I'm certain, do not align with the Supreme Court's percentages over the last few years. All this suggests that we should pause before embracing the *Chevron* framework. If the traditional tools of statutory interpretation resolve the case, that should end the analysis.

Here, PURPA's text is relatively straightforward, and we need not apply *Chevron* to decide this case. Instead, under our Article III authority and our duty under the Administrative Procedure Act to “decide all relevant questions of law” and “interpret . . . statutory provisions,” 5 U.S.C. § 706, I would rely on PURPA's plain language in evaluating whether FERC's rules complied with the law. Because the majority relied on *Chevron* deference to uphold (1) Order 872's compliance with PURPA's “encouragement” provision, (2) the 2020 Site Rule, and (3) the modified Fixed-Rate Rule, I analyze them separately here.

A.

To start, Petitioners generally challenge the four rules FERC promulgated through Order 872, claiming that they conflict with FERC's statutory obligation to “encourage” the development of independent energy producers, known as

“Qualifying Facilities.” 16 U.S.C. § 824a-3(a). Qualifying Facilities include cogeneration and small power production facilities. *See* 16 U.S.C. § 796(17)-(18). Petitioners assert that Order 872 reduces incentives for Qualifying Facilities and thus “discourages” them compared to the status quo.

But PURPA’s plain text forecloses this argument. In PURPA, Congress granted FERC broad authority to “prescribe . . . rules *as it determines necessary* to encourage cogeneration and small power production.” 16 U.S.C. § 824a-3(a) (emphasis added). Congress also instructed FERC to “revise” such rules “from time to time.” *Id.*

This language is a broad delegation of authority to FERC to make rules that “encourage” Qualifying Facilities as it sees fit. In this context, “encourage” is a capacious term. Around the time of PURPA’s enactment in 1978, “encourage” was defined to mean “to spur on.” Webster’s New Collegiate Dictionary 375 (1977); Webster’s Third New International Dictionary 747 (1971). It also meant “[t]o stimulate” and “[t]o allow or promote the growth of[.]” Shorter Oxford English Dictionary 653 (1973). Armed with express authority to apply this expansive term, FERC may make any rules that aren’t contrary to this statutory guidance. Nothing in the plain text of the encouragement provision requires that FERC “spur on,” “stimulate,” or “promote” the development of Qualifying Facilities to the maximum extent possible.

Imagine parents seeking to “encourage” their children to do their weekly chores. A \$10-a-week allowance would be a good encouragement. But say, after several years, when the children get older and more responsible, the parents reduce the weekly allowance to \$5 a week. Would anyone say that the new allowance *discourages* the children from

completing their chores? Of course not. While the children might be accustomed to a \$10 reward, *any* allowance would be an encouragement compared to the baseline of receiving nothing.

So too with Qualifying Facilities. A simple statutory directive to “encourage” the development of Qualifying Facilities is not a one-way ratchet. That prior FERC rules might have offered *more* encouragement than current ones doesn’t mean that FERC’s new rules violate PURPA. While FERC may not choose to *discourage* Qualifying Facilities, nothing in PURPA’s text prevents FERC from tweaking its rules in response to changes in the energy sector, as Congress told them to do.

B.

Next, the plain language of PURPA also authorizes FERC’s 2020 Site Rule. PURPA specifies that a “small power production facility” must have a power production capacity “which, together with any other facilities located at the same site (as determined by the Commission), is not greater than 80 megawatts.” 16 U.S.C. § 796(17)(A)(ii). The 2020 Site Rule modified FERC’s old test for determining when facilities within close proximity constitute the “same site” or separate sites. Under the old approach, facilities located more than one mile apart were considered separate sites. Small Power Production and Cogeneration Facilities—Qualifying Status, 45 Fed. Reg. 17959, 17965 (March 20, 1980). The 2020 Site Rule applies a rebuttable presumption that facilities located more than one but less than ten miles apart are separate sites. Qualifying Facility Rates and Requirements Implementation Issues Under the Public Utility Regulatory Policies Act of 1978, 85 Fed. Reg. 54638, 54696 (Sept. 2, 2020) (“Order 872”). This

presumption may be overcome based on a list of non-exhaustive factors that support treating the facilities as part of the same site. *Id.* at 54701.

Petitioners argue that the 2020 Site Rule conflicts with the plain meaning of “site” by allowing FERC to treat facilities located miles apart as the “same site” based on non-geographic factors. But once again, Congress expressly granted FERC the authority to “determine” what counts as the “same site” for purposes of the 80-megawatt limit. *Id.* Indeed, Congress didn’t use “same site” in the ordinary sense here; otherwise, it would not be necessary to specify that FERC got to choose what it means. *See Am. Bankers Ass’n v. Nat’l Credit Union Admin.*, 934 F.3d 649, 663 (D.C. Cir. 2019) (“An express delegation of definitional power necessarily suggests that Congress did not intend the terms to be applied in their plain meaning sense[.]”) (simplified)). And Petitioners haven’t shown that FERC acted inconsistently with the technical meaning of “same site” in PURPA, which doesn’t foreclose non-geographic considerations.

C.

Lastly, PURPA’s plain language authorizes FERC’s modified Fixed-Rate Rule. PURPA requires utilities to buy electricity from Qualifying Facilities at FERC’s established prices. 16 U.S.C. § 824a-3(b). PURPA mandates that the purchase rate not “exceed[] the incremental cost to the electric utility of alternative electric energy.” *Id.* FERC regulations call this the utility’s “avoided cost”—the cost that the utility would otherwise pay to produce the power itself or purchase it from another source. *See* 18 C.F.R. § 292.304. FERC’s old 1980 rule allowed Qualifying Facilities to choose between two methods of calculating the

purchase price: a rate calculated at the time of energy delivery or a rate fixed at the time the contract is signed with the utility. See *Winding Creek Solar LLC v. Peterman*, 932 F.3d 861, 863 (9th Cir. 2019). Under the modified rule, States may eliminate the fixed-rate option. 18 C.F.R. § 292.304(d)(2); Order 872, 85 Fed. Reg. at 54648. FERC contends that this modified rule more closely adheres to utilities' *actual* avoided costs.

Applying traditional tools of statutory construction, I would hold that the modified Fixed-Rate Rule aligns with the best reading of PURPA's text. PURPA defines "incremental cost of alternative electric energy" to mean "the cost to the electric utility of the electric energy which, but for the purchase from such cogenerator or small power producer, such utility would generate or purchase from another source." 16 U.S.C. 824a-3(d). Because PURPA doesn't supply a technical meaning for "cost," the ordinary meaning of the term applies. See *Asgrow Seed Co. v. Winterboer*, 513 U.S. 179, 187 (1995) ("When terms used in a statute are undefined, we give them their ordinary meaning."). At the time of PURPA's passage, "cost" meant "the amount or equivalent paid or charged for something." Webster's New Collegiate Dictionary 257 (1977); see also Webster's Third New International Dictionary 515 (1971) ("[T]he amount or equivalent paid or given or charged or engaged to be paid or given for anything bought or taken in barter or for service rendered[.]"); The Shorter Oxford English Dictionary 434 (1973) ("That which must be given in order to acquire, produce, or effect something; the price paid for a thing.").

Putting these definitions together, FERC is correct that the most natural reading of the text requires that Qualifying Facilities receive payments that do not exceed the *actual* cost

that a utility would otherwise pay for the same quantity of energy. We've already upheld FERC's interpretation of "PURPA to require an examination of the costs that a utility is *actually avoiding*." *Californians for Renewable Energy v. Cal. Pub. Util. Comm'n*, 922 F.3d 929, 938 (9th Cir. 2019) (approving rule that established that a Qualifying Facility "would not be entitled to capacity costs unless it actually displaced the utility's need for additional capacity"). And FERC's revised rule is more faithful to this statutory directive than the previous fixed-rate option. A pre-determined contractual price might *approximate* what a utility would pay for energy from another source, but the most accurate measure of that cost is the price at the time of delivery.

We also previously acknowledged the shortcomings of the fixed-rate approach as an estimate of avoided costs. Nearly thirty years ago, we confronted a case in which the fixed contractual rates paid to Qualifying Facilities "were higher than the actual avoided cost rates" because fuel prices had declined unexpectedly. *Indep. Energy Producers Ass'n, Inc. v. California Pub. Utilities Comm'n*, 36 F.3d 848, 852 (9th Cir. 1994). While the disparity between the contractual rate and the utilities' actual costs wasn't enough to justify unilateral modification of the standard offer contract, we understood the tension with PURPA's requirements and observed that the "proper remedy for such a situation is to ensure that future . . . contracts contain more flexible pricing mechanisms." *Id.* at 858–59.

Here, FERC's revisions accomplish just that—affording States the latitude to require the "more flexible" method of calculating avoided cost at the time of delivery so that utilities don't get locked into overpriced fixed rates. This change brings the rule into closer alignment with PURPA's

text. I would thus uphold the revised rule based on PURPA’s plain language.

D.

The majority in concurrence faults me for reaching the same conclusions as they do in approving of FERC’s regulatory changes without relying on *Chevron* deference. It’s true we reach the same conclusions—that’s why this part of my writing is a concurrence. But our approaches are fundamentally different—while the majority defers to FERC’s interpretation, I defer to the words that Congress wrote.

II.

Moving on to the NEPA claim. Simply, Petitioners haven’t alleged that they will suffer an environmental harm sufficient to confer NEPA standing.

“NEPA establishes a ‘national policy [to] encourage productive and enjoyable harmony between man and his environment,’ and was intended to reduce or eliminate environmental damage and to promote ‘the understanding of the ecological systems and natural resources important to’ the United States.” *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 756 (2004) (quoting 42 U.S.C. § 4321). Because NEPA does not provide a private right of action, petitioners seeking to enforce its provisions must meet the APA’s statutory standing requirements. *See Ranchers Cattlemen Action Legal Fund United Stockgrowers of Am. v. U.S. Dep’t of Agric.*, 415 F.3d 1078, 1102 (9th Cir. 2005). To do so, petitioners “must allege that [their] injury is within the zone of interests protected by NEPA.” *Nev. Land Action Ass’n v. U.S. Forest Serv.*, 8 F.3d 713, 716 (9th Cir. 1993); *see also Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 572

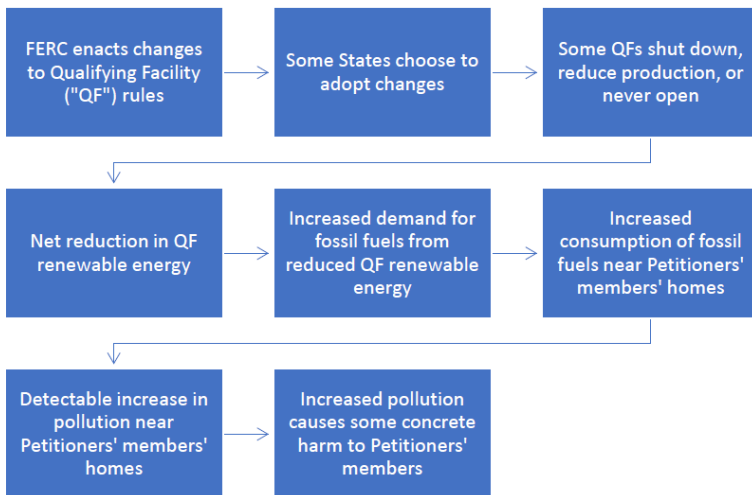
U.S. 118, 126 (2014) (holding that a plaintiff seeking to bring suit under a federal statute must show not only that he has standing under Article III, but also that his “complaint fall[s] within the zone of interests protected by the law” invoked) (simplified).

Given that the “purpose of NEPA is to protect the environment, not the economic interests of those adversely affected by agency decisions,” a petitioner who asserts only “purely economic injuries” lacks standing to bring a NEPA challenge. *Nev. Land Ass’n*, 8 F.3d at 716 (simplified); *see also Ashley Creek Phosphate Co. v. Norton*, 420 F.3d 934, 939–40 (9th Cir. 2005) (“[P]urely economic interests do not fall within NEPA’s zone of interests.”). Rather, to bring a NEPA claim, a petitioner “must allege injury to the environment” that is sufficiently concrete and individualized. *See Ranchers Cattlemen Action*, 415 F.3d at 1103. In other words, a petitioner must show by a “reasonable probability” that the petitioner will personally suffer an environmental injury from the challenged agency action. *Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 341 F.3d 961, 972 (9th Cir. 2003) (simplified). And “mere speculation or subjective apprehension about future harm [does not] support [NEPA] standing.” *Navajo Nation v. Dep’t of the Interior*, 876 F.3d 1144, 1163 (9th Cir. 2017) (simplified).

Here, Petitioners are a mix of environmental organizations, intergovernmental groups, and coalitions of owners and operators of Qualifying Facilities. Petitioners readily admit that FERC’s rulemaking may hit their pocketbooks—reducing revenue from their renewable energy sales. Perhaps acknowledging that this doesn’t confer NEPA standing, they also broadly proclaim that they have “environmental interests [in] transitioning away from

fossil fuels to less polluting forms of electricity generation.” Yet NEPA standing requires an interest “distinct from the interest held by the public at large.” *Navajo Nation*, 876 F.3d at 1164 (simplified). Probably realizing that this interest isn’t particularized enough, Petitioners try to assert a concrete injury by alleging that FERC’s rule changes “will reduce renewable generation development, leading to an increase in fossil-fuel generation that produces pollution that harms Petitioners’ members.”

But we aren’t obliged to accept speculative injuries to bring the Petitioners within NEPA’s zone of interests. And to accept the Petitioners’ claim of injury here requires stacking speculation upon speculation. Their theory of injury goes something like this:



To traverse the gap between FERC’s rule changes and their asserted injury, Petitioners layer conjecture on top of speculation on top of guesswork about how State

governments, individual Qualifying Facilities, the broader energy market, and emissions will react to the rule changes. To credit their claim, we must accept that FERC's new rules will lead to greater fossil-fuel consumption in some unspecified manner, in some unspecified location, to some unspecified degree, by the independent actions of third parties—all leading to an unspecified harm to Petitioners' members.

One problem is that their theory only considers FERC's rules in a vacuum. Energy markets are complex. FERC's rules are not the only forces influencing the development of new renewable facilities. Take Montana's energy market. Renewable energy projects are thriving in Montana even without PURPA's incentives. As amicus NorthWestern Corporation notes, out of 40 wind and solar projects currently underway in Montana, nearly half of them are larger than 80 megawatts—too big to be Qualifying Facilities. *Br. of Amicus Curiae Nw. Corp.* 9–10. One proposal involves a 750-megawatt wind farm, nearly *ten times* PURPA's upper limit for Qualifying Facility output. *Id.* at 9. In other words, a significant swath of the wind and solar energy boom in Montana is happening without any direct help from PURPA's incentives. This shows that FERC's regulations are just one component of a much larger web of market forces influencing the supply and demand of renewable energy nationwide—making any concrete injury to Petitioners purely speculative.

Another major weakness in Petitioners' theory is that most of FERC's rule changes are permissive—allowing independent parties to respond to them as they wish. States can freely choose whether to adopt the new fixed-rate rule or locational marginal price presumption. *See, e.g.*, 18 C.F.R. §§ 292.304(b)(6), 292.304(d)(2). And the new

nondiscriminatory access presumption only grants utilities greater flexibility in purchasing energy from Qualifying Facilities. *See* 18 C.F.R. § 292.309(d)(2). As the Supreme Court has warned, we shouldn't "endorse standing theories that rest on speculation about the decisions of independent actors." *Clapper v. Amnesty Int'l, USA*, 568 U.S. 398, 414 (2013). Petitioners have identified only Georgia, Idaho, and Montana as making any moves in response to FERC's rule changes. But that doesn't establish a "reasonable probability" that this will lead to harm at Petitioners' members' homes.

While Petitioners "need not provide smoking-gun allegations of harm," *Navajo Nation*, 876 F.3d at 1163 (simplified), their theory of injury is too speculative to give rise to NEPA standing. In *Navajo Nation*, an Indian tribe brought a NEPA claim against the Department of the Interior's guidelines for access to the Colorado River. *Id.* at 1152. To assert standing, the tribe alleged that the guidelines would impair their water rights by "creat[ing] a complex and difficult-to-reverse combination of third-party reliance and political inertia" that would hamper the tribe's future efforts to access water. *Id.* at 1162. In short, the tribe posited a "chain of events" by which Interior's actions would cause surrounding States to rely on Colorado River water, which in turn may disincline the federal government from protecting the tribe's interest in the river. *Id.* at 1163. We held that the tribe's "realpolitik predictions"—predicated on a "string of contingencies" and "conjecture," unsupported by "facts, figures, or data"—was "too speculative to confer standing." *Id.* (simplified).

We should have done the same here. Much like the tribe's theory of injury, Petitioners here assert an unquantified future harm that will purportedly result from a

chain reaction of third-party decisions and market forces. With scant evidence suggesting that the harm will occur or that it will be attributable to FERC's modified rules, we should not have entertained Petitioners' NEPA claim.

Based on all this, I would hold that Petitioners have failed to meet their burden of alleging an injury within NEPA's zone of interests. I would thus not reach the merits of their claim nor grant the petition to order an environmental assessment.

III.

For these reasons, I respectfully dissent in part.