United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued September 25, 2020 Decided July 16, 2021

No. 19-1023

GROWTH ENERGY, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, ADMINISTRATOR,
RESPONDENTS

AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS, ET AL.,
INTERVENORS

Consolidated with 19-1027, 19-1032, 19-1033, 19-1035, 19-1036, 19-1037, 19-1038, 19-1039

On Petitions for Review of an Action of the United States Environmental Protection Agency

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David M. Lehn, *Douglas A. Hastings*, and *David M. Williamson* argued the causes for the Renewable Fuels Producers. With them on the briefs were *Bryan M. Killian*, *Jerome C. Muys, Jr.*, *Sandra P. Franco*, *Seth P. Waxman*, *Saurabh Sanghvi*, and *Claire H. Chung*.

Amir C. Tayrani argued the cause for Obligated Parties. With him on the briefs were *Samara L. Kline*, *Lisa M. Jaeger*, *Brittany M. Pemberton*, *Clara Poffenberger*, *Richard S. Moskowitz*, *Robert J. Meyers*, *Thomas A. Lorenzen*, *Elizabeth B. Dawson*, *Suzanne Murray*, *Michael J. Scanlon*, and *Lochlan F. Shelfer.* *Evan A. Young* entered an appearance.

Carrie Apfel argued the cause for Environmental petitioners. With her on the briefs were *Peter Lehner* and *Surbhi Sarang.*

Tsuki Hoshijima, *Benjamin R. Carlisle*, and *Michael R. Eitel*, Attorneys, U.S. Department of Justice, argued the causes for respondents. With them on the brief were *Jeffrey Bossert Clark*, Assistant Attorney General, and *Jonathan D. Brightbill*, Principal Deputy Assistant Attorney General.

Elizabeth B. Dawson argued the cause for intervenors American Fuel & Petrochemical Manufacturers, et al. in support of respondents. With her on the brief were *Thomas A. Lorenzen*, *Robert J. Meyers*, *Richard S. Moskowitz*, *Amir C. Tayrani*, *Lochlan F. Shelfer*, *Robert A. Long, Jr.*, *Kevin F. King*, *Thomas R. Brugato*, *Carlton Forbes*, and *John Wagner.* *Stacy R. Linden* entered an appearance.

Bryan M. Killian, Douglas A. Hastings, Seth P. Waxman, David M. Lehn, Saurabh Sanghvi, Claire H. Chung, and *Ethan G. Shenkman* were on the brief for intervenors Growth Energy, et al. in support of respondents.

Bryan M. Killian, Douglas A. Hastings, Robert A. Long, Jr., *Kevin F. King*, *Thomas R. Brugato*, *Seth P. Waxman, David M. Lehn, Saurabh Sanghvi,* and *Claire H. Chung* were on the

brief for intervenors Growth Energy, et al. in support of respondents.

Before: SRINIVASAN, *Chief Judge*, and ROGERS and GARLAND,* *Circuit Judges*.

Opinion for the Court filed PER CURIAM.

PER CURIAM: To move the United States towards greater reliance on clean energy, the Clean Air Act's Renewable Fuel Standard Program calls for annual increases in the amount of renewable fuel introduced into the U.S. fuel supply. The statute sets annual targets for renewable fuel volumes, and each year, the Environmental Protection Agency implements those targets. The agency has certain waiver authorities under the statute to reduce the annual targets below the statutory levels.

Three groups of petitioners now challenge EPA's 2019 rulemaking. A group of companies that produce renewable fuels argues that EPA's 2019 volume levels are too low. In contrast, a group of fuel refiners and retailers argues that the agency's 2019 volumes are too high. Finally, a coalition of environmental organizations challenges various aspects of the 2019 Rule relating to environmental considerations.

We deny the petitions for review except for two of the environmental organizations' challenges. As to those challenges, we remand the 2019 Rule without vacatur to enable EPA to reassess the Rule in relevant part.

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* Then Judge Garland was a member of the panel but did not participate in the disposition of these consolidated cases.

I.

In 2005, Congress amended the Clean Air Act to establish the Renewable Fuel Standard (RFS) Program. *See* Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594. The RFS Program calls for a gradual shift over time to the use of renewable fuels.

This court recently entertained challenges to EPA's 2018 iteration of its annual regulations implementing the RFS Program. *See generally Am. Fuel & Petro. Mfrs. v. EPA*, 937 F.3d 559 (D.C. Cir. 2019) (*AFPM 2018*). Now before the court are challenges to EPA's regulations for the ensuing yearly cycle — the 2019 Rule. *Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020*, 83 Fed. Reg. 63,704 (Dec. 11, 2018) (2019 Rule). Several of the challenges presented in this case resemble or even match ones raised regarding the 2018 Rule.

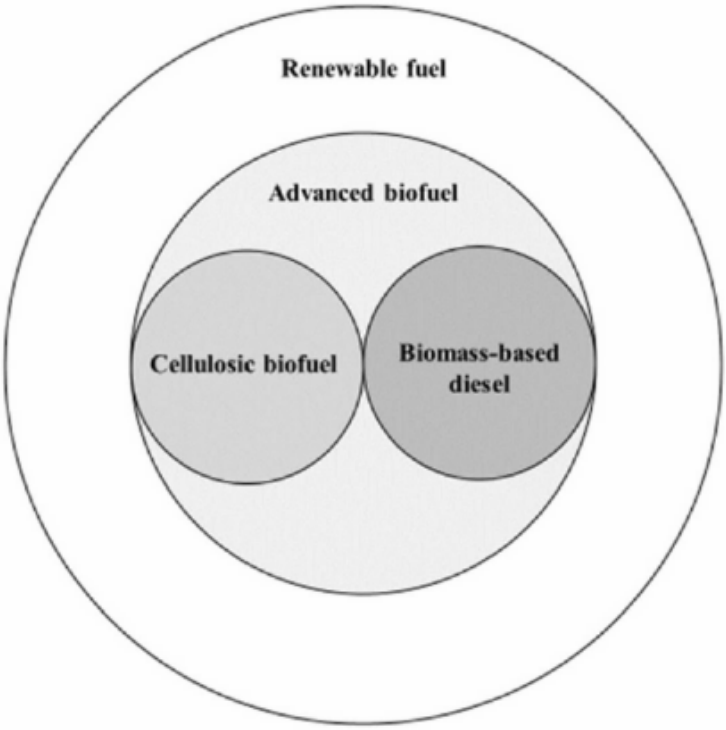
Because the description of the statutory and regulatory background for the challenges to EPA's 2018 Rule considered in that case is fully applicable to the challenges we now confront to the 2019 Rule, we repeat *AFPM 2018*'s description of that background here rather than reinvent it:

> [T]he [RFS] Program regulates suppliers through "applicable volume[s]"—mandatory and annually increasing quantities of renewable fuels that must be "introduced into commerce in the United States" each year—and tasks the EPA Administrator with "ensur[ing]" that those annual targets are met. 42 U.S.C. § 7545(o)(2)(A)(i). As we explained in *Americans for Clean Energy v. EPA*, "[b]y requiring upstream market participants . . . to introduce increasing volumes of renewable fuel into the transportation fuel supply,

Congress intended the Renewable Fuel Program to be a 'market forcing policy' that would create 'demand pressure to increase consumption' of renewable fuel." 864 F.3d 691, 705 (D.C. Cir. 2017) (first quoting Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017, 80 Fed. Reg. 77,420, 77,423 (Dec. 14, 2015); then quoting *Monroe Energy, LLC v. EPA*, 750 F.3d 909, 917 (D.C. Cir. 2014)).

The Program specifies annual fuel-volume requirements for four overlapping categories of fuel. The first and broadest category, "renewable fuel," includes any "fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in" either "a transportation fuel," 42 U.S.C. § 7545(o)(1)(J), or "home heating oil or jet fuel," *id*. § 7545(o)(1)(A); *see also* Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program, 75 Fed. Reg. 14,670, 14,687 (Mar. 26, 2010) (including "home heating oil" and "jet fuel" within the definition of "renewable fuel"). Next are "advanced biofuel[s]," a subset of the renewable-fuel category defined as any "renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions . . . at least 50 percent less than" "the average lifecycle greenhouse gas emissions . . . for gasoline or diesel" as of 2005. 42 U.S.C. § 7545(o)(1)(B)(i), (C). Lastly, of the fuels falling under the advanced-biofuel umbrella, the Program singles out two in particular: "cellulosic biofuel," a fuel derived from the fibrous parts of plants, *see id*. § 7545(o)(1)(E), and "biomass-based diesel," a renewable substitute for conventional diesel, *see id*. §§ 7545(o)(1)(D), 13220(f). Because the definitions of these four fuel categories are "nested," so, too, are their

applicable volumes. *Ams. for Clean Energy*, 864 F.3d at 731. As depicted below, the Program will double- or even triple-count the more specialized fuels, such that one gallon of advanced biofuel simultaneously counts as one gallon of renewable fuel, and one gallon of either cellulosic biofuel or biomass-based diesel also counts as one gallon of both advanced biofuel and renewable fuel.



The Program lists calendar years and corresponding applicable volumes for each type of fuel. These tables run through 2022 for renewable fuel, advanced biofuel, and cellulosic biofuel . . . . *See* 42 U.S.C. § 7545(o)(2)(B)(i)(I)–(III) . . . .

Although the statutory tables initially appear to admit no exception, their applicable volumes in fact provide only starting points. Under certain circumstances, the Program grants the Administrator authority to exercise so-called waivers to reduce applicable volumes below statutory levels. Three waivers are relevant to this case.

The first waiver is mandatory. The Program requires that if in any year "the projected volume of cellulosic biofuel production is less than the minimum applicable volume" set by statute, then "the Administrator shall reduce the applicable volume of cellulosic biofuel . . . to the projected volume available during that calendar year." *Id*. § 7545(o)(7)(D)(i). Put simply, regardless of the applicable volume Congress established in the Program, the EPA may require by regulation no more cellulosic biofuel than the market is projected to provide in any given year.

The second waiver flows from the first. For any year in which the EPA reduces the applicable volume of cellulosic biofuel based on a projected shortfall, "the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels . . . by the same or a lesser volume." *Id*. Unlike its mandatory cousin, this "cellulosic waiver" is discretionary: if cellulosic biofuel is projected to underperform statutory levels, the Administrator may reduce renewable fuel and advanced biofuel volumes by the entire cellulosic deficit, by some percentage of the shortfall, or by nothing at all. *See id*.; *see also* Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards, 78 Fed. Reg. 49,794, 49,810 (Aug. 15, 2013) (interpreting the cellulosic waiver provision "as authorizing [the] EPA to reduce both total

renewable fuel and advanced biofuel, by the same amounts, if [the] EPA reduces the volume of cellulosic biofuel"). Because cellulosic biofuel is nested within advanced biofuel, if the Administrator exercises anything less than a full cellulosic waiver, other advanced biofuels will need to make up for the difference.

The last waiver, the so-called general waiver, is also discretionary. It permits the Administrator to "reduc[e] the national quantity of renewable fuel required" by the Program "based on a determination" that any of three circumstances exist: first, "that implementation of the requirement would severely harm the economy . . . of a State, a region, or the United States," 42 U.S.C. § 7545(o)(7)(A)(i); second, "that implementation of the requirement would severely harm the . . . environment of a State, a region, or the United States," *id*.; or third, "that there is an inadequate domestic supply," *id*. § 7545(o)(7)(A)(ii). The Administrator may exercise the general waiver in response to a petition by a state or regulated party or "on his own motion." *Id*. § 7545(o)(7)(A).

After exercising any waivers and finalizing an applicable volume for each type of fuel, the EPA must by November 30 of each year calculate and promulgate "renewable fuel obligation[s] that" will "ensure[ ] that the [Program's] requirements . . . are met" in the upcoming year. *Id*. § 7545(o)(3)(B)(i). In broad strokes, this task requires the EPA to identify the entities responsible for collectively achieving applicable volumes, quantify each entity's individual obligation, and ensure those entities' successful compliance.

To begin with, there is the threshold question of who, exactly, must satisfy renewable fuel obligations—that is, who are the "obligated parties"? Although the statute states that "[t]he renewable fuel obligation determined for a calendar year . . . shall . . . be applicable to refineries, blenders, and importers, as appropriate," *id*. § 7545(o)(3)(B)(ii)(I), the EPA has since the Program's inception declined to include blenders—defined as "part[ies] that simply blend[ ] renewable fuel into gasoline or diesel fuel," 40 C.F.R. § 80.1406(a)(1)—within the definition of "obligated party," *see* Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program, 72 Fed. Reg. 23,900, 23,924 (May 1, 2007) (designating obligated parties); Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program, 75 Fed. Reg. at 14,721–22 (same) . . . . The Program . . . [also] permit[s] "small refiner[ies]" to receive exemptions from renewable fuel obligations if they demonstrate that compliance would inflict "disproportionate economic hardship." 42 U.S.C. § 7545(o)(9)(B).

Next, each year the EPA must transform its aggregate, fuel-sector-wide applicable volumes into individual compliance obligations that sum to the requisite whole. To do this, the Program instructs the EPA to translate the applicable volumes into "percentage[s] of transportation fuel sold or introduced into commerce in the United States." *Id*. § 7545(o)(3)(B)(ii)(II). By dividing the applicable volumes for each fuel type by an estimate of the total gasoline and diesel volume that will be used in the coming year (subject to some adjustments), the EPA generates "percentage standards" which then "inform each obligated party of how much renewable fuel it must introduce into U.S. commerce based on the volumes of fossil-based gasoline or diesel it imports or produces."

Ams. for Clean Energy, 864 F.3d at 699; *see also* 40 C.F.R. § 80.1405(c) (setting out the percentage-standard formula). In other words, the EPA estimates what percentage of the overall fuel supply each renewable-fuel type should constitute and then requires each obligated party to replicate those percentages on an individual basis . . . .

Finally, after the obligated parties have been identified and their percentage standards have been set, there remains the matter of compliance. The Program does not require each obligated party to produce precisely the right mix of fuel itself. *See id*. § 7545(o)(5) (directing the EPA to establish a "[c]redit program"). Instead, for every gallon of renewable fuel entering the U.S. market, producers and importers may generate a set of "Renewable Identification Numbers" (RINs). *See* 40 C.F.R. §§ 80.1426, 80.1429(b) (describing how RINs are "generated" and then "separated" from their fuel); *Ams. for Clean Energy*, 864 F.3d at 699 (same). Each year, obligated parties must generate or purchase enough RINs to meet their renewable fuel obligations, which the obligated parties then satisfy by "retir[ing]" RINs at an annual compliance demonstration. 40 C.F.R. § 80.1427. To prevent fuel that ultimately leaves the U.S. market from satisfying obligated parties' renewable fuel obligations, the EPA also requires exporters to retire any RINs (or an equivalent number of RINs) that were generated by exported fuel. *See* 40 C.F.R. § 80.1430 (listing requirements for renewable-fuel exporters). An obligated party lacking enough RINs may, under certain circumstances, carry forward a deficit, while an obligated party possessing excess RINs may save those RINs for the following year. *See* 42 U.S.C. § 7545(o)(5)(B), (D) (addressing the transfer of RINs and the ability to carry

forward a RIN deficit); 40 C.F.R. § 80.1427(b) (addressing "[d]eficit carryovers"); *id*. § 80.1428(c) (addressing "RIN expiration").

AFPM 2018, 937 F.3d at 568–72.

On December 11, 2018, EPA issued the 2019 Rule. Three sets of parties filed petitions for review challenging the Rule on various grounds. The first set of petitioners consists of Growth Energy, RFS Power Coalition, the National Biodiesel Board, and Producers of Renewables United for Integrity Truth and Transparency. Those petitioners produce (or represent companies that produce) renewable fuels. We will refer to those petitioners as Renewable Producers, and they generally contend that the 2019 Rule's renewable fuel obligations are unduly low.

The second set of petitioners consists of Monroe Energy, LLC, Small Retailers Coalition, American Fuel & Petrochemical Manufacturers, and Valero Energy Corporation. Those petitioners are (or represent) fuel refiners and retailers subject to RFS volume requirements. We will refer to this set of petitioners as Obligated Parties, and they contend that the 2019 Rule's renewable fuel obligations are too demanding. The American Petroleum Institute and a subset of Renewable Producers, intervenors on behalf of EPA, contest Obligated Parties' claim that the volumes are too high.

The final set of petitioners consists of National Wildlife Federation, Healthy Gulf, and Sierra Club. We will refer to this set of environmental organizations as Environmental Petitioners, and their challenges pertain to certain aspects of the 2019 Rule relating to the environment. A subset of Renewable Producers again intervenes on behalf of EPA, contesting Environmental Petitioners' claims.

We first consider Renewable Producers' challenges, followed by those of Obligated Parties, and then those of Environmental Petitioners.

II.

A. Small Refinery Exemptions

Renewable Producers first object to EPA's failure to account for certain small refinery exemptions in the 2019 Rule. The Act deems all small refineries exempt from the annual percentage standards until 2011. 42 U.S.C. § 7545(o)(9)(A)(i). For subsequent years, small refineries may petition for an extension of their exemption "at any time," *id.* § 7545(o)(9)(B)(i), and EPA must grant the exemption if compliance with the renewable fuel obligations would cause the petitioning small refinery "disproportionate economic hardship," *id.* § 7545(o)(9)(A)(ii)(II). Because EPA must publish the percentage standards for the upcoming compliance year by November 30, *id.* § 7545(o)(3)(B)(i), exemptions are sometimes granted *after* EPA has promulgated that year's standards. These so-called "retroactive" exemptions hinder achievement of the applicable volumes by excusing some obligated parties from having to produce renewable fuel without requiring that other non-exempt parties make up the shortfall. *See AFPM 2018*, 937 F.3d at 571. Nonetheless, since first exempting small refineries from their renewable fuel obligations in 2011, EPA has consistently declined to adjust the percentage standards to account for exemptions it may grant after the standards are finalized. *See* 82 Fed. Reg. 58,486, 58,523 (Dec. 12, 2017); 81 Fed. Reg. 89,746, 89,800 (Dec. 12, 2016); 80 Fed. Reg. 77,420, 77,511 (Dec. 14, 2015); 78 Fed. Reg. 49,794, 49,826 (Aug. 15, 2013); 77 Fed. Reg. 1,320,

1,340 (Jan. 9, 2012); 75 Fed. Reg. 76,790, 76,804–05 (Dec. 9, 2010).

In setting the 2019 standards, EPA again declined to account for retroactive exemptions. 83 Fed. Reg. at 63,740. EPA also declined to reconsider its approach, deeming comments on the issue "beyond the scope of this rulemaking." Response to Comments (RTC) at 183.

Renewable Producers maintain that EPA's refusal to adjust for retroactive exemptions violates the Act and is arbitrary and capricious. In their view, EPA's policy (1) contravenes its statutory duty to "ensure" that the annual requirements were met, 42 U.S.C. § 7545(o)(3)(B)(i); (2) illegally converts "exemption[s]," *id*. § 7545(o)(9), into "waivers," *id.* §§ 7545(o)(7), (8)(D); and (3) subverts the market-forcing purposes of the renewable fuel standards program. Renewable Producers further contend that EPA acted arbitrarily in declining to revisit its approach to "retroactive" exemptions in the 2019 Rule.

Under the Act's sixty-day time bar for judicial review, the court lacks jurisdiction to review Renewable Producers' direct challenge to EPA's approach to "retroactive" exemptions. The court may, however, review EPA's decision not to reconsider the issue because that decision was made in the 2019 rulemaking. Upon review of the record, we conclude that EPA's decision not to reconsider its policy was reasonable and we deny Renewable Producers' challenge.

1.

The Clean Air Act requires that challenges to a final EPA action be filed within sixty days of its publication in the Federal Register or the occurrence of valid after-arising grounds. 42

U.S.C. § 7607(b)(1). This time bar is jurisdictional, *Med. Waste Inst. & Energy Recovery Council v. EPA*, 645 F.3d 420, 427 (D.C. Cir. 2011), and Renewable Producers' challenge to EPA's approach to "retroactive" exemptions misses the deadline by almost a decade. EPA first adopted its approach in the 2011 Rule. 75 Fed. Reg. at 76,804–05. Thereafter, EPA maintained that approach in each rule setting the annual standards, including in the 2019 Rule. Renewable Producers do not contend that any "after-arising" grounds exist.

Recognizing this jurisdictional obstacle, Renewable Producers attempt to distinguish the policy they are challenging from the policy EPA adopted in the 2011 Rule. To that end, they maintain that EPA declined in the 2011 Rule to modify the applicable percentage standards throughout the year to reflect small refinery exemptions, whereas they challenge EPA's refusal to adjust the percentage standards based on the small refinery exemptions it expects to grant after the standards are issued. Oral Arg. Rec. 2:50–3:10. Even assuming *arguendo* that this is so, the 2012 Rule ruled out *any* adjustments to account for retroactive exemptions, determining that EPA would account for only exemptions granted by the date the standards were set. As a result, the 2012 Rule foreclosed Renewable Producers' proposals. For example, their suggestion that EPA could project expected retroactive exemptions *ex ante* cannot be squared with EPA's decision to account only for exemptions that have been granted as of the date the standards were set. 77 Fed. Reg. at 1,340. Thus, at best, Renewable Producers' challenge to EPA's approach is seven rather than eight years too late. Renewable Producers still may petition EPA to change its policy regarding small refinery exemptions even though the deadline for judicial review of that policy has passed, *see, e.g.*, *Alon Ref. Krotz Springs, Inc. v. EPA*, 936 F.3d 628, 639 (D.C. Cir. 2019), *cert. denied sub nom. Valero Energy Corp. v. EPA*, 140 S. Ct. 2792

(2020), but the court lacks jurisdiction to consider their instant challenge.

2.

Although Renewable Producers mainly mount a direct challenge to EPA's retroactive-exemption approach, they also challenge EPA's refusal to reconsider that approach in the 2019 Rule. They maintain that EPA must reassess the issue annually, pointing to the provision directing EPA to promulgate "renewable fuel obligation[s]" each year so as to "ensure[] that the [volume] requirements . . . are met." 42 U.S.C. § 7545(o)(3)(B)(i). Renewable Producers additionally maintain that EPA could not disregard the issue because it was "an important aspect of the problem" EPA faced in setting the 2019 applicable volumes. *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). By refusing to revisit its approach, they continue, EPA allowed a significant portion of the applicable volumes to go unmet.

Unlike Renewable Producers' direct challenge to EPA's approach, this challenge is timely because it applies to a decision EPA took in the 2019 rulemaking. *See AFPM 2018*, 937 F.3d at 586–87; *Alon*, 936 F.3d at 654. This challenge, however, fails on the merits. EPA's decision to maintain its approach to small refinery exemptions in the 2019 Rule was reasonable. EPA reexamined its approach to retroactive exemptions one year earlier in the 2018 Rule, and the court upheld EPA's treatment of small refinery exemptions as reasonable and reasonably explained. *See AFPM 2018*, 937 F.3d at 587–90. EPA could reasonably decline to reconsider the same issue again one year later when there had been no change in circumstances that would have required it to reexamine its approach again. *See id.* at 587. Although Renewable Producers describe a "dramatic[] increase[]" in

exemptions, Renewable Producers Pet'rs' Br. 11, that increase occurred in 2016 and 2017, *before* the court upheld EPA's approach. Further, the court in *AFPM 2018* upheld EPA's approach to small refinery exemptions despite exemptions representing 9% of the 2017 volume requirements. *See* RFS Small Refinery Exemptions, EPA, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions; Renewable Fuel Annual Standards, EPA, https://www.epa.gov/renewable-fuel-standard-program/renewable-fuel-annual-standards. It was not unreasonable for EPA to decline to reexamine its policy in the 2019 rulemaking where exemptions decreased to account for 7% of the 2018 volume requirements. *See id.*

B. Producers United's Challenge

Next, Producers United launches a broadside attack against EPA's practice of granting exemptions to small refineries after promulgating the annual percentage standards. Here too, the court lacks jurisdiction to review this challenge as part of a petition for review of the 2019 Rule. That rule granted no exemptions, and so Producers United challenge the wrong action. *See Producers of Renewables United for Integrity Truth & Transparency v. EPA*, 778 F. App'x 1, 4 (D.C. Cir. 2019). Producers United cites the statement in the 2019 Rule that "any exemptions for 2019 that are granted after the final rule is released will not be reflected in the percentage standards that apply . . . in 2019." 83 Fed. Reg. at 63,740. But that statement did not take a position on whether to grant retroactive exemptions; it said merely that *if* EPA granted any exemptions after the issuance of the 2019 Rule, they would not be reflected in the percentage standards. Foreclosing any further doubt, EPA also stated in responding to comments that the 2019 rulemaking "did not propose changes to, take comment on, or otherwise reexamine the manner in which

small refinery hardship petitions are evaluated." RTC at 185. The court, therefore, lacks jurisdiction to reach the merits of Producers United's challenge.

C. Renewable Electricity

Finally, RFS Power challenges EPA's decision to exclude electricity generated from renewable biomass (a form of cellulosic biofuel) from its cellulosic biofuel projection in the 2019 Rule. The Act requires EPA to project the annual "volume of cellulosic biofuel production." 42 U.S.C. § 7545(o)(7)(D)(i). In 2014, EPA added "a new cellulosic biofuel pathway for renewable electricity (used in electric vehicles)," 79 Fed. Reg. 42,128, 42,128 (July 18, 2014), whereby any facility that meets the requirements in 40 C.F.R. § 80.1426(f) may register to generate RINs. To date, however, EPA has not approved any registration petitions for facilities that produce electricity fuel. In the 2019 Rule, EPA projected that 418 million gallons of cellulosic biofuel would be produced. 83 Fed. Reg. at 63,705–08. This projection included "production volumes from all facilities that are reasonably likely to produce *qualifying* cellulosic biofuel in 2019." RTC at 37 (emphasis added). EPA did not include in its projection "production from facilities that must address significant technical and regulatory issues prior to facility registration (such as . . . facilities seeking to generate RINs for electricity generated from biogas used as transportation fuel)." *Id.* According to EPA, it was unlikely to register those facilities in 2019 despite "working as expeditiously as possible, in light of resource constraints and competing priorities." *Id.* at 36. Because only registered facilities may generate RINs, EPA concluded that no RIN-generating, or qualifying, electricity fuel would be produced in 2019.

RFS Power maintains that EPA's decision to exclude electricity fuel was arbitrary and capricious because no real "technical and regulatory issues" exist for electricity producers. Further, RFS Power maintains that EPA insufficiently explained the issues that prevented it from registering facilities, and it illegitimately relied on its own "resource constraints and competing priorities" to justify its projection. *See* Renewable Producers Pet'rs' Br. 36–38. The court is "particularly deferential" to agencies' predictive judgments, requiring only that "the agency acknowledge factual uncertainties and identify the considerations it found persuasive." *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095, 1105 (D.C. Cir. 2009). EPA cleared that modest bar.

In projecting the volume of cellulosic biofuel production, EPA must take a "neutral aim at accuracy." *Am. Petro. Inst. v. EPA*, 706 F.3d 474, 476 (D.C. Cir. 2013). To do so, EPA must consider those factors likely to influence the availability of qualifying renewable fuel, and that is what it did here. Because EPA's own resource constraints and priorities would affect whether it approved registration petitions from electricity facilities, it was reasonable to consider them when projecting the amount of qualifying cellulosic biofuel available in 2019. Moreover, it was reasonable for EPA to limit its projection to volumes available for compliance. Including non-RIN-generating volumes in the 2019 Rule would have left obligated parties "in an impossible position, or at least a highly punitive one — that is, forced to purchase volumes of [qualified] cellulosic biofuel greater than total production, or pay fines for failing to do so." *Id.* at 479. Nor was EPA's explanation for its decision inadequate. EPA was not writing on a blank slate when it excluded electricity fuel from its 2019 cellulosic biofuel projection. It had discussed the technical and regulatory barriers facing the renewable electricity industry at length in 2016, *see* 81 Fed. Reg. 80,828, 80,890–

900 (Nov. 16, 2016), and it declined to include electricity fuel in its cellulosic biofuel projection in both 2017 and 2018. Under the circumstances, EPA's explanation for its 2019 cellulosic biofuel projection was adequate. In sum, there is no basis for the court to disturb EPA's findings.

Separate from its arbitrary-and-capricious challenge, RFS Power maintains that EPA's refusal to include electricity fuel in the 2019 projections is inconsistent with the text of the Act, which requires EPA to estimate fuel production rather than RINs. And RFS Power maintains that EPA's failure to approve electricity facility registrations is "tantamount to revoking the 2014 pathway rule" without notice and comment. Renewable Producers Pet'rs' Reply Br. 19. RFS Power did not raise these arguments until its reply brief, and they are forfeited because it has identified no extraordinary circumstances to excuse this delay. *See Am. Wildlands v. Kempthorne*, 530 F.3d 991, 1001 (D.C. Cir. 2008).

III.

We now turn to the challenges brought by Obligated Parties. We reject each of those challenges.

A. Severe Economic Harm Waiver

Under EPA's general waiver authority, the agency "*may*" reduce statutory volume requirements "based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy . . . of a State, a region, or the United States." 42 U.S.C. § 7545(o)(7)(A)(i) (emphasis added). In implementing that severe economic harm waiver, EPA first determines whether implementation of the statutory RFS volumes would cause severe economic harm.

If so, the agency then decides whether to reduce the statutory volumes. Obligated Parties contend that EPA acted arbitrarily and capriciously in declining to exercise the severe economic harm waiver in the 2019 Rule. But because the agency "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action," we uphold its decision not to exercise the waiver. *State Farm*, 463 U.S. at 43; *see also AFPM 2018*, 937 F.3d at 581 (applying arbitrary and capricious review to EPA's general waiver determination).

First, Obligated Parties challenge EPA's determination that the 2019 volumes would not cause severe economic harm. 83 Fed. Reg. at 63,708. In particular, Obligated Parties claim that new evidence — a study by Dr. Craig Pirrong, Professor of Finance and Energy Markets at the University of Houston's Bauer College of Business — contradicts EPA's understanding that refineries subject to RFS obligations recover their compliance costs by passing along the costs to consumers through price increases. *See generally Alon*, 936 F.3d at 649. Relying on the Pirrong study, Obligated Parties assert that the "pass-through" theory is flawed and that RFS requirements impose severe economic consequences on refiners in the Eastern United States (specifically the "PADD1" region, shorthand for Petroleum Administration for Defense District 1).

We reject this challenge. EPA has interpreted the severe economic harm waiver to require "generally a high degree of confidence that severe harm would occur," as well as "a demonstration that implementation of the RFS Program itself would cause severe economic harm (as opposed to allowing a waiver if severe economic harm were demonstrated for any reason, or if the RFS merely contributed to severe harm)." Memorandum from David Korotney, Off. of Transp. & Air Quality, U.S. EPA, to EPA Docket EPA-HQ-OAR-2017-0091,

Assessment of Waivers for Severe Economic Harm or BBD Prices for 2018, at 15 (Nov. 30, 2017) (quotation marks omitted). The court has sustained that interpretation of the severe economic harm waiver. *AFPM 2018*, 937 F.3d at 579–80.

Applying that interpretation in connection with the 2019 Rule, EPA reasonably concluded that Obligated Parties had failed to make the strong causal showing required to trigger the waiver. The agency explained that commenters "did not provide any concrete evidence that their financial difficulties are caused primarily or even significantly by the RFS program," rather than by other factors. RTC at 14. That conclusion is consistent with the Pirrong study relied upon by Obligated Parties. Even accepting the study's conclusion that refineries cannot pass on RIN costs to consumers, such that RFS compliance comes at a cost to refineries, that conclusion does not establish that "the RFS Program itself" would cause severe economic harm rather than "merely contributing" to harm. Korotney Memorandum, Assessment of Waivers for Severe Economic Harm, at 15. Indeed, the Pirrong study acknowledges that PADD1 refineries have consistently experienced lower gross profit margins than refineries in other parts of the United States and that those refineries "faced significant economic headwinds" even before implementation of the RFS. Craig Pirrong, Analysis of the RFS Program and the 2019 Proposed Standards 8 (2018); *see id*. at 12, 14. In that light, it was reasonable for EPA to conclude that RFS costs alone were not the primary driver of PADD1 refineries' economic difficulties.

Obligated Parties next claim that EPA's refusal to exercise the severe economic harm waiver stands at odds with the agency's grant of small refinery exemptions. We again disagree. As EPA explained, "small refinery exemptions are

held to a different standard than a waiver under severe economic harm: the former requires 'disproportionate economic hardship' to '[a] small refinery' whereas the latter requires severe economic harm to a State, a region, or the United States." RTC at 19. The agency's recognition that RFS compliance costs could cause financial difficulties for certain small refineries, then, does not conflict with the agency's conclusion that there was insufficient evidence of statewide or regionwide severe economic harm to warrant exercise of the waiver.

Obligated Parties also contend that EPA impermissibly considered the potential benefits of the RFS program in determining whether to issue the waiver. In their view, the statute only permits EPA to consider potential economic harms (not benefits) in deciding whether to exercise the waiver. But EPA explained that it would have declined to exercise the severe economic harm waiver even if it did not take the benefits of the RFS Program into consideration. RTC at 17. We thus have no occasion to reach the merits of Obligated Parties' argument in this regard. *See AFPM 2018*, 937 F.3d at 583.

B. Inadequate Domestic Supply Waiver

EPA's general waiver authority also gives it discretion to "reduc[e] the national quantity of renewable fuel required . . . based on a determination . . . that there is an inadequate domestic supply." 42 U.S.C. § 7545(o)(7)(A)(ii). We have explained that the term "inadequate domestic supply" refers to the supply of renewable fuel "available to refiners, blenders, and importers to meet the statutory volume requirements." *Ams. for Clean Energy v. EPA*, 864 F.3d 691, 707 (D.C. Cir. 2017) (emphasis omitted).

In the 2019 rulemaking, EPA declined to exercise the inadequate domestic supply waiver to reduce the advanced biofuel volume or the total renewable fuel volume. Regarding the advanced biofuel volume, EPA reasoned that domestic supply of advanced biofuel did not in fact appear inadequate and that carryover RIN holdings could fill any unexpected gaps in supply. 83 Fed. Reg. at 63,708, 63,721 n.83, 63,730 n.128. Obligated Parties challenge that determination, claiming EPA failed adequately to consider whether domestic supply sufficed to meet the 2019 statutory volume requirements for advanced biofuel. (Obligated Parties also take issue with the methodology EPA used to support the total renewable fuel volume — a challenge we address in the next section. *See infra* Part III.C.)

The court reviews EPA's decision not to exercise the inadequate domestic supply waiver under the deferential arbitrary and capricious standard. *See AFPM 2018*, 937 F.3d at 574. In its Response to Comments, EPA explained that domestic advanced biofuel production alone — without taking imports into consideration — could meet the 2019 statutory volumes for advanced biofuel. RTC at 10–11. To meet the 2019 standards, EPA estimated that domestic biofuel production would need to increase by approximately 700 million RINs, which the agency noted was "about the same as . . . the greatest year-over-year increase in domestic advanced biofuel production." *Id*. at 11. EPA concluded that such an increase would be "difficult, but not impossible for the domestic industry to fulfill." *Id*. It also explained that neither "feedstock supplies [n]or production capacity would preclude the domestic industry from meeting the standard." *Id*. And consideration of imports only reinforced EPA's conclusion that the volume requirements likely could be met. *Id*. at 10–11.

EPA adequately explained its refusal to exercise the inadequate domestic supply waiver. Again, the court is "particularly deferential" to EPA's expertise "in matters implicating predictive judgments" and will sustain the agency's judgments in that regard as long as it "acknowledge[d] factual uncertainties and identif[ied] the considerations it found persuasive." *Rural Cellular Ass'n*, 588 F.3d at 1105. EPA did so here.

In addition, EPA reinforced its decision against exercising the inadequate domestic supply waiver by explaining that, even if domestic supply were inadequate, it would not exercise its discretion to further reduce the RFS volumes. RTC at 11; 83 Fed. Reg. at 63,708. In support of that determination, the agency noted that there was a "significant carryover RIN bank" that could be used if domestic production fell short. RTC at 11. In light of EPA's explanation that it would not exercise the waiver even if domestic supply were inadequate, there was even less need for it to make lengthy, detailed projections about the adequacy of domestic supply. *See AFPM 2018*, 937 F.3d at 584 ("Certainly [the] EPA must provide a reasoned explanation for its actions, but rationality does not always imply a high degree of quantitative specificity.") (alteration in the original; internal quotation marks omitted); *Am. Petro. Inst.*, 706 F.3d at 481 ("Nothing in the text of . . . the [RFS] plainly requires EPA to support its decision" not to exercise the general waiver "with specific numerical projections.").

Obligated Parties additionally assert that EPA acted arbitrarily by setting advanced biofuel volumes that were not "reasonably attainable" but merely "attainable." That argument misses the mark. EPA determines "reasonably attainable" volumes for purposes of the cellulosic waiver, not the inadequate domestic supply waiver. 83 Fed. Reg. at 63,721. And in determining "attainable" and "reasonably

attainable" volumes for purposes of the cellulosic waiver, EPA accounts for demand-side considerations, which the agency cannot consider in connection with a finding of inadequate domestic supply. *See Ams. for Clean Energy*, 864 F.3d at 696. Because EPA addressed all relevant considerations, we uphold the agency's decision not to exercise the inadequate domestic supply waiver.

C. Total Renewable Fuel Volume

Obligated Parties contend that there was insufficient record support for EPA's total renewable fuel volume in the 2019 Rule. Recall that the RFS Program sets annual volume requirements for renewable fuel generally. And renewable fuel includes advanced biofuels, like cellulosic biofuel and biomass-based diesel. But renewable fuel also includes conventional biofuels like corn-based ethanol, which is the most widely produced and consumed biofuel in the United States. Memorandum from David Korotney, Off. of Transp. & Air Quality, U.S. EPA, to EPA Docket EPA-HQ-OAR-2018-0167, Updated Market Impacts of Biofuels in 2019, at 1 (Nov. 2018). Blends of ethanol and gasoline typically make up a significant proportion of the annual renewable fuel produced to fulfill the overall volume requirements. *See, e.g.*, *AFPM 2018*, 937 F.3d at 582 (observing that corn ethanol production alone was projected to exceed the total production of advanced biofuel in 2018).

As relevant here, ethanol-gasoline blends contain varying ratios of ethanol to gasoline. Specifically, E10 contains roughly 10% ethanol (and 90% gasoline), E15 contains about 15% ethanol, and E85 contains around 85% ethanol. *See* Korotney Memorandum, Updated Market Impacts of Biofuels in 2019, at 1. E10 is by far the most common blend, so much

so that the average ethanol concentration in U.S. gasoline is 10.13%. *Id*.

The statute set the 2019 cellulosic biofuel volume at 8.5 billion gallons. 83 Fed. Reg. at 63,705 (Table I–1). But EPA determined that, in 2019, only 0.42 billion gallons would be produced and available for use. *Id*. Pursuant to the mandatory cellulosic waiver provision, *see* 42 U.S.C. § 7545(o)(7)(D)(i), EPA was required to reduce the 2019 volume for cellulosic biofuel by the difference — 8.08 billion gallons. Using the discretionary cellulosic waiver, *see id.*, EPA then lowered the applicable volumes for advanced biofuel and total renewable fuel by the same amount. 83 Fed. Reg. at 63,705–06 (Table I–1). The agency, however, declined to exercise its general waiver authority to further reduce the total renewable fuel volume. *Id*. at 63,731. EPA explained that, assuming the average ethanol concentration in gasoline remained around 10.13%, the market would be able to produce enough ethanol and gasoline to meet the overall renewable fuel volume target without any further reduction. *Id.*

Obligated Parties contend that to ensure that the 2019 total volume requirement could be met, EPA should have separately estimated how much gasoline, E15, and E85 the market could produce. We rejected precisely the same argument in *AFPM 2018* and we do so again here. EPA does not "craft applicable volumes . . . from scratch." *AFPM 2018*, 937 F.3d at 583. Rather, the statute sets applicable volumes, which EPA may adjust only through the exercise of its waiver authority. *Id*. As the court has repeatedly explained, "'[n]othing in the text of . . . the [RFS] plainly requires [the] EPA to support its decision' against exercising the general waiver 'with specific numerical projections.'" *Id*. at 584 (first and third alterations in original) (quoting *Am. Petro. Inst.*, 706 F.3d at 481). EPA therefore could reasonably conclude that "projecting ethanol use based

on th[e] [10.13 percent] concentration level . . . inherently account[s] for the net effect of volumes of [gasoline], E15, and E85 without the need to project volumes of these three blend levels individually." Korotney Memorandum, Updated Market Impacts of Biofuels in 2019, at 3. Moreover, EPA's determination that calculating the amount of ethanol fuel available using a nationwide average ethanol concentration of 10.13% "provides a better indication of the net effect of all E0, E15, and E85" was reasonable given that "nearly all gasoline contains 10 percent ethanol." 83 Fed. Reg. at 63,731.

Nor, contrary to Obligated Parties' contention, did EPA disregard data predicting reduced gasoline consumption (which in turn would reduce the demand for ethanol to blend with gasoline). Rather, the agency explained that, even taking into account reduced projections of gasoline consumption for 2019, the renewable fuel standard could be met if the market achieved a 10.13% concentration of ethanol, as it had in 2017. Korotney Memorandum, Updated Market Impacts of Biofuels in 2019, at 4–5. For those reasons, we find that EPA adequately supported its decision not to exercise its general waiver authority to reduce the total renewable fuel volume.

D. Sugarcane Ethanol Estimate

When EPA's projection of cellulosic biofuel production is lower than the statutory volume, the agency must reduce the applicable volume to the projected amount. 42 U.S.C. § 7545(o)(7)(D)(i). In that event, the statute also enables EPA to decide, under the discretionary cellulosic waiver, whether to lower the applicable volumes for advanced biofuel and total renewable fuel "by the same or a lesser" amount. *Id*. Although the statute does not prescribe specific factors for the agency to consider in making that determination, *see Monroe Energy*, 750 F.3d at 915, EPA typically considers what volume

of advanced biofuel is "reasonably attainable," *see Ams. for Clean Energy*, 864 F.3d at 735. A volume is "reasonably attainable" if it can be reached with "minimal market disruptions, increased costs, and/or reduced [greenhouse gas] (GHG) benefits, and with minimal diversion of advanced biofuels or advanced biofuel feedstocks from existing uses." 83 Fed. Reg. at 63,721.

Imported sugarcane ethanol is one of the principal sources of advanced biofuel. *Id*. The United States' supply of sugarcane ethanol is largely imported from Brazil, and there is a "high degree of variability in historical imports of sugarcane ethanol." *Id*. at 63,722. Obligated Parties observe that, for the past five years, actual volumes of sugarcane ethanol have not exceeded 45% of EPA's estimate. They argue that EPA again overestimated the amount of sugarcane ethanol available for import in the 2019 Rulemaking. Had it correctly estimated sugarcane ethanol levels, they submit, EPA might have found that advanced biofuel volumes were not "reasonably attainable" and thus decided to exercise the discretionary cellulosic waiver to reduce volumes.

We reject Obligated Parties' challenge to EPA's 2019 estimate of the volume of sugarcane ethanol available in the United States. We review that estimate under the arbitrary and capricious standard. *AFPM 2018*, 937 F.3d at 574 (citing 42 U.S.C. § 7607(d)(9)(A)). In light of the deference owed to EPA's predictive judgments, *see Rural Cellular Ass'n*, 588 F.3d at 1108, EPA's 2019 sugarcane ethanol projection was not arbitrary.

In its 2016 and 2017 RFS rulemakings, EPA estimated that the United States would import 200 million gallons of sugarcane ethanol. 83 Fed. Reg. at 63,721. Actual import volumes were lower: 34 million gallons in 2016 and 77 million

gallons in 2017. *Id.* at 63,722. Accordingly, in 2018, EPA estimated that only 100 million gallons of sugarcane ethanol would be "reasonably attainable." *Id*. EPA explained that the 2018 projection balanced the lower-than-expected imports in recent years against indications that higher import volumes were possible.

In 2019, EPA again estimated that 100 million gallons of sugarcane ethanol would be imported. *Id*. The agency observed that its data indicated that 77 million gallons had been imported in 2017. *Id*. And while only 37 million gallons had been imported in 2018 as of October of that year, EPA noted that import volumes typically rise in the second half of the year, such that the 2018 import levels to date did not fully capture the likely pace of imports through the end of the year. *Id*.

Although volumes in 2017 and 2018 would likely remain under 100 million gallons per year, the agency explained that projecting the volume of sugarcane ethanol imports in a given year is "inherently imprecise" because a multitude of factors — such as "uncertainty in the Brazilian political climate, weather and harvests in Brazil, world ethanol demand and prices," and "the cost of sugarcane ethanol relative to that of corn ethanol" — affect the level of imports. *Id*. Due to the high variability of import levels, data from past years was not determinative in projecting future import levels. *See id.* at Figure IV.B.1–1. In addition to considering recent years' data, EPA observed that the advanced biofuel volume requirement for 2019 was 630 million gallons higher than for 2018, which should fuel additional demand for sugarcane ethanol. *Id.* at 63,722. The agency also noted that imports had reached considerably more than 100 million gallons in the past, often jumping up significantly from year to year. *Id*. For instance, sugarcane ethanol import levels increased by 500

million gallons between 2005 and 2006, and by 300 million gallons between 2011 and 2012. *Id*. at Figure IV.B.1–1.

In that context, EPA did not act arbitrarily and capriciously in estimating that 100 million gallons of sugarcane ethanol was "reasonably attainable" for 2019. It acknowledged the factual uncertainties and adequately explained its conclusion. *See Rural Cellular Ass'n*, 588 F.3d at 1105. Even if it could have arrived at a different conclusion, the conclusion EPA reached was not arbitrary.

E. Exported Renewable Fuel

Since 2007, EPA has interpreted the RFS to require that the applicable volumes of renewable fuel be consumed within the United States. 72 Fed. Reg. at 23,936. Under EPA regulations, as noted, if renewable fuel that has generated RINs is later exported, that fuel cannot be used to satisfy RFS volume requirements (because the fuel will not be consumed in the United States). 79 Fed. Reg. 42,078, 42,115 (July 18, 2014) (promulgating current version of 40 C.F.R. § 80.1430). The upshot is that, when renewable fuel that generated RINs is exported, the exporter must retire the same number of RINs. *See* 40 C.F.R. § 80.1430.

During the 2019 rulemaking, EPA refused to consider comments from Obligated Parties urging it to change its requirement that the applicable RFS volumes be consumed within the United States. Obligated Parties challenge that decision, but their challenge is untimely.

Obligated Parties' challenge to EPA's 2007 interpretation of the RFS is barred by the Clean Air Act's sixty-day statutory time limit. *See* 42 U.S.C. § 7607(b)(1). The "reopening" doctrine, however, creates a limited exception to that kind of

statutory limitations period. *Nat'l Ass'n of Reversionary Prop. Owners v. Surface Transp. Bd.*, 158 F.3d 135, 141 (D.C. Cir. 1998) (*NARPO*). When a "later proceeding explicitly or implicitly shows that the agency actually reconsidered the rule, the matter has been reopened and the time period for seeking judicial review begins anew." *Id*. (citing *Pub. Citizen v. NRC*, 901 F.2d 147, 150 (D.C. Cir. 1990)).

"[T]he general principle [is] that if the agency has opened the issue up anew, even though not explicitly, its renewed adherence is substantively reviewable." *Pub. Citizen*, 901 F.2d at 150 (quoting *Ass'n of Am. R.Rs. v. ICC*, 846 F.2d 1465, 1473 (D.C. Cir. 1988)). In assessing whether there has been such a reopening, courts consider whether "the entire context demonstrates that the agency ha[s] undertaken a serious, substantive reconsideration of the [existing] rule." *P & V Enters. v. U.S. Army Corps of Eng'rs*, 516 F.3d 1021, 1024 (D.C. Cir. 2008) (internal citation and quotation marks omitted). The "entire context" for that purpose "include[s] all relevant proposals and reactions of the agency." *Pub. Citizen*, 901 F.2d at 150.

For instance, the court considers the text of the Notice of Proposed Rulemaking (NPRM) and the agency's response to comments submitted during the rulemaking. *NARPO*, 158 F.3d at 142–43. With regard to the NPRM, the court has observed that "[a]n explicit invitation to comment on a previously settled matter, even when not accompanied by a specific modification proposal, is usually sufficient to [effect] a reopening." *Id.* at 142. "Ambiguity in an NPRM may also tilt toward a finding that the issue has been reopened," but the mere fact that "an agency invites debate on some aspects of a broad subject . . . does not automatically reopen all related aspects including those already decided." *Id*.

Here, the record does not support the conclusion that EPA reopened its policy on exported renewable fuel. Obligated Parties observe that EPA invited comments on "any aspect of this rulemaking." *Proposed Rule, Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020*, 83 Fed. Reg. 32,024, 32,057–58 (July 10, 2018) (NPRM). But that blanket, generic statement alone did not suggest that the agency was undertaking a reconsideration of the relevant matter — i.e., the RFS exports policy. Thus, in *NARPO*, the court held there was no reopening when the agency made a similarly generic statement that it "welcome[d] public comments on these proposals, and on any other areas where changes might be made, to streamline our abandonment regulations." 158 F.3d at 142, 145.

EPA did solicit comments on certain alterations to the RIN system, such as establishing new regulations related to the buying, selling, and holding of RINs. NPRM, 83 Fed. Reg. at 32,027. But the fact that EPA invited comment on certain possible reforms to the way RINs are traded "d[id] not automatically reopen all related aspects" of the RIN market, *NARPO*, 158 F.3d at 142, including the treatment of RINs associated with exported fuel.

Obligated Parties further note that EPA solicited comment on "whether circumstances exist that would warrant further reductions in volumes through the exercise of the general waiver authority (e.g., due to severe economic harm)." NPRM, 83 Fed. Reg. at 32,048. And Obligated Parties sought to tie that invitation to the subject of exported renewable fuel in their comments by conveying that, if renewable exports continued to be excluded, EPA's proposed volumes would cause substantial economic harm.

EPA, however, set out the type of information it thought was relevant to identifying severe economic harm — for instance, it gave the example of "modeling showing expected levels of production and price for [renewable fuels] with and without a waiver." NPRM, 83 Fed. Reg. at 32,048. That discussion demonstrates that EPA was looking for evidence of the impact of its proposed levels to inform its determination whether to exercise the severe economic harm waiver. It was not seeking alternatives to the waiver through broader RIN market reforms such as altering the treatment of RINs connected to exported renewable fuel. Correspondingly, all agree that EPA declared that Obligated Parties' comments on the treatment of exported renewable fuel were beyond the scope of the rulemaking. *See* RTC at 188.

In short, EPA at no point suggested that it was substantively reconsidering its longstanding policy concerning the treatment of exported renewable fuel, and it reasonably refused to consider Obligated Parties' arguments for changing that policy as beyond the scope of the 2019 rulemaking. As a result, Obligated Parties' challenge to EPA's treatment of exports is untimely.

F. Point of Obligation

The Clean Air Act provides that EPA shall make "compliance provisions applicable to refineries, blenders, distributors, and importers, as appropriate." 42 U.S.C. § 7545(o)(2)(A)(iii)(I). As noted, EPA has declined to obligate blenders since the implementation of the RFS Program in 2007. EPA explained that there were "approximately 1,200 ethanol blenders, as compared to 100–200 refiners and importers," such that "making ethanol blenders obligated parties would greatly expand the number of regulated parties and increase the complexity of the RFS program." Denial of

Petitions for Rulemaking to Change the RFS Point of Obligation, EPA-420-R-17-008 at 11 (Nov. 2017) (2017 Denial) (internal quotation marks omitted). EPA reiterated its approach in the 2010 "point of obligation" rule. 75 Fed. Reg. at 14,721–22 (codified at 40 C.F.R. § 80.1406(a)(1)).

Refiners have repeatedly but unsuccessfully urged EPA to include blenders in the point of obligation — i.e., to subject blenders to RFS obligations. *See Alon*, 936 F.3d at 649. EPA has offered a number of rationales for its conclusion that the current point of obligation is "appropriate," *see* 42 U.S.C. § 7545(o)(2)(A)(iii)(I), citing concerns that including blenders would significantly increase RFS Program complexity and require extensive market repositioning to achieve compliance. 2017 Denial at 3. EPA has also explained that declining to obligate blenders does not give them a windfall relative to refiners, because refiners recover their compliance costs by passing along the costs to their customers — the aforementioned "pass-through" theory. *See Alon*, 936 F.3d at 649; 2017 Denial at 1–2.

In the 2019 rulemaking, EPA treated comments requesting the adjustment of the point of obligation to include blenders as beyond the scope of the Rule. RTC at 188. Obligated Parties contend that EPA was required to reconsider whether blenders should be included in the point of obligation.

Our review of EPA's decision not to reconsider the point of obligation in an annual rulemaking is for abuse of discretion. *Alon,* 936 F.3d at 659. EPA had last considered the point of obligation only a year before, in connection with its 2017 Denial of Petitions for Rulemaking. *See* 2017 Denial. At that time, EPA provided a number of reasons for declining to alter the point of obligation. It explained that "changing the point of obligation . . . would be very disruptive to the program,

and likely the fuels marketplace as well, undermining long settled expectations and the program stability and certainty that are critical to both short- and long-term success of the program. Thus, even if there were some marginal net benefits to changing the point of obligation, we believe that the disruptive effects of a change at this time would still warrant denial." *Id*. at 2.

In contending that EPA was required to reconsider the point of obligation just a year later in connection with the 2019 rulemaking, Obligated Parties rely on new evidence — primarily the Pirrong study referenced earlier — that ostensibly disproves the idea that refiners recover the cost of RINs they purchase by passing along the cost to their consumers. Even assuming Obligated Parties successfully disproved the pass-through theory, that is only one of many factors relevant to the determination whether to alter the point of obligation. Obligated Parties do not explain why their supposed disproval of the pass-through theory suffices to negate EPA's stated concerns in 2017 about market stability and reliance interests. Nor have Obligated Parties shown a change in circumstances between 2017 and 2018 meriting reconsideration.

Obligated Parties further claim that EPA abused its discretion when it dismissed comments on the point of obligation as beyond the scope of the 2019 rulemaking without explaining why reconsideration was unnecessary. But requiring EPA to accept and respond to comments on the point of obligation each year would effectively require conducting a yearly reassessment of the point of obligation — a reading of the statute rejected in *Alon*. 936 F.3d at 658. Moreover, in its Response to Comments, EPA again reiterated that it had recently reconsidered the validity of the pass-through theory in 2017, when it denied petitions to change the point of obligation. *See* RTC at 164. Given EPA's recent reassessment of the

point of obligation, EPA's decision not to undertake another reassessment in the 2019 rulemaking was not an abuse of discretion. Obligated Parties remain free to present their evidence to EPA by filing a petition for a rulemaking to change the point of obligation. *See, e.g.*, *Alon*, 936 F.3d at 648 (reviewing EPA's denial of such a petition for rulemaking).

G. Regulatory Flexibility Act

One of the Obligated Parties, the Small Retailers Coalition (SRC), argues that EPA failed to comply with the Small Business Regulatory Flexibility Act. The Flexibility Act requires agencies promulgating rules to conduct analyses describing the effects of a rule on small businesses and the steps taken to minimize any burdens. 5 U.S.C. §§ 601 *et seq*. An agency need not conduct the required analyses if it certifies that a rule will not have a significant economic impact on a substantial number of small entities. *Id*. § 605(b). In the 2019 Rule, EPA certified that its rule would not have a significant economic impact on small *refiners*. SRC now contends that the Flexibility Act also required the agency to make the same certification as to small *retailers*.

SRC, however, did not raise that objection during the 2019 rulemaking. Under the Clean Air Act's exhaustion requirement, "[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment . . . may be raised during judicial review." 42 U.S.C. § 7607(d)(7)(B). That provision is to be strictly enforced. *Nat. Res. Def. Council v. EPA*, 571 F.3d 1246, 1259 (D.C. Cir. 2009) (quoting *Motor & Equip. Mfrs. Ass'n v. Nichols*, 142 F.3d 449, 462 (D.C. Cir. 1998)). SRC contends that exhaustion rules do not apply to its statutory-interpretation questions, but there is no support for that kind of carve-out

from exhaustion requirements. *See, e.g., Nat. Res. Def. Council v. Thomas*, 805 F.2d 410, 427 (D.C. Cir. 1986).

SRC also claims that it did comment on the Flexibility Act issue in the rulemaking. But the referenced comment was submitted in connection with the 2018 rulemaking, not the 2019 rulemaking at issue in this case. *See* Obligated Parties Pet'rs' Reply Br. 21. Because SRC did not comply with the statutory exhaustion requirement, the court does not consider its argument based on the Flexibility Act.

IV.

Environmental Petitioners challenge the 2019 Rule on three grounds: (1) EPA's "aggregate compliance approach" for determining whether biofuel qualifies as renewable fuel contravenes the text and purpose of the Clean Air Act; (2) EPA's conclusion that the 2019 Rule will have no effect on endangered species or their critical habitat is arbitrary and capricious, and therefore EPA failed to satisfy its consultation obligations under the Endangered Species Act (ESA), 16 U.S.C. § 1536(a)(2); and (3) EPA's decision not to reduce applicable volumes pursuant to its general waiver authority to prevent severe environmental harm is arbitrary and capricious. EPA raises two threshold, jurisdictional objections joined by intervenors representing the biodiesel industry and ethanol producers. One of these objections is persuasive, and EPA's responses on the merits are not. Although Environmental Petitioners' first challenge is untimely and the court therefore lacks jurisdiction to address it, EPA's effects determination and severe environmental harm waiver decision are contrary to the evidence in the administrative record. Accordingly, we grant Environmental Petitioners' petition in part and remand the 2019 Rule without vacatur to enable EPA to reassess the Rule in relevant part.

A. Aggregate Compliance Approach

As noted, obligated parties satisfy their annual renewable fuel obligations by accumulating and then retiring credits known as RINs, each of which corresponds to a batch of renewable fuel produced or imported for use in the United States. *See Ams. for Clean Energy*, 864 F.3d at 699; *see also* 40 C.F.R. §§ 80.1426, 80.1427. The Clean Air Act defines "renewable fuel" as fuel "produced from "renewable biomass," 42 U.S.C. § 7545(o)(1)(J), which, among other things, includes "[p]lanted crops and crop residue harvested from agricultural land cleared or cultivated at any time prior to December 19, 2007, that is either actively managed or fallow, and nonforested," *id.* § 7545(o)(1)(I)(i). To ensure RINs are assigned only to biofuel made from biomass grown on qualifying land, EPA promulgated a rule in 2010, imposing recordkeeping and reporting requirements on foreign producers and importers. 75 Fed. Reg. at 14,708 (codified at 40 C.F.R. § 80.1454(c)(1)(ii)). EPA took a different tack to renewable fuel produced domestically, choosing to adopt an "aggregate compliance approach," whereby all feedstock derived from planted crops and crop residue grown in the United States is deemed to be "renewable biomass" so long as total national agricultural acreage does not exceed 402 million acres, the amount of land EPA concluded was under cultivation in 2007. *See id.* at 14,701–04 (codified at 40 C.F.R. § 80.1454(g)). Only if this baseline is exceeded will EPA scrutinize the provenance of domestic biofuel. 40 C.F.R. § 80.1454(g)(2). In the 2019 Rule, EPA found no reason to depart from this approach, explaining that "U.S. agricultural land reached approximately 381 million acres in 2018, and thus did not exceed the 2007 baseline acreage." 83 Fed. Reg. at 63,741.

Environmental Petitioners contend that EPA's approach facilitates the conversion of previously uncultivated land for biofuel production, in violation of the Clean Air Act's text, *see* 42 U.S.C. § 7545(I)(i), and its environmental objectives as indicated in the legislative history. *See* Env't Pet'rs' Br. 28–32. EPA and intervenors respond that this challenge is untimely, and we agree.

The Clean Air Act's sixty-day limitations period, 42 U.S.C. § 7607(b)(1), "is jurisdictional in nature," and therefore a petitioner's failure to timely petition renders the court "powerless to address their claim," *Med. Waste Inst.*, 645 F.3d at 427 (quoting *Motor & Equip. Mfrs. Ass'n*, 142 F.3d at 460). Environmental Petitioners' challenge to EPA's aggregate compliance approach comes almost a decade after its adoption.

Resisting this conclusion, Environmental Petitioners respond that EPA's 2018 Triennial Report "effectively reopened the aggregate compliance scheme" by providing "indisputable evidence" that the aggregate compliance approach is causing land conversion. Env't Pet'rs' Reply Br. 16–17. But under the court's precedent, a longstanding rule may be reopened when an agency "indicates a willingness to reconsider such a regulation by inviting and responding to comments," *Kennecott Utah Copper Corp. v. U.S. Dep't of Interior*, 88 F.3d 1191, 1213 (D.C. Cir. 1996), or "changes the regulatory context in such a way that could not have been reasonably anticipated by the regulated entity and is onerous to its interests," *Env't Def. v. EPA*, 467 F.3d 1329, 1334 (D.C. Cir. 2006) (citing *Kennecott*, 88 F.3d at 1214–15). Neither of these circumstances is present, and Environmental Petitioners offer no persuasive reason that an exception to EPA's control of its annual rulemaking is warranted here. Although the Triennial Report's findings may cast doubt on the efficacy of

EPA's aggregate compliance approach, the Report contains no hint that EPA was reconsidering its regulation or was amenable to comments on the issue. Nor did the Report change the regulatory scheme as evidenced by EPA's use of the aggregate compliance approach in the 2019 Rule. Further, even assuming such a constructive reopening occurred, the challenge is still untimely: EPA issued the Triennial Report on June 29, 2018, and Environmental Petitioners did not file their petition until February 11, 2019, well after § 7607(b)(1)'s sixty-day window expired. Consequently, their challenge to EPA's aggregate compliance approach is dismissed for lack of jurisdiction.

B. Endangered Species Act

Section 7 of the ESA imposes a duty on federal agencies to prevent harm to endangered wildlife and flora, reflecting a "conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 185 (1978). Specifically, under Section 7(a)(2), each federal agency "shall, in consultation with and with assistance of the Secretary, insure that any action . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species." 16 U.S.C. § 1536(a)(2). To facilitate compliance with this statutory mandate, the ESA's implementing regulations require a federal agency to determine whether its proposed action "may affect listed species or critical habitat." 50 C.F.R. § 402.14(a). If so, then the agency must engage in either formal or informal consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services). *Id.* §§ 402.14(a), (b)(1); *see Ctr. for Biological Diversity v. EPA*, 861 F.3d 174, 177–78 (D.C. Cir. 2017).

Environmental Petitioners contend that, in view of unrebutted record evidence, EPA's conclusion that the 2019 Rule will pose no danger to listed species or threaten their critical habitat and its consequent failure to consult with the Services is arbitrary and capricious. We agree.

1.

As a threshold matter, EPA maintains that Environmental Petitioners lack Article III standing to bring this challenge. Environmental Petitioners, relying on associational standing on the basis of several of their members' activities, contend that because their legal challenge is procedural, they have met their burden to show standing. EPA responds that because it "expressly addressed" its obligations under the ESA by making an effects determination before issuing the 2019 Rule, "no procedural omission thus exists," Resp't's Br. 84, and therefore Environmental Petitioners must satisfy the traditional standing inquiry, *id.* at 85. EPA also maintains that Environmental Petitioners cannot establish that the 2019 Rule causes environmental harm generally, or in the areas used by their members specifically. Intervenors likewise contest Environmental Petitioners' standing on the same grounds raised by EPA.

For associational standing, Environmental Petitioners must show that their "members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Friends of the Earth, Inc. v. Laidlaw Env't Servs. (TOC), Inc.*, 528 U.S. 167, 181 (2000). When, as here, multiple organizations bring suit, the court "need only find one party with standing" to reach the merits. *Ctr. for*

Biological Diversity, 861 F.3d at 182 (quoting *Ams. for Safe Access v. DEA*, 706 F.3d 438, 443 (D.C. Cir. 2013)). Because "standing is not dispensed in gross," the court must analyze separately Environmental Petitioners' Article III standing to challenge the effects determination and the waiver for severe environmental harm. *Competitive Enter. Inst. v. FCC*, 970 F.3d 372, 382 (D.C. Cir. 2020) (quoting *Davis v. FEC*, 554 U.S. 724, 734 (2008)); s*ee Town of Chester v. Laroe Estates, Inc.*, 137 S. Ct. 1645, 1650 (2017).

Neither EPA nor intervenors contest that Environmental Petitioners satisfy the second and third requirements of associational standing. Consequently, the inquiry becomes whether Environmental Petitioners have identified at least one member who satisfies the familiar tripartite test for Article III standing: (1) an injury in fact that is "concrete and particularized" and "actual or imminent," which is (2) "fairly traceable to the challenged action of the defendant" and (3) "likely" to be "redressed by a favorable decision." *Laidlaw Env't Servs*., 528 U.S. at 180–81 (citing *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560–61 (1992)); s*ee Sierra Club v. EPA*, 292 F.3d 895, 899 (D.C. Cir. 2002). In this context, Environmental Petitioners must "support each of these elements 'by affidavit or other evidence,' and their burden of proof is not to demonstrate certainty but to 'show a *substantial probability*' that each of these elements has been met." *In re Idaho Conservation League*, 811 F.3d 502, 508 (D.C. Cir. 2016) (quoting *Sierra Club*, 292 F.3d at 899).

A "claim that the EPA failed to meet its statutory consultation obligation" is a procedural deprivation. *Ctr. for Biological Diversity*, 861 F.3d at 182; *see AFPM 2018*, 937 F.3d at 593. Hence, in *AFPM 2018*, the court applied the standing requirements for procedural injuries to the environmental organizations' view that EPA failed to conduct

an effects determination before promulgating the 2018 Rule, describing it as "an 'archetypal procedural injury.'" 937 F.3d at 592 (citation omitted). Here, too, Environmental Petitioners maintain that EPA fell short of its ESA obligations by failing to engage in consultation with the Services as a result of its flawed effects determination. As in *AFPM 2018*, Environmental Petitioners point to a procedural omission because they maintain that they were entitled to further procedure by EPA. The court therefore will "relax — while not wholly eliminating — the issues of imminence and redressability." *Ctr. for Law & Educ. v. Dep't of Educ*., 396 F.3d 1152, 1157 (D.C. Cir. 2005); *see Lujan*, 504 U.S. at 572 n.7.

Where a petitioner asserts a procedural injury "our analyses of the injury and of causation tend to involve similar concepts." *AFPM 2018*, 937 F.3d at 592. To demonstrate injury, then, Environmental Petitioners "must show that the failure to comply with the ESA affects its members' concrete interests; in other words, that the failure demonstrably increased some specific risk of environmental harms that imperil the members' particularized interests in a species or habitat with which the members share a geographic nexus." *Id.* (citations, quotation marks, and alterations omitted). With respect to causation, Environmental Petitioners "must show two links: 'one connecting the omitted procedural step to some substantive government decision that may have been wrongly decided because of the lack of that procedural requirement' and 'one connecting that substantive decision to the plaintiff's particularized injury.'" *Id.* (quoting *Ctr. for Biological Diversity*, 861 F.3d at 184). Finally, under the relaxed redressability requirement, Environmental Petitioners "need not show that 'court-ordered compliance with the procedure would alter the final [agency decision].'" *Ctr. for Biological Diversity*, 861 F.3d at 185 (quoting *Nat'l Parks Conservation*

Ass'n v. Manson, 414 F.3d 1, 5 (D.C. Cir. 2005)). Rather, it suffices to show that "EPA *could* reach a different conclusion" if ordered to revisit its procedural error. *Id*.

For substantially the reasons the court discussed in *AFPM 2018*, 937 F.3d at 591–96, the same two members of the Sierra Club — C. Elaine Giessel and William Fontenot — who had standing to challenge the 2018 Rule have met their burden at each step of the analysis here. Giessel's and Fontenot's declarations describe aesthetic and recreational interests in particular listed species. "Giessel has aesthetic and recreational interests in observing the whooping crane" populations of Texas and Kansas, *id.* at 593; she is an avid bird watcher and a member of and frequent visitor to two refuges known to support whooping cranes, the Quivira National Wildlife Reserve and the Cheyenne Bottoms States Waterfowl Management Area, Giessel Decl. ¶¶ 21–22. "Fontenot has similarly cognizable educational and conservation interests in observing and studying the sturgeon that live in the Gulf of Mexico and the Mississippi River Basin." *AFPM 2018*, 937 F.3d at 593. He has joined researchers by boat to study the Gulf sturgeon in their habitat and uses the information that he learns about the Gulf sturgeon to educate others, including the media, about environmental issues that affect them. Fontenot Decl. ¶¶ 18–20.

These interests are threatened by EPA's failure to consult with the Services before promulgating the 2019 Rule. As recounted in *AFPM 2018*, 937 F.3d at 593–94, EPA's 2018 Triennial Report to Congress and the declaration of Dr. Tyler Lark, an associate researcher at the University of Wisconsin-Madison's Center for Sustainability and Global Environment, establish "that the [renewable fuel] Program's annual standards likely cause the conversion of uncultivated land into agricultural land for growing crops that can be used to make

biofuels," and that "this increase in crop production and land conversion harms the habitats of numerous animals and fish, . . . including — critically — the particular habitats of the whooping cranes and Gulf sturgeon in which Giessel and Fontenot have interests."

Briefly stated, Dr. Lark explains that the renewable fuel standards program increases demand for corn and soy, the primary biofuel feedstocks, and this in turn drives both the intensification of crop production and the conversion of land into cropland. Lark Decl. ¶¶ 5–7. The Triennial Report supports Dr. Lark's conclusions, finding an "observed increase" in corn and soy acreage in the decade following the enactment of the renewable fuel standards program, "some" of which was a "consequence of increased biofuel production mandates." Off. of Rsch. & Dev., U.S. EPA, Biofuels and the Environment: Second Triennial Report to Congress at ix (June 29, 2018) (Triennial Rept.). This increase in biofuel production threatens the whooping cranes and Gulf sturgeon enjoyed by Giessel and Fontenot. The conversion of wetlands in Kansas to biofuel cropland threatens the critical habitat of whooping cranes. Lark Decl. ¶ 17; *see* Triennial Rept. at 35–36 (describing Kansas as a "hotspot[]" of conversion). Such intensified land use causes excess nutrients to flow into the Gulf of Mexico, creating an oxygen-deficient area, known as the "hypoxic zone" or "dead zone." Lark Decl. ¶ 27. This poses a particular risk to Gulf sturgeon, which are "vulnerable to low dissolved oxygen levels and hypoxia." *Id.* ¶ 29.

The causation element of standing is satisfied too, because "EPA's alleged failure to comply with its ESA obligations is plainly connected to the setting of [renewable fuel] standards in the [2019] Rule, and those standards might have come out differently if the EPA had complied." *AFPM 2018*, 937 F.3d at 594. Further, it is substantially probable that EPA's

inadequate effects determination and subsequent failure to consult with the Services — like its failure to conduct an effects analysis in the first instance — resulted in applicable volumes that "adversely affected local conditions in Kansas, the Gulf, and the Mississippi River Basin, harming cranes and sturgeon to the detriment of Giessel and Fontenot." *Id.*

Finally, upon remand of the 2019 Rule, EPA could change its position that the applicable volumes have no effect on listed species or critical habitat and pursue consultation with the Services. EPA could reach a different conclusion, for instance by deciding to use the severe environmental harm waiver to further reduce volumes, if it were required to consult. *See id.* at 595; *infra* Part IV.C.2. That suffices to establish redressability. *See Ctr. for Biological Diversity*, 861 F.3d at 185. Insofar as EPA contends that the ordinary standards of redressability apply, *see Food & Water Watch v. U.S. Dep't of Agric.*, No. 20–5100, 2021 WL 2546671 (D.C. Cir. June 22, 2021) (slip op. at 7 & n.2), Environmental Petitioners have made that showing. Were EPA ordered to consult with the Services and subsequently decided to reduce the 2019 applicable volumes, it is substantially probable that corn and soybean production would decrease for the reasons that the court describes in Part IV.C.1 *infra*, thereby ameliorating the harms to the wildlife enjoyed by Giessel and Fontenot.

Notwithstanding little daylight between these consolidated cases and *AFPM 2018*, EPA nonetheless insists that Environmental Petitioners cannot establish injury-in-fact. EPA maintains that the 2019 Rule poses no risk to listed species because "recent evidence" reveals the program is "*not* associated with increased corn and soybean demand or cultivation." Resp't's Br. 87. This new data shows that although applicable volumes increased from 2012 to 2017 and then plateaued, total acres of corn and soybeans planted in the

United States decreased between 2012 and 2019. *See id.* at 87–90. But EPA confuses total corn production with the relevant metric: the amount of corn and soybeans produced for ethanol fuel and biodiesel. Indeed, the Triennial Report stated that although the number of corn acres "fluctuated considerably between 2006 and 2016," the percentage of corn used for ethanol production increased over the same period of time. Triennial Rept. at 11; *see id.* at 12–14. In short, overall corn acreage does not fully capture the effect of the renewable fuel standards program on biofuel feedstock production.

As a fallback, EPA maintains that even if the 2019 Rule causes environmental harm, Environmental Petitioners fail to establish an injury-in-fact because there is "no evidence that these assumed effects occur in the specific areas used by the allegedly affected members." Resp't's Br. 91. The court rejected this argument in *AFPM 2018*. A petitioner "must show only a 'substantial probability' of injury," not that EPA's actions "in fact" cause harm. *AFPM 2018*, 937 F.3d at 595 (quoting *Ctr. for Biological Diversity*, 861 F.3d at 183–84). Environmental Petitioners have made that showing by linking the renewable fuel standards program to the degradation of critical habitat for whooping cranes and Gulf sturgeon in the geographic areas where Giessel and Fontenot view those species. For these reasons, Environmental Petitioners have standing to challenge EPA's effects determination.

2.

Implementing regulations promulgated pursuant to the Endangered Species Act require an agency to "determine whether any action may affect listed species or critical habitat," and, if so, to consult with the Services. 50 C.F.R. § 402.14(a); *see* 16 U.S.C. § 1536(a)(2). Only if an agency determines that its action will have no effect on listed species or critical habitat

can it dispense with consultation. *Ctr. for Biological Diversity v. U.S. Dep't of Interior*, 563 F.3d 466, 475 (D.C. Cir. 2009). "May affect" purposefully sets a low bar: "Any possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the formal consultation requirement." *Interagency Cooperation—Endangered Species of 1973, as Amended*, 51 Fed. Reg. 19,926, 19,949 (June 3, 1986). "Thus, actions that have any chance of affecting listed species or critical habitat — even if it is later determined that the actions are 'not likely' to do so — require at least some consultation under the ESA." *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012).

In *AFPM 2018*, environmental groups "complain[ed] that the EPA ha[d] never consulted on the Program during the past decade," including during the 2018 rulemaking being challenged. 937 F.3d at 591. The court agreed, holding that EPA had violated the ESA by failing to take the initial step of conducting an effects determination and remanded the 2018 renewable fuel standards to EPA "to make an appropriate effects determination." *Id.* at 598.

As part of the 2019 rulemaking, EPA placed a memorandum in the administrative record assessing the environmental effects of the proposed rule. *See* Memorandum from EPA Staff to EPA Docket EPA-HQ-OAR-2018-0167, Endangered Species Act No Effect Finding and Determination on Severe Environmental Harm under the General Waiver Authority for the 2019 Final Rule (Nov. 2018) (Effects Memorandum). There, EPA concluded that the proposed applicable volumes for 2019 "will have no effect on listed species or their critical habitat, either directly or indirectly" and therefore "it need not consult with the Services" before issuing a final rule. *Id.* at 1. The proposal would not directly affect listed species or critical habitat because "[i]t does not require,

authorize, fund, or carry out the production of any specific biofuel or crop, the use of any land that is critical habitat, or the taking of any listed species or other activity that may affect any listed species." *Id.* at 2. Nor would it have indirect effects because the applicable volumes would not influence the production of corn for ethanol fuel or of soybeans for biodiesel. *Id.*

As to corn, EPA stated in its Effects Memorandum that it "d[id] not expect that the 2019 RFS standards will cause greater production of ethanol from corn starch than would otherwise occur . . . . because demand for corn ethanol, both in the U.S. and globally, is strong." *Id.* at 3. For soybeans, EPA acknowledged that the 2019 standards "likely will affect the volume of biodiesel and renewable diesel produced and used" but stated they were "unlikely to result in higher production of oilseed crops than would be produced in [their] absence" because oilseed crops "are primarily grown to provide high protein animal feed (i.e., soy meal and canola meal) for both U.S. and worldwide markets." *Id.* at 8. But even if the 2019 standards would affect corn and soybean production, EPA was satisfied that "any specific effects on listed species or critical habitat from those activities could not be attributed with reasonable certainty to the" 2019 standards. *Id.* at 2; *see id.* at 6–7, 11. Finally, although acknowledging that its effects determination "may appear inconsistent" with its 2018 Triennial Report, EPA dismissed the Report because it "did not purport to establish a causal relationship" between the renewable fuel standards program and land use changes, conducted a proportional analysis that was "not accurate," and "was primarily a retrospective review of the impact of biofuel production on the environment." *Id.* at 16.

An agency decision is not arbitrary and capricious where it is "reasonable and reasonably explained." *Ams. for Clean*

Energy, 864 F.3d at 726 (quoting *Jackson v. Mabus*, 808 F.3d 933, 936 (D.C. Cir. 2015)). But "[a]n agency acts arbitrarily or capriciously if it 'has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.'" *Am. Wildlands*, 530 F.3d at 997–98 (quoting *State Farm*, 463 U.S. at 43).

EPA's effects determination is arbitrary and capricious. First, its own Triennial Report undermines the determination that there is no relationship between the renewable fuel standards program, biofuel feedstock production, and land use changes that may harm listed species or critical habitat. The Report stated that between 2012 and 2016, biofuel production in the United States grew "steadily" from 14.1 billion to 16.6 billion gallons. Triennial Rept. at 7. Over that same period, corn production increased from 10.8 billion bushels to 15.1 billion bushels while soybean production increased from 2.7 billion bushels to 4.3 billion bushels. *Id.* at 12. Indeed, 4 to 7.8 million acres of land have been converted to growing corn and soybeans since the enactment of the renewable fuel standards program. *Id.* at 45. The rate of land conversion was higher in areas closer to biorefineries, *id.* at 35, which "suggests a causal link" between proximity to a biorefinery and land conversion, *id.* at 36. These "[w]idespread changes in land use for biofuel production," the Report concluded, "have negative impacts to ecosystem health and biodiversity." *Id.* at 88.

Second, other record evidence, including the declaration of Dr. Tyler Lark, connects the renewable fuel standards program, increased corn and soybean production, and harm to threatened species. Dr. Lark noted that "the existing body of

research . . . ties the Renewable Fuel Standard to documented land use changes and ensuing environmental consequences which may potentially have detrimental impacts on federally listed species and their designated critical habitat." Lark Decl. ¶ 4. He described the "link between the Renewable Fuel Standards Program, increased cropping intensification, and hypoxia in the Gulf of Mexico" as "well established." *Id.* ¶ 27. This unrebutted evidence is also inconsistent with EPA's conclusion that the 2019 standards would not affect corn and soybean cultivation.

Moreover, EPA's effects determination dismissed the relevance of the Triennial Report to the 2019 proposed standards on the ground that the Report "did not purport to establish a causal relationship between the RFS annual rules and land use changes," conducted a flawed proportional analysis, and was "primarily a retrospective review." Effects Memorandum at 16. Yet, to the contrary, the Report states that "the observed increase in acreage planted with soybeans and corn" following the enactment of the renewable fuel standards program was, at least in part, "a consequence of increased biofuel production mandates." Triennial Rept. at ix. The Report did not speak only in terms of correlation. Further, upon acknowledging the limitations of proportional analyses, it supported its conclusions with other types of analyses. *Id.* at 54–55. EPA failed to explain why its assessment regarding the cumulative weight of the evidence had changed. Finally, the Report expressly addressed the "likely future impacts" of the renewable fuel standards program, concluding that "[a]vailable data suggest that current trends using corn starch and soybeans as primary biofuel feedstocks, with associated environmental and resource conservation impacts, will continue in the near term." *Id.* at ix.

EPA offered no reason to question the Triennial Report's prediction as to 2019, instead stating that the Report "did not specifically consider the 2019 RFS standard, nor factors unique to 2019," such as recent tariffs imposed by China on soybeans produced in the United States. Effects Memorandum at 16. The court observed in *AFPM 2018* that because the Report "describe[d] the effects of the annual standards promulgated over the past decade, and the 2018 Rule is simply the next iteration of those standards," it "certainly serve[s] as evidence of the likely effects of the 2018 Rule." 937 F.3d at 595. By parity of reasoning, identifying factors independent of the renewable fuel standards that may affect corn or soybean production in 2019 does not rebut the Triennial Report's conclusion that renewable fuel standards have caused and will likely continue to cause increased biofuel feedstock production, which in turn may harm listed species and critical habitat.

EPA also rested its 2019 effects determination on "the lack of a reasonable causal connection between the 2019 [renewable fuel standards] and effects to listed species or critical habitat." Effects Memorandum at 2. But as the court stated in *AFPM 2018*, "[t]he inability to 'attribute[]' environmental harms 'with reasonable certainty' to the 2018 Rule . . . is not the same as a finding that the 2018 Rule 'will not affect' or 'is not likely to affect' listed species or critical habitat." 937 F.3d at 598 (second alteration in original). EPA's regulations require a finding that the proposed action is "not likely" to harm listed species or critical habitat before an agency may forego formal consultation with the Services. 50 C.F.R. § 402.14(b)(1). To the extent EPA questions the causal connection between the 2019 Rule and specific land use changes, this alone does not excuse the failure to engage in formal consultation.

In sum, EPA's effects determination is contrary to the record evidence and thus arbitrary and capricious, *see* 5 U.S.C. § 706(2)(A), and EPA violated the ESA by failing to consult with the Services before promulgating the 2019 Rule. *See* 16 U.S.C. § 536(a)(2).

Environmental Petitioners seek a remand of the 2019 Rule "with an order to consult with the Services," Env't Pet'rs' Br. 34, but the court rejected that request in *AFPM 2018*, "preferring instead to allow the EPA to develop the record and the decide the issue in the first instance." 937 F.3d at 598. That still appears the preferrable approach — namely, to remand the 2019 Rule without vacatur, which Environmental Petitioners do not request.

C. Severe Environmental Harm Waiver

Environmental Petitioners further challenge the 2019 Rule for EPA's arbitrary and capricious failure to invoke the general waiver provision in 42 U.S.C. § 7545(o)(7)(A), to lower applicable volumes of renewable fuel in order to prevent severe environmental harm. This challenge is distinct from Environmental Petitioners' challenge to EPA's failure to engage in consultation. First, it does not implicate a procedural right; so, the causation and redressability elements of standing are not relaxed. Second, it rests on a chain of causation involving third parties not before the court, namely, corn and soybean farmers.

1.

Although neither party addresses standing, the court has an "independent obligation to be sure of [its] jurisdiction." *Grocery Mfrs. Ass'n v. EPA*, 693 F.3d 169, 174 (D.C. Cir. 2012) (quoting *Sierra Club*, 292 F.3d at 898). An essential

premise of Environmental Petitioners' challenge is that reducing the applicable volumes would cause some farmers to forego planting corn and soybean, thereby mitigating the environmental harms associated with biofuel production. Where traceability and redressability depend on third-party conduct, "standing is not precluded, but it is ordinarily substantially more difficult to establish." *Competitive Enter. Inst.*, 970 F.3d at 381 (quoting *Lujan*, 504 U.S. at 562). The party asserting the court's jurisdiction must "show[] that third parties will likely react in predictable ways to the" challenged government action, *Dep't of Commerce v. New York*, 139 S. Ct. 2551, 2566 (2019), such that they "would very likely alter [their] behavior based on our decision, even if not bound by it," *Teton Historic Aviation Found. v. U.S. Dep't of Def.*, 785 F.3d 719, 728 (2015); *see Competitive Enter. Inst.*, 970 F.3d at 381–82 (collecting cases). "In considering the likely reaction of third parties, we may consider a variety of evidence, including the agency's own factfinding; affidavits submitted by the parties; evidence in the administrative record; arguments firmly rooted in the basic laws of economics; and conclusions in other agency orders and rulemakings." *Competitive Enter. Inst.*, 970 F.3d at 382 (citations and quotation marks omitted).

Environmental Petitioners have demonstrated an injury in fact that is fairly traceable to EPA's decision not to apply its environmental harm waiver in the 2019 rulemaking. Giessel and Fontenot have established cognizable interests in listed species that are threatened by environmental degradation caused, at least in part, by EPA's renewable fuel standards program. These injuries are redressable. Congress intended the renewable fuel standards program to function as a "market forcing policy." *Ams. for Clean Energy*, 864 F.3d at 705 (citation omitted). "By requiring upstream market participants such as refiners and importers to introduce increasing volumes of renewable fuel into the transportation

fuel supply," the program "create[s] 'demand pressure to increase consumption of renewable fuel.'" *Id.* (citation omitted). As set forth in Dr. Lark's declaration and the Triennial Report, the natural consequence of artificially increasing the supply of biofuel is an increase in the demand for biofuel feedstocks of corn and soybeans. Farmers respond to this increase in demand by growing more corn and soybeans. This assessment is "firmly rooted in the basic laws of economics" and requires no complex chain of reasoning. *Competitive Enter. Inst.*, 970 F.3d at 382. Therefore, there is substantial reason to conclude that reducing the 2019 applicable volumes through application of the severe environmental harm waiver would cause the demand for corn and soy to drop and at least some farmers would respond by reducing their production of corn and soybeans. This "voluntary but reasonably predictable" third-party conduct suffices to establish redressability. *Id.* at 384.

2.

The Clean Air Act's general waiver authority permits EPA to reduce the applicable volumes in whole or in part if, after notice and comment, it determines that they "would severely harm the . . . environment of a State, a region, or the United States." 42 U.S.C. § 7545(o)(7)(A)(i). In its Effects Memorandum evaluating the environmental effects of the proposed 2019 Rule, EPA acknowledged that "[m]any commenters" argued the applicable volumes would cause severe environmental harm "for the same reasons" it would threaten listed species and critical habitat. Effects Memorandum at 13. EPA disagreed, stating that "[b]ased on the analysis" in the effects determination, "we do not believe that the 2019 RFS standards induce increased crop cultivation or associated land use changes or otherwise affect listed species or critical habitat." *Id.* "[T]here [was] not sufficient

evidence to support a finding of 'severe environmental harm' to justify the exercise of the severe environmental harm waiver." *Id.* at 12.

For reasons discussed, EPA's determination that the 2019 Rule would not affect listed species is arbitrary and capricious because it is contrary to the weight of the evidence. Because EPA's effects determination is defective, its decision regarding severe environmental harm, which rests on the same faulty analysis, is also arbitrary and capricious. We therefore remand without vacatur of the 2019 Rule for EPA to revisit its decision not to exercise the waiver for severe environmental harm.