No.

In the Supreme Court of the United States

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, PETITIONER

v.

CALUMET SHREVEPORT REFINING, LLC, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

APPENDIX TO THE PETITION FOR A WRIT OF CERTIORARI

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FOR THE FIFTH CIRCUIT

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v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, RESPONDENT

Filed: Nov. 22, 2023

Petitions for Review of Actions of the Environmental Protection Agency
Agency Nos. 87 Fed. Reg. 24300,
87 Fed. Reg. 34873,
EPA-420-R-22-011,
87 Fed. Reg. 34873,
87 Fed. Reg. 34873

Before HIGGINBOTHAM, SMITH, and ELROD, *Circuit Judges*.

JERRY E. SMITH, *Circuit Judge*:

Six small refineries[1] ("petitioners") challenge the EPA's decision to deny their requested exemptions from their obligations under the Renewable Fuel Standard

[1] (1) Calumet Shreveport Refining, L.L.C. ("Calumet"); (2) Placid Refining Company, L.L.C. ("Placid"); (3) Ergon Refining, Incorporated ("Ergon"); (4) Wynnewood Refining Company, L.L.C. ("Wynnewood"); (5) The San Antonio Refinery, L.L.C. ("TSAR"); and (6) Ergon-West Virginia, Incorporated ("Ergon-WV").

("RFS") program of the Clean Air Act ("CAA"). The EPA denied petitioners' years-old petitions using a novel CAA interpretation and economic theory that the agency published in December 2021. We conclude that the denial was (1) impermissibly retroactive; (2) contrary to law; and (3) counter to the record evidence. We grant the petitions for review, vacate the challenged adjudications, deny a change of venue, and remand.

I.

A. Statutory and Regulatory Background

In 2005 and 2007, Congress amended the CAA, 42 U.S.C. § 7401 *et seq.*, to establish the RFS.[2] That program mandates annual increases in "applicable volumes" of four categories[3] of renewable fuel for the transportation sector. *Id.* § 7545(*o*)(2)(B)(i)(I)-(IV).

To implement the RFS, Congress delegated to EPA the authority to (1) set annual renewable fuel percentage standards and (2) establish an RFS compliance program. *See id.* § 7545(*o*)(3), (7). EPA sets the annual percentage standards based on the amount of renewable fuel needed to meet the statutorily stipulated volume requirements in § 7545(*o*)(2). Obligated parties—refiners, blenders, and importers of transportation fuel—use that annual-percentage standard to determine their volume obligations for the four categories of renewable fuel. *See* 40 C.F.R. § 80.1406. Obligated parties must satisfy their individual volume obligations by

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[2] *See* Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594; Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492.

[3] (1) renewable fuel; (2) advanced biofuel; (3) cellulosic biofuel; and (4) biomass-based diesel. 42 U.S.C. § 7545(*o*)(2)(B)(i)(I)-(IV).

the RFS annual compliance date set by EPA. *Id.* § 80.1451(f)(1)(i)(A).

EPA tracks obligated parties' RFS compliance with a credit-trading program. Credits are called Renewable Identification Numbers ("RINs"). There are two ways blenders may acquire RINs: *First*, they can generate RINs by blending renewable fuel into conventional fuel. *See id.* § 80.1429(b). That's because RINs are "attached" to the renewable fuel the obligated party buys for its blending operation. Once blending has occurred, the RIN "separates" and exists independently of any batch of fuel. *See id.* §§ 80.1425-29. *Second*, obligated parties can meet their annual volume obligations by purchasing RINs from other obligated parties. *See generally id.* §§ 80.1425-29; 42 U.S.C. § 7545(*o*)(5)(B).

RINs are generally fungible—with one catch. A RIN may be used for compliance only during the calendar year in which it was generated or the calendar year following. 40 C.F.R. § 80.1427(a)(6)(i); *see also id.* §§ 80.1428(c), 80.1431(a)(iii). For example, a RIN that was created in 2018 can be used only to meet an obligated party's 2018 or 2019 RFS volume obligations. *See id.* § 80.1427(a)(6).[4] Obligated parties demonstrate they have met their volume obligations—thereby complying with RFS—by "retiring" their RINs at their annual compliance demonstration. *Id.* § 80.1427(a)(1).

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[4] That is not to say that a RIN generated in 2018 becomes valueless in 2020—RINs do not turn into pumpkins after their expiration date. An unretired 2018 RIN remains transactable in 2023 to the extent other obligated parties create demand for RINs that can be used to meet 2018 or 2019 compliance year requirements. *See id.* §§ 80.1427(a)(6), 80.1428(c), 80.1431(a).

Congress, recognizing that RFS might impose disproportionate economic hardship on "small refineries"[5] from RFS, created three exemptions from the compliance regime:

- *First* is the blanket exemption, which automatically exempted all small refineries from RFS until 2011. 42 U.S.C. § 7545(*o*)(9)(A)(i).
- *Second* is the refinery-specific exemption initiated by the Secretary of Energy. If, after conducting the statutorily mandated Department of Energy study, the Secretary determined that a small refinery was subject to a disproportionate economic hardship, "the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years." *Id.* § 7545(*o*)(9)(A)(ii).
- *Third*, the subparagraph (B) exemption allows small refineries to "petition the Administrator for an extension under subparagraph (A) for the reason of disproportionate economic hardship." *Id.* § 7545(*o*)(9)(B)(i). "In evaluating a petition . . . the Administrator, in consultation with the Secretary of Energy, shall consider the findings of the study under subparagraph (A)(ii) and other economic factors." *Id.* § 7545(*o*)(9)(B)(ii). Further, "[t]he Administrator shall act on any petition . . .

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[5] The CAA defines small refineries as those "for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels." 42 U.S.C. § 7545(*o*)(1)(K).

not later than 90 days after the date of receipt." *Id.* § 7545(*o*)(9)(B)(iii).

B. Procedural History

This matter involves the last of the three small refinery exceptions enumerated in the CAA. Petitioners challenge two EPA actions—each of which adjudicated and denied multiple exemption petitions ("Denial Actions"): *The first* is EPA's April 7, 2022, action "denying 36 petitions from 36 small refineries seeking exemption from their [RFS] obligations for the 2018 compliance year" ("April Denial").[6] *The second* is EPA's June 8, 2022, action denying "denying 69 petitions from 33 small refinery petitioners seeking exemption from their [RFS] obligations for the 2016-2021 compliance years" ("June Denial").[7]

1. The April Denial

On April 7, 2022, EPA published the April Denial—that is, the agency's final adjudications rejecting a total of thirty-six small refinery exemption petitions for the 2018 compliance year. Among those were petitions submitted by Calumet, TSAR, Ergon, Placid, and

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[6] EPA, EPA-420-R-22-005, April 2022 Denial of Petitions for RFS Small Refinery Exemptions, at 1 (2022); *see also* April 2022 Denial of Petitions for Small Refinery Exemptions Under the Renewable Fuel Standard Program, 87 Fed. Reg. 24,300 (April 25, 2022).

[7] EPA, EPA-420-R-22-011, June 2022 Denial of Petitions for RFS Small Refinery Exemptions, at 1 (2022); *see also* Notice of June 2022 Denial of Petitions for Small Refinery Exemptions Under the Renewable Fuel Standard Program, 87 Fed. Reg. 34,873 (June 8, 2022).

Wynnewood.[8] EPA denied those petitions using its revised interpretation of the subparagraph (B) exemption provision and RIN-passthrough economic theory.

Notably, the April Denial was not the first time EPA had evaluated these thirty-six petitions. Indeed, thirty-one of them had been *granted* by EPA in 2019.[9] These August 2019 grants were subsequently ensnared in proceedings litigated in the D.C. Circuit unrelated to the dispute at hand. What is relevant, however, is that EPA moved for voluntary remand without vacatur to consider those petitions with regard to the Tenth Circuit's "alternate holdings" in *Renewable Fuels Ass'n v. EPA* ("*RFA*").[10] The D.C. Circuit granted EPA's motion on December 8, 2021.[11] Shortly thereafter, EPA provided notice of its intent to include those previously decided petitions in the April Denial action.[12]

2. The June Denial

EPA once again applied its new interpretation and approach in June 2022 when it denied sixty-nine exemp-

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[8] Ergon-WV's 2018 exemption petition was not adjudicated in the April Denial.

[9] Memorandum Decision on 2018 Small Refinery Exemption Petitions from Anne Idsal, Acting Asst. Admin'r, Off. of Air and Rad. to Sarah Dunham, Dir., Off. of Transp. and Air Qual. (Aug. 9, 2019), at 2.

[10] 948 F.3d 1206 (10th Cir. 2020), *rev'd on other grounds sub nom. HollyFrontier Cheyenne Ref., LLC v. RFA*, 141 S. Ct. 2172 (2021) ("*HollyFrontier*") and *vacated*, No. 18-9533, 2021 WL 8269239 (10th Cir. July 27, 2021).

[11] *RFA v. EPA*, No. 19-1220, Doc. 1925942, at 3 (D.C. Cir. Dec. 12, 2021).

[12] EPA, EPA-HQ-OAR-2021-0566, SCOPE OF ACTION AND NOTIFICATIONS (2022).

tion petitions for the 2016 through 2021 RFS compliance years. Among those were petitions from (1) Calumet for 2019 and 2020; (2) TSAR for 2019, 2020, and 2021; (3) Ergon for 2019 and 2020; (4) Ergon-WV for 2019 and 2020; (5) Placid for 2019 and 2020; and (6) Wynnewood for 2017, 2019, 2020, and 2021.

EPA's new interpretation and approach—which it applied in the Denial Actions—displaced the adjudicative methodology the agency had relied on for over a decade. In that prior approach, EPA granted and denied petitions based on DOE's findings through its application of the DOE scoring matrix. That scoring matrix—developed as part of the statutorily-mandated 2011 DOE study—"was designed to evaluate the full impact of disproportionate economic hardship on small refiners and used to assess the individual degree of potential impairment."[13] But, starting with the April Denial, EPA has now completely abandoned the scoring matrix.

Instead, EPA now adjudicates petitions using an approach it announced in a December 2021 publication.[14] That approach rests on two components.

First is a revised interpretation of the statutory term "disproportionate economic hardship" as used in 42 U.S.C. § 7545(*o*)(9)(A)-(B). Under the agency's new interpretation, a small refinery's disproportionate eco-

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[13] Off. of Pol'y & Int'l Affs., U.S. Dep't of Energy, Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship (2011), at 32 ("2011 DOE Study").

[14] *See* Notice of Opportunity to Comment on Proposed Denial of Petitions for Small Refinery Exemptions, 86 Fed. Reg. 70,999 (Dec. 14, 2021).

nomic hardship must be caused solely by RFS compliance costs.[15]

Second is a new economic theory. Called "RIN passthrough," EPA now theorizes that (A) the "cost of RINs is the same for all obligated parties, whether the RINs are acquired by blending renewable fuel or by buying them on the market" and (B) the "costs of RFS compliance (i.e., RINs) are passed through in the prices of refined products."[16]

Before us now are petitions for review of EPA's Denial Actions. Petitioners contend the Denial Actions are impermissibly retroactive, contrary to law, and arbitrary and capricious. For the reasons that follow, we agree. Accordingly, we vacate and remand petitioners' exemption petitions adjudicated in the Denial Actions.

II.

Before we proceed to the merits of petitioners' contentions, we must address EPA's motion to transfer venue to the D.C. Circuit under 42 U.S.C. § 7607(b)(1).[17]

The CAA includes a statutory channeling provision delineating the appropriate venue in which a petitioner may seek judicial review of agency action:

> A petition for review of . . . any . . . nationally applicable regulations promulgated, or final action taken, by the Administrator under this chap-

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[15] *See* EPA, EPA-420-D-21-001, Proposed RFS Small Refinery Exemption Decision, at 23-26 (Dec. 2021) ("Proposed Denial").

[16] *Id.* at 62.

[17] *See* Order, No. 22-60266 (5th Cir. Oct. 21, 2022) (motions panel ordering the threshold issue of venue to carry with the merits).

> ter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action . . . under this chapter . . . which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination.

42 U.S.C. § 7607(b)(1).

Determining where proper venue lies under § 7607(b)(1) requires us to conduct a two-step analysis: At the first step, we determine whether the challenged agency action is "nationally applicable" as distinguished from "locally or regionally applicable." *Id.* If nationally applicable, our inquiry ends because proper venue exists only in the D.C. Circuit. But if the challenged action is "locally or regionally applicable," we proceed to step two.

That second step begins with the default presumption that venue is proper in this circuit. *See Texas v. EPA*, 829 F.3d 405, 419 (5th Cir. 2016) ("*Texas 2016*"). To overcome that default presumption, a challenged action must satisfy two necessary and independent subconditions. Namely, we must determine that (a) the challenged action "is based on a determination of nationwide scope or effect" and (b) the Administrator, in taking that challenged action, "finds and publishes that

such action is based on such a determination." Only if both sub-conditions are satisfied is venue proper solely in the D.C. Circuit.

A. Step One

EPA first avers the Denial Actions are "nationally applicable" agency actions because they "apply a consistent statutory interpretation and economic analysis to small refineries nationwide." The agency analogizes the Denial Actions to the SIP Calls in *Texas v. EPA*, where this court reasoned that the agency's disapproval of and call to correct thirteen states' plans regarding air quality standards was a "nationally applicable regulation." No. 10-60961, 2011 WL 710598, at *3 (5th Cir. Feb. 24, 2011) ("*Texas 2011*"). The agency contends the Denial Actions, like the SIP Calls, rest on "a revised interpretation of the relevant CAA provisions and the RIN discount and RIN cost passthrough principles that are applicable to all small refineries no matter the location or market in which they operate."

We disagree with EPA's position. In-circuit precedent counsels that it is the *legal* effect—and not the practical effect—of an agency action that determines whether that action is "nationally applicable." *See Texas 2016*, 829 F.3d at 419. That is the key distinction between the SIP Call in *Texas 2011* and the Denial Actions in this case. The SIP Call in *Texas 2011* was sufficient—by itself—to change regulated entities' legal obligations. It required *all* states to apply their "prevention-of-significant-deterioration" programs to "greenhouse-gas-emitting sources." 2011 WL 710598, at *1-2. States whose plans already met that requirement were just as bound as states with violative plans. *See id.* at *4-5.

Not so with the "new approach" EPA used in the Denial Actions. EPA may swear that the new approach will apply in all future exemption petitions. But it cannot be said that EPA's promise to apply its "new approach"—as described in the Denial Actions—affects the legal rights, duties, or obligations of any small refinery whose exemption petitions were not the subject of the April Denial or June Denial. The agency's promise is naked—neither the new interpretation nor the RIN pass through theory binds EPA in *any* future adjudication.[18]

The Denial Actions are not "nationally applicable." They are, instead, "locally or regionally applicable." We must therefore proceed to the second step.

B. Step Two

We begin step two with the presumption that venue is proper in this circuit. That's because we have already determined, at step one, that the agency action is "locally or regionally applicable." *See Texas 2016*, 829 F.3d at 419. A challenged action overcomes that presumption if (1) it is based on a determination of nationwide scope or effect, and (2) the Administrator, in taking such action, "finds and publishes that such action is based on such a determination." 42 U.S.C. § 7607(b)(1). EPA claims the Denial Actions meet both sub-conditions.

We begin with the second sub-condition—whether the Administrator found and published that such an action was based on a determination of nationwide scope or effect. That is easily met, as no party contests that

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[18] EPA unsuccessfully asserts that its new interpretation and theory are imbued with the force of law and therefore binding on the agency. *See infra* part V.

the Administrator so found and published in each of the Denial Actions.[19]

What the parties dispute is the *accuracy* of the Administrator's finding. And that is addressed in the first sub-condition.

The parties initially skirmish on the applicable standard of review for the first sub-condition. EPA asserts that we review its determination under a deferential standard, but petitioners contend that we owe no deference at all. Petitioners are correct. As explained in *Texas 2016*, we "independent[ly] assess[]" whether the action is based on a determination of nationwide scope or effect. 829 F.3d at 420 (citation omitted).

The agency's assertion to the contrary finds little support: All EPA cites to buttress its position is a nineteen-year-old, non-precedential decision in which the D.C. Circuit rejected a motion to transfer after it noted that "the Administrator has unambiguously determined that the final action . . . has nationwide scope and effect." *Alcoa, Inc. v. EPA*, No. 04-1189, 2004 WL 2713116, at *1 (D.C. Cir. Nov. 24, 2004). That is not enough, especially given that that same assertion was subsequently dismissed in *Dalton Trucking, Inc. v. EPA*, 808 F.3d 875 (D.C. Cir. 2015). There, the D.C. Circuit characterized EPA's assertion "that venue in this circuit is 'compelled by [its] published determination that an action would have a nationwide scope or ef-

[19] *See* 87 Fed. Reg. at 24,301 ("the Administrator is exercising the complete discretion afforded to him by the CAA and hereby finds that this final action is based on a determination of nationwide scope or effect for purposes of CAA section 307(b)(1) and is hereby publishing that finding in the Federal Register."); *id.* at 34,874 (same).

fect'" as nothing more than a "transparent sleight of hand that does not persuade." *Id.* at 881 (citation omitted). Consequently, we do not accord deference to EPA's determination.

EPA contends, in its motions-stage briefing, that the Denial Actions were based on a determination of nationwide scope or applicability" because it made "no unique or individualized findings as to the ability of any of the thirty-six petitioning refineries to recover the costs of RFS compliance" and "did not adjust its statutory interpretation and economic theory to the particulars of any specific small refinery, or the region in which a refinery operates." We disagree. EPA's motions-stage characterization of the Denial Actions is flatly contradicted by the agency's position on the merits and the explanations it provided in the Denial Actions:

First, when asked to defend the Denial Actions on the merits, EPA contends that it "considered each petition on the merits . . . and individual refinery information." That mirrors the Denial Actions that state that EPA

> completed a thorough evaluation of the data and information provided in the SRE petitions, supplemental submissions, and comments to determine if any of the petitioners have demonstrated that the cost of compliance with the RFS is the cause of their alleged DEH and that such costs are not passed through by that small refinery to the wholesale purchasers under the RIN cost passthrough principle.[20]

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[20] EPA, EPA-420-R-22-005, April 2022 Denial of Petitions for RFS Small Refinery Exemptions (2022), at 23; EPA, EPA-420-R-

Second, EPA admits that, even under its new approach, there is still a non-zero chance it will grant small refinery petitions. According to the agency's briefing, EPA will grant exemption petitions to small refineries that provide data and evidence demonstrating that they faced disproportionate economic hardship contrary to the facts regarding other small refineries.

EPA's representations in the Denial Actions and its position on the merits show that its new interpretation and RIN passthrough theory—without more—fail to provide the agency with a sufficient basis to adjudicate exemption petitions. When EPA says it denied petitions "based on factors and facts common to each petition," it also implicitly concedes that there were no refinery-specific facts that would justify the issuance of an exemption. The agency thus had to verify that each of the petitions implicated in the Denial Actions did not (1) present facts contrary to those of other nonexempt small refineries and (2) demonstrate disproportionate economic hardship consistent with the statutory criteria.[21] Consequently, the Denial Actions rely on refinery-specific determinations and are not based on a determination of nationwide scope or effect.

Because the Denial Actions are neither nationally applicable nor based on a determination of nationwide scope or effect, venue is proper in the Fifth Circuit. EPA's motion to transfer venue to the D.C. Circuit is denied. We turn to the merits.

22-011, June 2022 Denial of Petitions for RFS Small Refinery Exemptions (2022), at 24.

[21] *See id.*

III.

The Administrative Procedure Act ("APA") requires us to "set aside" agency actions found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Arbitrary-and-capricious review requires this court to scrutinize the record to determine whether the agency has "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983) (cleaned up). We "may not supply a reasoned basis for the agency's decision that the agency itself has not given." *Id.* (quoting *SEC v. Chenery Corp.* (*Chenery II*), 332 U.S. 194, 196 (1947)). Instead, "we must set aside" agency action that is "premised on reasoning that that fails to account for relevant factors or evinces a clear error of judgment" as arbitrary and capricious. *Univ. of Tex. M.D. Anderson Cancer Ctr. v. U.S. Dep't of Health & Hum. Servs.*, 985 F.3d 472, 475 (5th Cir. 2021) (cleaned up).

Petitioners contend the Denial Actions are defective in three ways: *First*, they are impermissibly retroactive. *Second*, EPA's interpretation of the CAA is contrary to law. *And third*, the agency acted arbitrarily and capriciously by failing to engage in reasoned decision-making.

A. Retroactivity

The 2011 DOE Study and the scoring matrix are the two factors EPA relied on for over a decade when deciding whether to grant subparagraph (B) exemption petitions. But starting with the April Denial, EPA threw

those factors away: Now, the 2011 DOE Study and the scoring matrix have no bearing on the agency's decision-making process.

Petitioners cry foul—explaining that they had relied on those two factors when they submitted the exemption petitions implicated in the Denial Actions. EPA says petitioners have nothing to complain about. According to the agency, petitioners (1) have no protectable property right in subparagraph (B) exemptions and (2) should not have relied on the approach used in the agency's prior adjudications. We disagree with EPA on both points.

Petitioners have a protectable property interest because the small-refinery exemption is "an entitlement expressly created by statute," *McDonald v. Watt*, 653 F.2d 1035, 1045-46 (5th Cir. Unit A Aug. 1981), which EPA "shall" grant for any small refinery that shows "disproportionate economic hardship," 42 U.S.C. § 7545(*o*)(9)(B)(ii). The CAA defines the factors EPA must consider in deciding whether to grant or deny an exemption, and, once those factors have been satisfied, the agency is legally obligated to grant such a petition. *See id.*

Because petitioners possess a protectable property interest, we must determine whether the regulation is impermissibly retroactive. There is no blanket prohibition against retroactive application of regulation through adjudication.[22] But that power—to regulate

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[22] *See Chenery II*, 332 U.S. at 203-04; *Macy's, Inc. v. NLRB*, 824 F.3d 557, 566-67 (5th Cir. 2016); *Handley v. Chapman*, 587 F.3d 273, 283 (5th Cir. 2009) (Regulation is retroactive where its application "would impair rights a party possessed when he acted, in-

retroactively—is limited to circumstances in which retroactive application would not result in "injury or prejudice." *Handley*, 587 F.3d at 283 (quoting *Pac. Molasses Co. v. FTC*, 356 F.2d 386, 390 n.10 (5th Cir. 1966)).

Thus, we must "balance the ills of retroactivity against the disadvantages of prospectivity." *Microcomputer Tech. Inst. v. Riley*, 139 F.3d 1044, 1050 (5th Cir. 1998).[23] And in conducting such balancing, we accord no deference to the agency's determination that its approach should be applied retroactively, for that determination does not involve policy considerations delegated to the agency or require any agency expertise. *Id.* at 1050-51. "If that mischief [of prospectivity] is greater than the ill effect of the retroactive application of a new standard, it is not the type of retroactivity which is condemned by law." *Monteon-Camargo v. Barr*, 918 F.3d 423, 430 (5th Cir. 2019), *as revised* (Apr. 26, 2019) (quoting *Chenery II*, 332 U.S. at 203). Typically, "the ill effect of retroactivity is the frustration of the expectations of those who have justifiably relied on a prior rule; the ill effect of prospectivity is the partial frustration of the statutory purpose which the agency has perceived to be advanced by the new rule." *McDonald*, 653 F.2d at 1044.

We start the balancing analysis with the ills of retroactivity. Petitioners justifiably relied on EPA's past agency practice when applying for the exemptions at is-

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crease a party's liability for past conduct, or impose new duties with respect to transactions already completed." (quoting *Fernandez-Vargas v. Gonzales*, 548 U.S. 30, 37 (2006))).

[23] Balancing occurs "case-by-case," and this court has previously rejected the multi-factor balancing tests adopted by other circuits, *see id.* (rejecting D.C. Circuit's five-factor test).

sue. EPA—for over a decade—consistently used the 2011 DOE Study and scoring matrix to adjudicate small-refinery exemption petitions. That is exactly the kind of "well established" agency practice that forms the basis for justifiable reliance. *Id.* at 1045 (citation omitted).[24] EPA "cannot 'surprise' [petitioners] by penalizing [them] for 'good-faith reliance' on the agency's prior positions." *R.J. Reynolds Vapor Co. v. FDA*, 65 F.4th 182, 189 (5th Cir. 2023) (quoting *Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 156-57 (2012)).

EPA nonetheless maintains that petitioners' reliance was unjustifiable because they were—or should have been—aware of impending changes to agency policy. The EPA first points to its publication requesting comment on its proposed interpretation and theory. But that request for comment was not published in the Federal Register until December 2021.[25] The April Denial adjudicated exemption petitions submitted in 2018.[26] And all of petitioners' exemption petitions that were adjudicated in the June Denial had been submitted before December 2021.[27] Thus, all petitioners' exemptions

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[24] EPA insists petitioners couldn't have justifiably relied on its prior approach because it wasn't "announced in an interpretive rule" or "subjected . . . to notice and comment." The agency's position is cute but wrong. Longstanding and well-established agency practice need not be officially adopted to form the basis for reasonable reliance. *See id.*

[25] *See* 86 Fed. Reg. at 70,999-71,000.

[26] The April Denial included 2018 compliance-year petitions from Calumet, TSAR, Ergon, Placid, and Wynnewood.

[27] The June Denial included Calumet, TSAR, Ergon, Ergon-WV, and Placid's 2019 and 2020 petitions; TSAR's 2019, 2020, and 2021 petitions; and Wynnewood's 2017, 2019, 2020, and 2021 petitions.

were submitted before EPA provided notice in the Federal Register that it intended to change its adjudicative methodology.[28] EPA's December 2021 notice and comment publication does not render petitioners' reliance unjustifiable.

Next, EPA asserts that petitioners' reliance was unjustifiable by June 2021—the month litigation ended in *RFA*.[29] We disagree with EPA's assertion that *RFA* provided petitioners with notice by June 2021.[30]

For one, EPA's expressly states its policy is only to "provide for exceptions to the general policy" in response to "decisions of the federal courts that arise from challenges to 'locally or regionally applicable' actions. . . . " 40 C.F.R. § 56.3(d). A Tenth Circuit decision —no matter its holding—had no effect on petitioners' operating outside that circuit's boundaries.

Moreover, the initial Tenth Circuit panel opinion—which held that EPA's prior approach of finding disproportionate economic hardship allowed the agency to act "outside the scope of [its] statutory authority" when "[g]ranting extensions of exemptions based in part on hardships not caused by RFS compliance"[31]—was *va-*

TSAR's 2021 petition was submitted on November 23, 2021, and Wynnewood's 2021 petition was submitted on September 23, 2021.

[28] Petitioners, unlike Ant-Man and the Wasp, cannot time travel. *See also Rick and Morty: The Vat of Acid Episode* (Comedy Central May 17, 2020).

[29] *See supra* note 10 and accompanying text.

[30] Even if we assume *arguendo* that petitioners had notice by June 2021, that would affect only TSAR's and Wynnewood's 2021 petitions; the other seventeen petitions in this case were filed before June 2021.

[31] *RFA*, 948 F.3d at 1254.

cated by a subsequent Tenth Circuit panel.[32] That, in turn, "remove[s] both the *res judicata* and the *stare decisis* effect" from the initial *RFA* panel opinion. *City Ctr. W., LP v. Am. Mod. Home Ins. Co.*, 749 F.3d 912, 913-14 (10th Cir. 2014).

Thus, it is EPA that is being unreasonable when it blames petitioners for disregarding a vacated holding that—per EPA's own regulations—never had any effect outside the Tenth Circuit. Consequently, petitioners' continued reliance on EPA's longstanding and well-established practice of adjudicating exemption petitions based on the 2011 DOE study and scoring matrix was justifiable till the agency first published notice of its intent to change its adjudicative methodology in December 2021.[33]

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[32] *Renewable Fuels Ass'n v. EPA*, 854 F. App'x 983, 984 (10th Cir. 2021) (per curiam) ("*RFA II*") ("In light of the United States Supreme Court's decision in *HollyFrontier* . . . we previously recalled our mandate and vacated our judgment in this case.").

[33] In its brief, EPA asserts it "indicat[ed] that it would follow" the *RFA* holding on the agency's approach of finding disproportionate economic hardship "on remand if the Tenth Circuit denied the motion or did not clarify otherwise." *See* EPA's Motion for Clarification of the Court's July 29, 2021 Mandate, *RFA II*, No. 18-9533, Doc. 010110564301, at 6-7 (Aug. 19, 2021) ("*RFA II* Motion").

For three reasons, that does not change our analysis: *First*, EPA's intent, as stated in its *RFA II* motion, was limited to the three exemption petitions in *RFA*. The only petition in this case that overlaps with *RFA* is Wynnewood's 2017 exemption petition. *Second*, EPA stated in its Tenth Circuit motion that it *had not decided* "what, if any, impact . . . the unaffected holdings . . . may have on EPA's implementation of the RFS program." *Id.* at 6; *cf. FTC v. Standard Oil Co.*, 449 U.S. 232, 240 (1980) (agency's "threshold determination that further inquiry is warranted . . . is not 'definitive'" agency action). *Third*, it is hardly reasonable to ask

We now turn to the other side of the balancing equation and analyze the disadvantages of prospectivity. *See Microcomputer Tech. Inst.*, 139 F.3d at 1050. In other words, we must determine what benefits are lost if EPA's new interpretation and RIN passthrough theory are applied only to newly submitted exemption petitions.

EPA fails to identify a single benefit of retroactive application. Intervenors assert retroactive application is necessary because "withholding the Denials' effect would harm the producers of renewable fuel" and "depress the demand for renewable fuel." That is absurd. The exemption petitions in this case concern compliance years 2017 to 2021. By the time EPA published the Denial Actions, no producer could have produced RINs applicable to these petitions, *see* 40 C.F.R. §§ 80.1427(a)(6), 80.1428(c), 80.1431(a), so the Denial Actions could not have affected the amount of renewable fuel blended in those past years.

The result of the balancing test could not be more obvious: There is no legitimate benefit EPA can gain from retroactive application. On the other hand, retroactive application of EPA's new adjudicative methodology harshly penalizes petitioners for their good-faith and justified reliance on the agency's prior approach.[34]

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regulated entities to rely on EPA's statements of future intent made in the course of litigation. *Cf. BNSF Ry. Co. v. Fed. R.R. Admin.*, 62 F.4th 905, 911 & n.4 (5th Cir. 2023) (discounting post-hoc agency rationalizations).

[34] *See R.J. Reynolds*, 65 F.4th at 189 ("Dealing with administrative agencies is all too often a complicated and expensive game, and players . . . 'are entitled to know the rules.'" (citation omitted)).

EPA impermissibly applied its new CAA interpretation and RIN passthrough theory to petitioners' years-old exemption petitions.

B. Contrary to Law

Petitioners contend the Denial Actions are contrary to law for four reasons.

1. Disproportionate Economic Hardship

Under EPA's new interpretation, RFS compliance costs must be *the sole cause* of a small refinery's disproportionate economic hardship. In other words, a small refinery will receive an exemption only if it can show that it has incurred disproportionate RFS compliance costs. Petitioners insist that that is an unreasonable construction of the statute. We agree.

The CAA provides small refineries with the ability to submit a petition requesting an exemption from RFS "for the reason of disproportionate economic hardship." 42 U.S.C. § 7545(*o*)(9)(B)(i). An exemption petition, once submitted, is evaluated by the Administrator "in consultation with the Secretary of Energy." § 7545(*o*)(9)(B)(ii). In that evaluation, "the Administrator . . . shall consider the findings of the study under subparagraph (A)(ii)"—that is, the 2011 DOE Study—"and other economic factors." *Id.*

At dispute is what qualifies as "disproportionate economic hardship" for a subparagraph (B) exemption. *See id.* at § 7545(*o*)(9)(B)(i). Subparagraph (A) uses

that same phrase twice.[35] But neither subparagraph defines it.

EPA theorizes that disproportionate economic hardship can only mean RFS compliance costs. It bases that conclusion on its observation that the phrase, as used in subparagraph (A), does not identify any cause of disproportionate economic hardship other than RFS compliance costs.[36] It thus posits that the statute should be read to say that RFS compliance costs are the sole cause of disproportionate economic hardship.[37]

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[35] *First*, in subparagraph (*o*)(9)(A)(ii)(I), the Secretary of Energy is instructed to "determine whether compliance with [RFS] would impose a disproportionate economic harm on small refineries," the product of which is the 2011 DOE Study. *Second*, in subparagraph (II), which directs the Administrator to extend the initial subparagraph (A)(i) exemption—the blanket exemption for all small refineries "until calendar year 2011"—for any small refinery that "would be subject to a disproportionate economic hardship if required to comply with [RFS]. . . . "

[36] The reasoning employed here is suspect as well. EPA interprets two phrases in subparagraph (A)—namely, "would impose" and "subject to . . . if required to comply"—as creating an *exclusive* causal relationship between RFS compliance costs and disproportionate economic hardship. *See* § 7545(*o*)(9)(A)(ii). That is error because neither provision purports to rule out other causes of disproportionate economic harm.

[37] EPA asks us to defer to its interpretation under *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). EPA claims *Chevron* applies because it "undertook notice and comment before taking the Denial Actions."

Not so fast. While the agency did subject its interpretation to notice-and-comment proceedings, it applied that interpretation in *informal* adjudication, not notice-and-comment rulemaking or formal adjudication. *See United States v. Mead Corp.*, 533 U.S. 218, 230 (2001). True, EPA's decision to engage in informal adjudica-

Petitioners disagree: They instead contend that "disproportionate economic hardship" should be interpreted more broadly. In their view, a small refinery can experience disproportionate economic hardship for myriad causes; it qualifies for the exemption if RFS compliance cost is one such cause.

We agree with petitioners. EPA's interpretation is foreclosed by the statute's text in two ways:

First, to interpret "disproportionate economic hardship" as synonymous with "RFS compliance cost" would render part of subparagraph (B)(ii) a nullity. That provision stipulates that the Administrator, in evaluating subparagraph (B) exemption petitions, shall consider (1) the 2011 DOE study and (2) "other economic factors." § 7545(*o*)(9)(B)(ii). EPA's interpretation of "disproportionate economic hardship" leaves no room for "other economic factors"—it makes the first factor outcome-determinative for every exemption petition. But those words "cannot be meaningless, else they

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tion "does not automatically deprive that interpretation of the judicial deference otherwise its due." *Texas v. United States*, 809 F.3d 134, 178 n.160 (5th Cir. 2015) (quoting *Barnhart v. Walton*, 535 U.S. 212, 221 (2002)), *aff'd by an equally divided court*, 579 U.S. 547 (2016). But to qualify for *Chevron* deference, EPA's interpretation must satisfy the *Barnhart* test, which asks us to consider factors such as "the interstitial nature of the legal question, the related expertise of the Agency, the importance of the question to administration of the statute, the complexity of that administration, and the careful consideration the Agency has given the question over a long period of time. . . . " 535 U.S. at 222. We need not decide whether the *Barnhart* test is satisfied because EPA's interpretation fails even under *Chevron*. *See infra* note 43.

would not have been used."[38] Thus, subparagraph (B)(ii) contemplates granting exemptions to small refineries that experience disproportionate economic hardship attributable to a combination of (1) RFS compliance costs and (2) economic factors other than RFS compliance costs.

Second, EPA's approach to defining "disproportionate economic hardship" is misguided. The agency relies heavily on subparagraph (A) to define the phrase. It justifies its approach on the absence of a definition in subparagraph (B). EPA's justification is incorrect. Though it is true that we presume—absent persuasive countervailing evidence—that identical words and phrases "bear the same meaning throughout a text,"[39] subparagraph (A) does not define "disproportionate economic hardship" either. And "[w]here Congress does not furnish a definition of its own, we generally seek to afford a statutory term 'its ordinary or natural meaning.'" *HollyFrontier*, 141 S. Ct. at 2176 (quoting *FDIC v. Meyer*, 510 U.S. 471, 476 (1994)).

"Disproportionate economic hardship," as ordinarily understood, includes much more than just RFS compliance cost. "Disproportionate" modifies "economic hardship." For economic harm to be disproportionate, it must be "inadequately or excessively proportioned."[40] The relevant comparator—that to which the harm is "proportioned"—could be the amount other small refin-

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[38] ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 174 (2012) (quoting *United States v. Butler*, 297 U.S. 1, 65 (1936)).

[39] *Id.* at 170.

[40] *Disproportionate*, Oxford English Dictionary, tinyurl.com/32spx2ve.

eries pay to comply with RFS. But it could also be factors unrelated to RFS, such as local economic conditions or refinery-specific circumstances. For example, "small refineries might apply for exemptions . . . in light of market fluctuations and changing hardship conditions." *Holly-Frontier*, 141 S. Ct. at 2178. Congress could have—but did not—enumerate the particular ways in which economic harm might be "disproportionate."[41] We therefore accord the phrase disproportionate economic harm its "full and fair scope," for "the presumed point of using general words is to produce general coverage."[42]

EPA's interpretation 42 U.S.C. § 7545(*o*)(9)(B) is unreasonable.[43] The statute's text cannot plausibly be read to say that RFS compliance costs must be the sole cause of disproportionate economic hardship.

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[41] *See, e.g.*, 26 U.S.C. § 302(b)(2)(C) (delineating in detail when a "distribution is substantially disproportionate").

[42] SCALIA & GARNER, *supra* note 38, at 101.

[43] *Chevron* deference applies "only if 'the agency's [interpretation] is based on a permissible construction of the statute.'" *Huntington Ingalls, Inc. v. Dir., Off. Of Workers' Comp. Programs, U.S. Dep't of Lab.*, 70 F.4th 245, 252 (5th Cir. 2023) (quoting *Mexican Gulf Fishing Co. v. U.S. Dep't of Commerce*, 60 F.4th 956, 963 (5th Cir. 2023)). EPA's interpretation falls outside "the range of meanings that could be plausibly attributed to the relevant statutory language." *Sw. Elec. Power Co. v. EPA*, 920 F.3d 999, 1024 (5th Cir. 2019) (citation omitted). Consequently, EPA's interpretation is not entitled to *Chevron* deference.

Furthermore, EPA is not entitled to deference under *Skidmore v. Swift & Co.*, 323 U.S. 134 (1994), because an unreasonable interpretation of a statute's text cannot be persuasive. *See Texas*, 809 F.3d at 178 n.160 (citing *Gonzales v. Oregon*, 546 U.S. 243, 256 (2006)).

2. Petitioners' other reasons that the Denial Actions are contrary to law.

Petitioners urge that the Denial Actions are contrary to law for three other reasons. On those claims, we agree with EPA.

First, petitioners assert the EPA's interpretation is unlawful because it was adopted on the agency's mistaken belief that it was bound by the alternate holdings in *RFA*—a now-vacated Tenth Circuit case interpreting the relevant statutory provisions. *See RFA II*, 854 F. App'x at 984. But the agency record shows that the EPA adopted *RFA*'s reasoning because it "determined that the *RFA* decision provides the best reading of the statutory provisions of CAA section 211(*o*)(9)." That is an independent basis for EPA's interpretation, *i.e.*, the agency did not base its interpretation on the idea it was bound by *RFA*'s alternate holdings. Thus, EPA's interpretation did not violate the *Chenery* mistake-of-law doctrine. *Cf. Teva Pharm. U.S.A. Inc. v. FDA*, 441 F.3d 1, 5 (D.C. Cir. 2006).

Second, petitioners allege EPA impermissibly construed the statute's requirement that it consult with DOE in deciding an exemption petition. In their view, EPA's consultation with DOE had to be "meaningful," which requires EPA and DOE to—at a minimum—consult on "whether EPA's new RIN pass-through theory was actually correct and applicable to each small refinery." Petitioners claim EPA fell short of that standard with the Denial Actions because EPA merely asked DOE to "assume the RIN pass-through theory was correct and an appropriate basis for denying the hardship petitions." EPA counters by claiming that it, along

with DOE, has "discretion to determine the shape of the procedural consultation requirement."

We agree with EPA. Congress did not define the term "consultation" as used in the relevant statutory provision. *See* 42 U.S.C. § 7545(*o*)(9)(B)(ii). It only stipulates the subjects the agencies must cover. We decline to graft extra-textual procedural requirements onto that consultation requirement. *See Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 525 (1978).

Third, petitioners attest the Denial Actions are contrary to law because EPA evaluated multiple petitions simultaneously. Pointing to § 7545(*o*)(9)(B)'s use of the terms "a small refinery" and "a petition," petitioners claim that the petitions must be examined one at a time. True, using "a"—an indefinite article immediately followed with a singular noun—can refer to "one" of something. But it can also indicate "that there may be two or more substantial parts." *Comm'r v. Kelley*, 293 F.2d 904, 912 (5th Cir. 1961). Without more, petitioners fail to show that the relevant statutory provisions require EPA to consider exemption petitions individually. We are textualists, not literalists.

We conclude the Denial Actions are contrary to law only because EPA's interpretation of the CAA subparagraph (B) exemption provision is unreasonable. Petitioners' other claims fail.

C. Arbitrary and Capricious

Petitioners contend the Denial Actions are arbitrary and capricious because they rely on the RIN-passthrough theory, which ran counter to the evidence before the EPA.

The APA requires us to "set aside agency action if the agency . . . '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.'" *Sw. Elec. Power Co.*, 920 F.3d at 1013 (quoting *State Farm*, 463 U.S. at 43) (cleaned up). That includes agency action that is "premised on reasoning that fails to account for relevant factors or evinces a clear error of judgment." *Univ. of Tex. M.D. Anderson Cancer Ctr.*, 985 F.3d at 475 (internal quotation marks and citation omitted).

Petitioners take issue with EPA's RIN-passthrough economic theory—that is, the agency's conclusion that the "market-based design of the RFS program and the RIN-based compliance system have equalized the cost of compliance among all market participants." EPA made two findings to support its RIN-passthrough theory: *The first* is that the price per RIN at any given point in time is identical for all refineries nationwide. *The second* is that market prices for fuel and RIN costs correspond, which means all refineries could offset 100% of their RIN costs by raising the price of their fuel products, thereby passing RIN costs along to their customers. Petitioners claim those two findings are contrary to the evidence before EPA.

We agree that EPA's RIN-passthrough theory is contrary to the evidence. EPA's second finding—that all refineries can completely pass on their RIN costs—is so implausible as applied to petitioners that it cannot be ascribed to a difference in view or agency expertise. *See Sw. Elec. Power Co.*, 920 F.3d at 1013 (quoting *State Farm*, 463 U.S. at 43).

Petitioners have demonstrated that the local markets in which they operate are inefficient. Calumet's exemption petition, for example, included market price data from the local "micro-market" it operated in as compared to Pasadena, Texas. Pasadena is an example of an economically efficient market—that is, a market in which EPA's general conclusion about RIN passthrough holds true—so the price premium for fuel there matches the market price of RINs. Not so with Calumet's micro-market: Prices there are lower than in Pasadena, which means that fuel is discounted by more than the corresponding RIN market price.

EPA does not seriously engage with petitioners' refinery-specific market data. The agency's two responses are insufficient:

First, EPA's conclusions about fuel market efficiency in general do not disprove petitioners' local market data. The agency arrived at that conclusion by "examin[ing] available market data, as well as studies by outside parties and numerous public comments."[44] That allowed

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[44] EPA, EPA-420-R-22-011, June 2022 Denial of Petitions for RFS Small Refinery Exemptions (2022), at 32. Petitioners' attempts to challenge EPA's conclusions about these studies are not meritorious. EPA concluded that these studies "on balance . . . provide more evidence in support of the conclusion that RIN costs are passed through than evidence to suggest they do not." Petitioners interpret those studies differently from how EPA does. But that's not enough for us to conclude that EPA's conclusion is counter to the evidence. EPA provided a reasonable explanation as to why it questioned the studies petitioners identified when the agency pointed to potential methodological infirmities in each. Petitioners' reply briefing does not explain why EPA's critiques are irrelevant or incorrect. It cannot be said that petitioners' studies

the agency to conclude that "the RIN costs and RIN discount were fully passed through to wholesale purchasers and reflected in the market prices of petroleum fuel and blended fuel. . . . "[45] But EPA's macro-level analysis about fuel markets only supports a conclusion that passthrough can occur in fuel markets generally—it does not rule out the existence of inefficient fuel markets. And those are the markets in which petitioners operate.

Second, EPA glosses over petitioners' refinery-specific data proving they operate in inefficient local markets that do not allow for RIN cost passthrough. In response to Calumet's data, for example, all EPA said was that the Pasadena market demonstrated "the RIN price is fully passed through." That's not responsive—both petitioners and EPA agree Pasadena is efficient. The problem is that Calumet does not operate in Pasadena. EPA leaves unrebutted petitioners' actual contention—that lower sale prices in the micro-market relative to the efficient Pasadena market prove that Calu-

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made it unreasonable for EPA to reach a conclusion opposite to that held by petitioners.

Additionally, petitioners cite a GAO report that is not in the administrative record, U.S. Gov't Accountability Off., GAO-23-104273, Renewable Fuel Standard: Actions Needed to Improve Decision-Making in the Small Refinery Exemption Program (2022). Generally, we do not review information that was outside the record when the agency made its decision. *See Luminant Generation Co. v. EPA*, 675 F.3d 917, 925 (5th Cir. 2012). Even though the GAO report is based on evidence available at the time the agency made its decision, petitioners cannot—and do not—contend that its conclusions and findings are based *solely* on data in the record. We therefore exclude the GAO report from our analysis.

[45] EPA, EPA-420-R-22-011, June 2022 Denial of Petitions for RFS Small Refinery Exemptions (2022), at 32.

met, like other petitioners, cannot pass through the costs of the RINs it purchases.

EPA's second finding is also contrary to the evidence because petitioners are unable to purchase RINs ratably. Ratable purchasing is an underlying premise of EPA's second finding—a refinery must be able to purchase RINs at the same time they sell fuel in order for the market price to correspond with the price of RINs. That's not an option available to petitioners. Take TSAR for example: Given the amount of fuel it produces, it would need to buy 75,000 RINs per day. But a trade size of 75,000 RINs is "essentially unheard of" in the RIN market—most RINs are sold in "a clip of '1 million' at a time." Indeed, as TSAR explained to the EPA, it can't even find a RIN broker willing to transact at such low RIN quantities.

EPA brushes that evidence aside. In response to TSAR, the agency merely restates its prior assertion that "small refineries can enter into contracts with various RIN brokers to purchase RINs on a ratable basis." The agency supports its assertion by dreaming up a hypothetical contract—filled with unsubstantiated speculation about terms such RIN clip sale prices and broker service fees—that TSAR might be able to negotiate. But EPA never explains why it believes small refineries can get contract terms like those. Unsubstantiated agency speculation does not overcome petitioners' proven inability to purchase market-rate RINs ratably.

IV.

Petitioners complain that EPA acted arbitrarily and capriciously by failing to provide sufficient guidance as to the information small refineries should submit as part

of their exemption petitions under the agency's new interpretation and RIN passthrough theory.

We disagree with petitioners. As a general matter, courts cannot compel agencies to act.[46] Petitioners do not allege that the CAA expressly requires EPA to issue such guidance. An agency's control over its timetables is entitled to considerable deference.[47] That EPA has yet to make good on its promise to provide further guidance does not render the agency's current (lack of) guidance arbitrary and capricious.

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In summary: The challenged Denial Actions are locally or regionally applicable. EPA's motion to transfer venue to the District of Columbia Circuit is DENIED.

The EPA's denials of petitioners' small refinery exemption petitions are impermissibly retroactive. Furthermore, the agency's interpretation of the small refinery exemption petition provisions of the CAA is contrary to law and arbitrary and capricious as applied to petitioners' exemptions. The petitions for review are GRANTED. The challenged adjudications are VACATED and REMANDED for further consideration.

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[46] *See Norton v. S. Utah Wilderness All.*, 542 U.S. 55, 64 (2004) ("[A] claim under § 706(1) can proceed only where a plaintiff asserts that an agency failed to take a discrete agency action that it is required to take." (emphases omitted)).

[47] *See* CHARLES H. KOCH, JR. & RICHARD MURPHY, 4 ADMIN. L. & PRAC. § 11:50 (Westlaw).

PATRICK E. HIGGINBOTHAM, *Circuit Judge*, dissenting:

Congress carefully crafted the Renewable Fuel Standard ("RFS") program of the Clean Air Act to nudge the nation toward clean renewable fuel sources[1] and Congress, in light of "the advantages of expeditious and authoritative review of all national standards in the D.C. Circuit," also implemented a judicial review venue provision that "priorities efficiency" in the form of 42 U.S.C. § 7607(b)(1).[2] Today we impermissibly interfere with these Congressional mandates by finding that venue is proper in this Circuit, contrary to the text, structure, and purpose of § 7607(b)(1). I would find that venue is only proper in the D.C. Circuit, consistent with the actions of the four other circuit courts that have addressed this very case, and dissent.

I.

The majority correctly describes the overall mechanics of the CAA's venue provision.[3] At step one, we determine whether a final agency action is "nationally applicable," as distinguished from a "locally or regionally applicable" action. If "nationally applicable," venue is only proper in the D.C. Circuit.[4] If we find that the challenged action is "locally or regionally" applicable, we proceed to step two. At this second step, a "locally

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[1] Pub. L. No. 110-140, 121 Stat. 1492.

[2] 41 Fed. Reg. 56767 (Dec. 30, 1976) (Comments of G. William Frick).

[3] *See generally* 42 U.S.C. § 7607(b)(1). "Had Congress wanted to prioritize efficiency, it could have authorized direct circuit-court review of all nationally applicable regulations, as it did under the Clean Air Act." *Nat'l Ass'n of Mfrs. v. Dep't of Def.*, 583 U.S. 109, 130 (2018).

[4] 42 U.S.C. § 7607(b)(1).

or regionally applicable" action must be reviewed in the D.C. Circuit if (1) it is "based on a determination of nationwide scope or effect" and (2) the Administrator "finds and publishes that such action is based on such a determination"[5] The majority opinion errs at both steps of the venue analysis, inappropriately finding that venue is proper in this Circuit.

A.

According to the majority, "[i]n-circuit precedent" controls the outcome of the venue analysis at step one. As we are supposedly obliged to look to the "*legal* effect —and not the practical effect—of an agency action" to determine whether the action is "nationally applicable," the Denial Actions must be "locally or regionally applicable" because they do not "change regulated entities' legal obligations" for "*all* states." With due respect, this "legal effect" rule runs counter to the text, structure, and purpose of the CAA's venue provision.

As a starting matter, the majority's description of the "legal effect" rule as in-circuit *precedent* relies on *Texas 2016* to support its assertion. In *Texas* 2016, both "parties agree[d] that the [agency action] under review [was] a locally or regionally applicable action."[6] Whether the "legal" or "practical" effect of an agency action determines its scope was not before the Court.[7] As a result, the panel's statement in *Texas 2016* that "[t]he question of applicability turns on the legal impact as a whole" is dicta.

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[5] *Id.*

[6] *Texas v. EPA*, 829 F.3d 405, 419 (5th Cir. 2016) ("*Texas 2016*").

[7] *Id.*

Issues with "precedent" aside, this quest reads words into the statute that are not there. Section 7607(b)(1) refers only to agency actions that are "nationally applicable." Nowhere does the text of the statute reference or suggest that Congress intended to distinguish between "legal" and "practical" effects. Indeed, this part of the statute does not refer to "effects" at all. The question is one of "national applicability."

Not only does the majority read new words into the statute, but in fashioning its new "legal effect" theory, they elide *Texas 2016*'s reference to the plain meaning of the term "nationwide" and ignore *Texas 2011*, which also defines the key terms of the statute by reference to the words' plain meaning.[8] Instead, we should look to the plain meaning of "nationally" to understand what Congress set out to achieve with § 7607(b)(1). "Nationally" generally means "throughout the whole nation."[9] As commonly understood, a reasonable person would measure "nationally applicable" by looking to "the location of the persons or enterprises that the action regulates."[10] Applying this definition, the Denial Actions

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[8] *See Texas v. EPA*., No. 10-60961, 2011 WL 710598, at *4 n.4 (5th Cir. Feb. 24, 2011) ("*Texas 2011*").

[9] *See Texas 2016*, 829 F.3d at 420 n.22, defining "nationwide" as "throughout the whole nation." "National" means "of or relating to a nation." *Nation*, Merriam Webster Dictionary, https://www.merriam-webster.com/dictionary/national (last visited Nov. 19, 2023); "Nationally" means "in a national manner; as a nation; with regard to the nation as a whole." *Nationally*, Oxford English Dictionary, https://www.oed.com/dictionary/nationally_adv?tab=meaning_and_use#35387357 (last visited Nov. 19, 2023).

[10] *Texas 2011*, 2011 WL 710598, at *3 (citing *New York v. EPA*, 133 F.3d 987, 990 (7th Cir. 1998)). *See also* JOHN F. MANNING,

are here inescapably nationally applicable: they apply one consistent statutory interpretation and economic analysis to thirty-six small refineries, located in eighteen different states, in the geographical boundaries of eight different circuit courts. Without the siren song of the war against the administrative state, they are, for all intents and purposes, "applicable" across the "nation."

By applying the plain meaning of "nationally" along with this Court's precedents, venue is proper only in the D.C. Circuit. In *Texas 2011*, we found an agency action to be nationally applicable when it applied to only thirteen states and seven different circuit courts.[11] Here, we have eighteen states within eight different circuits, all facing the same new statutory interpretation and economic analysis. In *Texas 2020*, this Court found that the agency action in question was "locally or regionally" applicable because it only applied to four *counties* within the State of Texas,[12] and to *Sierra Club v. EPA*, in which we similarly found that the agency action was not "nationally applicable" because it dealt exclusively with a State Implementation Plan ("SIP") for the State of Louisiana.[13] Even *American Road & Transportation Builders Association v. EPA*, which *Texas 2016* cites favorably to fashion its "legal effects" pronouncement, dealt with the denial of a SIP exclusively applicable to

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WHAT DIVIDES TEXTUALISTS FROM PURPOSIVISTS?, 106 COLUM. L. REV. 70, 76 (2006).

[11] *Texas 2011*, 2011 WL 710598, at *3.

[12] *Texas v. EPA*, 983 F.3d 826, 833 (5th Cir. 2020) ("*Texas 2020*").

[13] *Sierra Club v. EPA*, 939 F.3d 649 (5th Cir. 2019).

the State of California.[14] *Texas 2020*, *Sierra Club*, and *American Road*, when compared to the facts of this case and when the term "nationally applicable" is given its common sense reading, require transfer of this case to its proper venue in the D.C. Circuit.

By the majority's reading of § 7607(b)(1), if the EPA denied the petitions of small refineries located in every single U.S. state and territory in one single agency action, this denial action would *still* not be "nationally applicable" because it does not have any binding "legal effect" on future hardship petitions. That result simply defies common sense.

The proffered new rule also "does violence . . . to the structure and language of the statute."[15] Section 7607(b)(1) refers to "final agency action," and the Administrative Procedure Act defines "agency action" to include both rulemakings *and* adjudications.[16] Section 7607(b)(1) then contemplates scenarios, such as this one, in which an agency may proceed through an "action," such as an adjudication, that is of "national applicability." But as adjudications lack "legal effect" beyond the parties involved, they could never be "nationally applicable" as defined by the majority. Thus, the majority's "legal effects" reading of the statute effectively removes *all* "adjudications" from the ambit of § 7607(b)(1), contrary to the plain text of the statute.

Additionally, this "legal effects" rule offers no meaningful guidance to litigants, particularly problematic

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[14] *Am. Road & Transp. Builders Ass'n v. EPA*, 705 F.3d 453, 455-56 (D.C. Cir. 2013).

[15] *Smith v. United States*, 508 U.S. 223, 240 (1993).

[16] *See* 5 U.S.C. 551(13).

when considering that venue provisions should "draw bright lines to minimize waste and expense of litigation over whether a case has been brought in the right court."[17] Its new rule begs the question: even if we were to require "legal effects," why do those effects have to be "future" legal effects? And why are "present" legal effects, which in this case, are felt over a large swath of the country, insufficient? The majority's now re-written § 7607(b)(1) then reads:

> [a] petition for review of . . . any . . . nationally applicable regulations [*with future legal effects*] promulgated, or final action taken [*minus adjudications*], by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia.

Contrary to the majority's re-working of the statute, I would simply conduct the venue analysis by applying the plain meaning of § 7607(b)(1). The EPA's Denial Actions, affecting eighteen states within the geographical boundaries of eight different circuit courts, are nationally applicable, as they apply one consistent statutory interpretation and economic analysis to small refineries nationwide. This should have been the end of the Court's venue analysis, and venue is only proper in the D.C. Circuit.

B.

Alternatively, I would find that the Denial Actions should be transferred to the D.C. Circuit at step two of the venue analysis. They were "based on a determination of nationwide scope or effect" and the Administra-

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[17] 41 Fed. Reg. 56767 (Dec. 30, 1976) (Comments of G. William Frick).

tor made and published the required determination. The plain meaning of the statute's key terms and this Circuit's precedents command this result.

"Determinations" are "the justifications the agency gives for the action and they can be found in the agency's explanation of its action. They are the reason the agency takes the action that it does."[18] "[T]he agency should identify the core determinations in the action."[19] Here, "[b]ecause the statute speaks of the determinations the action 'is based on,' the relevant determinations are those *that lie at the core* of the agency action."[20] Section 7607(b)(1), moreover, requires this Court look to the "scope" or "effect" of the relevant determination and determine whether it was "nationwide." In this context, "[s]cope" means "[t]he area covered by a given activity or subject," and "effect" means "[s]omething brought about by a cause or agent; result."[21] Altogether, this Court must then look to the core determinations that the EPA has identified as the justifications for the Denial Actions, and it must independently determine if they have nationwide scope or effect.

The EPA identified the two determinations at the core of the Denial Actions: (1) its new interpretation of the CAA's disproportionate hardship provision; and (2) its economic analysis of the nationwide market for RINs. The scope and effect of these core determinations are nationwide, as they are applicable to all small

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[18] *See Texas 2016*, 829 F.3d at 419.

[19] *Id.*

[20] *Id.*

[21] *Id.* at 421 n.20 & 21.

refineries no matter the location or market in which they operate.

The majority, however, takes issue with the EPA's identification of its core determinations. In their view, the EPA's core determinations for the Denial Actions are "flatly contradicted" by the agency's position on the merits. The majority faults the EPA for "consider[ing] each petition on the merits . . . and individual refinery information." But there is no contradiction in the EPA ensuring that its core determinations hold up when presented with potentially differing data in the individual petitions. While of course the agency considered and responded to the small refineries' comments (else, the action would have surely been arbitrary and capricious), there can be multiple determinations that influence an agency's actions. What the majority ignores is that for venue purposes, what matters are the EPA's *core* determinations. In the case of the Denial Actions, these determinations were of nationwide scope and effect. And because the Administrator made and published the required determination, venue is only proper in the D.C. Circuit.

II.

There remains the matter of what our sister circuits have already done with this exact same case. The Third, Seventh, and Tenth Circuits transferred the relevant petitions to the D.C. Circuit, and the Ninth Circuit dismissed the petitions. No Circuit has kept the case for itself—until today.

Congress designed § 7607(b)(1) to "prioritize efficiency,"[22] and with the majority's decision today, this Court has impermissibly interfered with Congress's stated preference for "centralized review of national issues" over "piecemeal review . . . in the regional circuits."[23] To these eyes, its decision looks away from "general congressional direction in an attempt to do justice," an unfortunate overreach this day by my colleagues.[24] I must respectfully dissent.

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[22] *Nat'l Ass'n of Mfrs.*, 583 U.S. at 130.

[23] *Texas 2011*, 2011 WL 710598, at *4.

[24] 41 Fed. Reg. 56767 (Dec. 30, 1976) (Comments of G. William Frick).

APPENDIX B

June 2022 Denial of Petitions for RFS Small Refinery Exemptions

June 2022 Denial of Petitions for RFS Small Refinery Exemptions

United States Environmental Protection Agency

EPA United States Environmental Protection Agency

EPA-420-R-22-011
June 2022

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EXECUTIVE SUMMARY

Small Refinery Exemption (SRE) Denial and Related Compliance Actions

In this action, the Environmental Protection Agency (EPA or "the Agency") is denying 69 petitions from 33 small refinery petitioners seeking exemption from their Renewable Fuel Standard (RFS) obligations for the 2016-2021 compliance years. This final action (hereinafter the "SRE Denial") is a single action, but it is comprised of the adjudications of 69 SRE petitions.

On December 7, 2021, EPA proposed to deny 65 pending SRE petitions (the "Proposed Denial") based on a proposed revision of EPA's interpretation of Clean Air Act ("CAA" or "the Act") SRE provisions. On April 7, 2022, EPA acted on 36 SRE petitions that were remanded to the Agency by the U.S. Court of Appeals for the D.C. Circuit on December 8, 2021.[1]

In this action, EPA is acting on 69 SRE petitions that remain pending after the April 2022 SRE Denial. EPA has received and considered all the comments received on the Proposed Denial and addresses those comments in this action.

In separate actions, EPA is providing: (1) A supplement to the alternative compliance demonstration is-

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[1] "April 2022 Denial of Petitions for RFS Small Refinery Exemptions," EPA-420-R-22-006, April 2022 (hereinafter the "April 2022 SRE Denial"). On January 3, 2022, EPA provided notice that the 36 remanded 2018 SRE petitions were again before the Agency, and that EPA was expanding the Proposed Denial to include them and requesting comment on that approach. Memorandum: Scope of Action and Notification," EPA-HQ-OAR-2021-0566-0027.

sued on April 7, 2022,[2] for 31 small refineries whose SRE petitions EPA initially granted for the 2016-2018 compliance years, but now, on remand, were denied in this action or the April 2022 SRE Denial; and (2) A notice of proposed rulemaking for an alternative RIN retirement schedule for all small refineries for their renewable volume obligations (RVOs or "RFS obligations") for the 2020 compliance year.[3] Under the June 2022 Compliance Action, EPA has determined that, if it were to require these 31 small refineries to comply with their newly created 2016-2018 RFS obligations[4] under the existing compliance scheme, the impact on the RFS program as a whole, in addition to the impacts on the individual small refineries, would be unacceptable due to the unavailability of sufficient RINs to satisfy these new obligations. Thus, that concurrent action provides an alternate compliance approach by which these small refineries can demonstrate compliance with their 2016-2018 RFS obligations that they otherwise would not be able to meet.

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[2] "June 2022 Alternative RFS Compliance Demonstration Approach for Certain Small Refineries," EPA-420-R-22-012, June 2022 (hereinafter the "June 2022 Compliance Action").

[3] "Renewable Fuel Standard (RFS) Program: Alternative RIN Retirement Schedule for Small Refineries Notice of Proposed Rulemaking" (hereinafter the "Alternative RIN Retirement Schedule NPRM"). A pre-publication version of this proposed rule is available at https://www.epa.gov/renewable-fuel-standard-program/proposed-alternative-rinretirement-schedule-small-refineries. A small refinery's 2020 RVOs would also include any RIN deficit carried forward from the 2019 compliance year.

[4] The 2018 RFS obligations were newly created by the April 2022 SRE Denial. The 2016 and 2017 RFS obligations are newly created by this action.

The Alternative RIN Retirement Schedule NPRM would provide small refineries with more time to comply with their 2020 RFS obligations by creating quarterly RIN retirement deadlines by which a small refinery must comply with certain percentages of its 2020 RFS obligations; it would also expand the range of RIN vintages that a small refinery could use to demonstrate compliance with its 2020 obligations. EPA is proposing this action because small refineries need more flexibility to comply with their RFS obligations given EPA's reasonable delay in deciding SRE petitions and setting the associated RFS compliance deadlines. This proposed action initiates a rulemaking that is separate from EPA's June 2022 SRE Denial and for which EPA is establishing a public comment period.

Grounds for the SRE Denial

The Proposed Denial

EPA issued the Proposed Denial in response to the conclusion of litigation that addressed historical inconsistencies in EPA's treatment of SREs since 2011. First, in *Renewable Fuels Association v. EPA*, the U.S. Court of Appeals for the Tenth Circuit Court found that EPA had exceeded its statutory authority by granting extensions of the SREs held by certain small refineries and remanded those decisions to the Agency for reconsideration. The court held that: (1) In granting exemptions based on economic factors unrelated to compliance with the RFS program, EPA had exceeded its statutory authority to exempt small refineries from their RFS obligations "for the reason of disproportionate economic hardship [DEH]" because the statute authorizes EPA to extend exemptions only where RFS compliance costs are the cause of the small refinery's hard-

ship; (2) EPA had acted arbitrarily and capriciously in granting exemptions without explaining whether and how the subject SRE grants were consistent with EPA's firmly established position that all parties subject to RFS obligations recover their compliance costs through a feature of the market EPA identified as "RIN cost passthrough;" and (3) In order to be eligible to petition for extension of an SRE, a small refinery needed a continuous, uninterrupted exemption history beginning with the CAA section 211(*o*)(9) blanket statutory exemption period for small refineries.

Following the Tenth Circuit's *RFA* opinion, the small refinery intervenors in that case appealed only the holding that, to be eligible for exemption, a small refinery needed a continuous, uninterrupted exemption history. In *HollyFrontier Cheyenne Refining, LLC, et al. v. Renewable Fuels Association, et al.*, the Supreme Court held that the term "extension" as used in CAA section 211(*o*)(9)(B) does not include a continuity requirement and reversed the Tenth Circuit opinion on that issue.

After evaluating this jurisprudence, refinery-specific materials submitted by many small refineries to support of their SRE petitions in the wake of the Supreme Court's ruling, years of experience and data collected by implementing the RFS program and SRE provisions, and our exhaustive analysis of how the RFS credit market functions, EPA determined that the Tenth Circuit provided the best reading of the SRE statutory provisions and issued the Proposed Denial, based on EPA's conclusion that small refineries cannot demonstrate they suffer DEH caused by the cost of compliance with the RFS program. EPA proposed the following findings: (1) Regardless of the mechanism by which any

obligated party—including small refineries—comply with their RFS obligations, RFS compliance costs are the same for all obligated parties and thus no party bears RFS compliance costs that are disproportionate relative to others' costs; (2) Any obligated party—including small refineries—recovers their compliance costs through the market price they receive when they sell their fuel products and thus do not bear a hardship created by compliance with the RFS program; and (3) With no disproportionality and no economic hardship, there can be no DEH pursuant to the statute. EPA therefore proposed to revise its CAA statutory interpretation to extend SREs only to small refineries whose claimed DEH is caused by the cost of complying with the RFS program and not by other factors and to deny 65 pending SRE petitions on this basis. Further, EPA proposed to deny SRE petitions submitted by any small refinery that had not received the initial blanket statutory exemption under CAA section 211(*o*)(9).

The Notice-and-Comment Process

Recognizing the complexity of the Agency's past implementation of the SRE provisions, recent litigation, and the significance and potential ramifications of the proposed changes in SRE interpretations to refineries and the entire RFS program, EPA requested comment on the Proposed Denial to ensure that RFS stakeholders and the public had an opportunity to provide input on the proposed shift in interpretation of the SRE statutory provisions, as well as to submit refinery-specific information related to the proposed SRE petition denials. EPA chose to undertake a notice-and-comment process to provide maximum transparency, as we proposed to address past inconsistencies in SRE implementation

and new case law providing a better read of the SRE statutory provisions.

As set forth herein, EPA received numerous individual comments from various RFS stakeholders, most of which are available in the public docket for this action; however, some of the comments from petitioning small refineries provided unique, refinery-specific information submitted under claims of confidentiality that are, therefore, being addressed in appendices that will be provided only to the individual commenters. EPA has carefully considered all comments received and provides responses to those comments in Appendix B and in confidential, refinery-specific appendices to this action. While this final action adjudicates 69 SRE petitions for the 2016-2021 compliance years, many small refineries' comments raised arguments and provided data applicable to more than one of their pending SRE petitions. EPA considered and responded to all information relevant to the remanded 2018 SRE petitions in the April 2022 SRE Denial. In this action, EPA considers and responds to comments relating to 69 SRE petitions for the 2016-2021 compliance years.

First, EPA received similar comments from most small refineries and their trade associations challenging the validity of the Proposed Denial's approach to DEH. Many submitted refinery-specific information about their operations, finances, and the fuels markets in which they participate to support their arguments that they should receive SREs. Because the same arguments were repeated by most, if not all, SRE petitioners, EPA presents and responds to them as a group in Section IV.D.3. These comments articulate the following general themes:

(a) Small refineries face unique challenges that prevent them from achieving RIN cost passthrough and EPA must consider their specific circumstances;

(b) EPA's Point of Obligation denial is not relevant to SRE policy because it did not address their situations and does not apply to them;

(c) The Point of Obligation denial is out of date and inapplicable;

(d) Revenue from RIN sales allows large retailers to undercut small refineries;

(e) Large integrated refiners set prices in fuels markets, undercutting small refineries on price because of their market position and because large integrated refiners have lower or no RIN costs;

(f) EPA is incorrect about there being parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market;

(g) Single-site refineries are disadvantaged relative to large integrated refiners because they only have access to a limited market; and

(h) Small refineries that produce primarily diesel fuel are at a disadvantage because they cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

After addressing the universal comments described above, EPA presents and responds to unique comments received from a range of RFS stakeholders—including refineries and their trade organizations, biofuel produc-

ers and their trade organizations, and a number of local, state, and federal officials—in Appendix B and, where applicable, in confidential, refinery-specific appendices to this action. The comments addressed in Appendix B focus on EPA's notice-and-comment process for proposing and finalizing the SRE Denial, EPA's legal authority to take this final action, and how the SRE Denial may affect the RFS program as a whole. The comments addressed in the refinery-specific appendices focus on information submitted by many refineries under claims of confidentiality regarding their specific operations and finances, and studies commissioned based on such confidential information to evaluate the RFS economic findings described in the Proposed Denial.

After careful consideration of all the comments received as well as all other available information regarding the RFS program, the operation of the RIN market, and the validity of our DEH analysis, EPA is here adopting and applying its proposed SRE statutory interpretations and denying 69 pending SRE petitions.

I. Final Adjudication Summary and Process

This section summarizes EPA's final action and the public process the Agency has followed to reach its decision. EPA has determined that any small refinery seeking an exemption from its RFS obligations must: (1) Demonstrate that any DEH it claims to experience is caused by compliance with the RFS program; and (2) Reconcile any such showing with RIN cost passthrough.[5] EPA has also changed its criteria for assessing a refinery's eligibility to receive an exemption

[5] This approach is described in more detail in Section III. The RIN cost passthrough phenomenon is explained in Section IV.D.2.

from its RFS obligations; we now require a small refinery to have received the original statutory exemption under CAA section 211(*o*)(9)(A)(i) in order to be eligible to petition for an extension of that exemption, though, consistent with the Supreme Court's holding in *HollyFrontier*,[6] a small refinery need not have received continuous exemptions since the original statutory exemption.[7]

On December 7, 2021, EPA issued the Proposed Denial. On December 8, 2021, the D.C. Circuit remanded 36 2018 SRE petitions.[8] On January 3, 2022, EPA provided notice that it was considering deciding the 36 SRE petitions under the Proposed Denial and requested comment on that approach. On April 7, 2022, EPA denied the 36 2018 SRE petitions consistent with the Proposed Denial. After analyzing the petitions, applying the new approach to DEH, and for the reasons described in this document, EPA is denying 69 pending SRE petitions for the 2016-2021 compliance years. EPA received numerous comments on the process utilized in reaching this final action, and we have responded to those comments in Appendix B.

In addition to denying 69 pending SRE petitions on DEH grounds, EPA is also finding that there are alternative grounds to deny four pending SRE petitions from two refineries, each for the 2019 and 2020 compliance years, because they did not receive the original statutory

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[6] *See HollyFrontier Cheyenne Refining, LLC, et al. v. Renewable Fuels Ass'n, et al.*, 114 S. Ct. 2172, 2181 (2021) (*HollyFrontier*).

[7] Refinery eligibility is explained in Section IV.A.

[8] *See, e.g.*, Order, Doc. No. 1925942, Dec. 8, 2021, *Sinclair Wyo. Refining Co. v. EPA,* No. 19-1196 (consol. with 19-1197) (D.C. Cir.).

blanket exemption under CAA section 211(*o*)(9)(A)(i).[9] Additionally, EPA is finding that one of the two refineries is ineligible to petition for an exemption for the 2019 and 2020 compliance years because it exceeded the crude oil throughput limit of 75,000 barrels per day in 2019, thereby making the refinery ineligible for an exemption in those two years pursuant to applicable EPA regulations.[10] EPA received comments from these refineries under claims of confidentiality and has responded to those comments in confidential, refinery-specific appendices. EPA has also responded to generalized comments on eligibility to petition for an SRE in Appendix B.

This final agency action therefore adjudicates 69 pending SRE petitions by: (1) Clearly articulating EPA's current interpretation of its statutory authority to grant SREs; (2) Presenting our analysis of all available data on RFS costs and market dynamics, including our response to comments received on the Proposed Denial; and (3) Denying 69 pending SRE petitions based on the current statutory interpretation and analysis described herein in a single action. EPA's final action on the pending SRE petitions is based on the legal and factual analysis presented herein, after consulting with the Department of Energy (DOE), and considering the 2011 DOE small refinery study, "other economic factors,"

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[9] While we determine in this action that these two refineries are ineligible to petition for SREs, this determination is made in the alternative, because EPA has denied these four petitions as part of the 69 pending SRE petitions denied by this action on DEH grounds for the reasons described herein. Therefore, even if the refineries are later deemed eligible to petition for exemptions, their four SRE petitions pending before EPA are denied for substantive reasons.

[10] 40 CFR 80.1401 and 80.1441(e)(2)(iii).

and public comments submitted in response to our request for comment on the Proposed Denial.[11]

While this single final action adjudicates 69 SRE petitions, we intend for this adjudication to be severable in these articulated ways. First, we intend for the two distinct statutory interpretations we adopt in this action to be severable. If a reviewing court invalidates our interpretation that DEH must be caused by compliance with the RFS program, our interpretation on eligibility to petition for and receive an exemption would still stand. Second, it is our intent that the separate action we are taking to provide an alternative compliance demonstration be severable from the decision to deny the SRE petitions. While the need for the alternative compliance demonstration flows from this adjudication, each action is separate and independent from the other. This adjudication, consistent with the statute and applicable case law, denies 69 SRE petitions. The separate June 2022 Compliance Action providing compliance flexibility determines how the identified 31 small refineries will demonstrate compliance with their newly created 2016-2018 obligations. As these actions utilize differing authorities and operate independently, we intend for them to be severable.

This document provides a sequential explanation of EPA's current approach to SRE petition evaluation and the data we analyzed to support this approach. It begins, in Section II, by providing background on the RFS program, compliance with the RFS program, and the

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[11] EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2021-0566. Supporting materials for this action and comments received on the Proposed Denial can be found there.

SRE provisions of that program. Section II also provides a brief history of EPA's approach to evaluating SRE petitions and judicial review of EPA's past SRE decisions. Section III presents the statutory requirements for EPA's evaluation of SRE petitions and EPA's new approach to SRE evaluation. Section IV provides EPA's analysis of the SRE eligibility and petition requirements and statutory construction of the CAA's SRE provisions. It also presents a detailed explanation of RFS market economics including the costs of RFS compliance on obligated parties, and the implications of those costs on DEH. Section IV also includes a description of how EPA satisfied the statutory requirements for this action,[12] then summarizes and responds to the arguments advanced by the petitioning small refineries, and others that commented on the Proposed Denial, as to how and why RFS compliance could cause DEH.[13] Section V describes the separate, concurrent actions EPA is taking to provide certain small refineries with an alternative compliance demonstration for their 2016-2018 RFS obligations and all small refineries with an alternative RIN retirement schedule for their 2020 RFS obligations. Lastly, Section VI provides EPA's

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[12] In evaluating SRE petitions, CAA section 211(*o*)(9)(B)(ii) requires the Administrator, in consultation with the Secretary of Energy, to consider the findings of the DOE study performed under CAA section 211(*o*)(9)(A)(ii)(I) and other economic factors. A memorandum summarizing the consultation between EPA and DOE can be found in the docket for this action.

[13] A summary of the substantive comments EPA received that were not submitted under claims of confidentiality, and EPA's responses to those comments, can be found in Appendix B. EPA has responded to confidential information submitted by the petitioning small refineries in their comments through confidential, refinery-specific appendices to this action.

conclusion to deny 69 SRE petitions based on all the information presented herein and information regarding judicial review of this final action.

II. Background

This section describes the RFS program in general, including the SRE provisions of the program, as well as how EPA has implemented the SRE provisions in the past.

A. RFS Program

In 2005 and 2007, Congress amended the CAA to establish the RFS program.[14] Congress enacted this program to "move the United States toward greater energy independence and security" and to "increase the production of clean renewable fuels," among other purposes.[15] The statute specifies increasing annual "applicable volumes" for four categories of renewable fuel for the transportation sector: total renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel (BBD).[16] The specified applicable volumes for renewable fuel, advanced biofuel, and cellulosic biofuel are prescribed for each year through 2022, and for BBD through 2012; EPA must determine the applicable volumes for subsequent years.[17]

Congress directed EPA to establish a compliance program and annual percentage standards to ensure that

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[14] *See* Energy Policy Act of 2005 (EPAct), Pub. L. No. 109-58, 119 Stat. 594; Energy Independence and Security Act of 2007 (EISA), Pub. L. No. 110-140, 121 Stat. 1492

[15] 121 Stat. 1492.

[16] CAA section 211(*o*)(2)(B)(i)(I)-(IV).

[17] *Id.*

the applicable volumes are used each year.[18] To calculate these percentage standards, EPA divides the applicable volume for each type of renewable fuel established in the CAA or determined by EPA[19] by the Energy Information Administration's estimate of the national volume of transportation fuel that will be introduced into commerce in that year.[20] For example, if EPA set the percentage standard for total renewable fuel at 10%, an obligated party that produced 1,000,000 gallons of gasoline one year would need to ensure that 100,000 gallons of renewable fuel was introduced into the market that year.

Congress authorized EPA to place the obligation to satisfy the applicable percentage standards on "refineries, blenders, and importers, as appropriate."[21] By regulation, EPA determined that refineries and importers of gasoline and diesel fuel must fulfill the requirements of the RFS program.[22] These "obligated parties" apply the percentage standards to their own annual production (or importation) of gasoline and diesel fuel to calculate their individual renewable volume obligation (RVO or "RFS obligation") for each category of renewable fuel. Thus, the RFS standards place the same obligation on all producers and importers of gasoline and die-

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[18] *Id.*; CAA section 211(*o*)(2)(A)(i), (iii), and (3)(B)(i).

[19] CAA section 211(*o*)(2)(B), (7)(A), and (7)(D)-(F).

[20] CAA section 211(*o*)(3)(A).

[21] CAA section 211(*o*)(3)(B)(ii)(I).

[22] 40 CFR 80.1406. For simplicity this document focuses on refiners; however, the same concepts of RIN costs, RIN cost pass-through, and RIN discount for blended fuel also apply to importers.

sel fuel in proportion to their production (or importation) volume.

B. Renewable Identification Numbers (RINs)

The CAA requires EPA to establish a credit trading program allowing obligated parties that acquire excess credits in one year to apply credits toward compliance in a subsequent year or to sell the credits to another obligated party for use in its own compliance.[23] In conjunction with EPA's authority under CAA section 211(*o*)(2)(B) to put in place implementing regulations for the RFS program, and in compliance with CAA section 211(*o*)(5), EPA designed a flexible and comprehensive system of tradable credits (Renewable Identification Numbers or RINs). Section 211(*o*)(5) required only that EPA allow for the generation and trading of credits for obligated parties that refine, blend, or import excess renewable fuel. The RIN system fulfills that statutory provision, and also creates a fungible system of credit trading by not just obligated parties but also renewable fuel producers and others, creating an open, liquid market for RINs to allow obligated parties to comply with their RFS obligations.

Under the RIN system, producers and importers of renewable fuel generate RINs for each gallon of renewable fuel they import or produce for use in the United States.[24] RINs are "assigned" to batches of renewable fuel by the producers and importers of renewable fuel.[25] RINs may be "separated" from those batches by a party that blends the renewable fuel into gasoline or fossil-

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[23] CAA section 211(*o*)(5)(A)-(C).

[24] 40 CFR 80.1426(a).

[25] 40 CFR 80.1426(e).

based diesel fuel to produce a transportation fuel, heating oil, or jet fuel.[26] Once separated, RINs may be kept for compliance or sold.[27] Obligated parties may use a RIN to demonstrate compliance for the compliance year in which the RIN is generated, or for the following compliance year (for up to 20% of an obligated party's obligations).[28] An obligated party may not use a RIN for any subsequent compliance years because the RIN has expired, is now invalid, and therefore not useable for compliance purposes.[29] Obligated parties meet their RFS obligations by accumulating RINs and "retiring" them in an annual compliance demonstration.[30] The statute and RFS regulations also provide that, in lieu of retiring the requisite number of RINs to show compliance for a particular compliance year, an obligated party may choose to carry forward a RIN deficit into the following compliance year under certain conditions.[31] An obligated party may carry forward a RIN deficit equal to its full or partial RFS obligations in a given compliance year, but must satisfy the deficit in full the subsequent compliance year, along with the obligations for that subsequent year in full (i.e., the obligated party cannot carry forward the subsequent compliance year's obligations as a deficit).

The price of the RIN is expected to reflect the marginal difference between the supply price for the renewable fuel and the demand price for the renewable fuel,

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[26] 40 CFR 80.1429(b).

[27] 40 CFR 80.1425-29.

[28] 40 CFR 80.1427(a)(6), 80.1428(c), and 80.1431(a).

[29] 40 CFR 80.1427(a)(6), 80.1428(c), and 80.1431(a).

[30] 40 CFR 80.1427(a).

[31] CAA section 211(*o*)(5)(D), 40 CFR 80.1427(b).

which is the price the market is willing to pay for the renewable fuel as a transportation fuel.[32] In other words, if it costs more to produce the renewable fuel than consumers are willing to pay for it, the RIN price would be expected to match that cost difference so that, in the end, the fuel price for consumers is the same.[33] The price of the RIN, therefore, provides the "discount" on the renewable fuel necessary for the market to consume the renewable fuel. This dynamic functions to incentivize blending and use of the renewable fuel up to the mandated volume even if the market demand price for the renewable fuel would not cover the cost of its production. In this way, the RIN price facilitates greater use of renewable fuel as the RFS program was designed to do. Throughout this document we refer to the cost difference described here as the "RIN discount."

The design of the RIN trading system enabled parties that were already producing and blending renewable fuel to continue to do so. They could then sell excess RINs to obligated parties that lacked blending capability. This open trading market for RINs provides three main benefits. First, it allows all obligated parties, regardless of size or situation, equal ability to comply with their RFS obligations immediately without hav-

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[32] *See* "A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effect," Dallas Burkholder, Office of Transportation and Air Quality, US EPA, May 14, 2015, pg. 7 (hereinafter the "Burkholder memo").

[33] Throughout this document we use the term "consumer" to refer to wholesale and retail consumers alike as RIN prices pass through both levels of the market. Where we are specifically describing the sale from terminals or refinery racks we refer to the purchaser of the fuel at wholesale as the "wholesale purchaser."

ing to invest capital or resources. They can contract with others already providing the services and/or go into the open market to acquire RINs. Second, this system averts the need for each individual obligated party to purchase and blend renewable fuel into its own gasoline and diesel fuel.[34] Thus, the program was designed to "preserve[] existing business practices for the production, distribution, and use of both [petroleum] and renewable fuel."[35] Third, it levels the playing field for the cost of compliance, with all obligated parties having access to the RINs needed for compliance at the same cost, regardless of whether they acquire the needed RINs by purchasing them on the open market or by blending renewable fuel themselves. The RFS program, through the RIN system, was designed to avoid creating DEH based on whether compliance is achieved through blending of renewable fuel or through purchasing RINs.

C. RFS Compliance and RIN Market Dynamics

Congress structured the RFS program to impose proportional requirements on all obligated parties, including small refineries. The RFS obligations are established as a percentage of an obligated party's production (or importation) of gasoline and diesel fuel;[36] therefore, by definition, the obligation is proportional to the quantity of gasoline and diesel fuel that a party produces

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[34] Complying with such a requirement would have been difficult, if not impractical for obligated parties, as different renewable fuels are blended into gasoline and diesel fuel and pipeline operators normally do not allow gasoline or diesel fuel containing renewable fuel to be transported through their pipelines.

[35] "RFS1 Summary and Analysis of Comments," EPA-420-R-07-006 at 1-6, April 2007.

[36] *See supra*, Sections II.A and B.

(or imports) each year.[37] Obligated parties must acquire RINs to meet their RFS obligations,[38] either through their own blending of renewable fuel or through the purchase of RINs from other parties that produce or blend renewable fuel. Obligated parties must demonstrate compliance annually by retiring RINs requisite with their RFS obligations.

The cost of acquiring RINs is the same for all parties regardless of whether the RINs needed to comply are acquired by blending renewable fuel or by procuring RINs from others.[39] This occurs through the phenomena of RIN discount and RIN cost passthrough, introduced in the Executive Summary and explained in detail throughout this document. Parties that blend more renewable fuel than they need to satisfy their RFS obligations may show an apparent revenue source from the

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[37] *See* CAA section 211(*o)*(3)(B); 40 CFR 80.1407.

[38] For purposes of the RFS program, transportation fuel is defined as "fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels)." 40 CFR 80.1401. The regulations at 40 CFR 80.1406 establish that "[a]n obligated party is any refiner that produces gasoline or diesel fuel within the 48 contiguous states or Hawaii, or any importer that imports gasoline or diesel fuel into the 48 contiguous states or Hawaii during a compliance period." The regulations at 40 CFR 80.1407 establish that, in practice, an RFS obligation is imposed only on gasoline and ultra-low-sulfur diesel (ULSD) used in motor vehicles, nonroad engines, locomotives, and marine engines (historically called MVNRLM diesel fuel). Such gasoline and diesel fuel only incur an obligation if used in the RFS "covered location" as defined in 40 CFR 80.1401. Throughout this document we refer to fuel that incurs an RFS obligation (i.e., gasoline and diesel fuel) as "obligated fuel" and fuel that does not incur an RFS obligation (e.g., heating oil, jet fuel) as "non-obligated fuel."

[39] *See infra*, Section IV.D.2.

sale of those RINs. However, in the competitive fuels market, parties that sell RINs acquired through blending renewale fuels must discount the price of their blended fuel by the value of the RINs associated with the renewable fuel in the fuel blend.[40] If parties that blend renewable fuel into transportation fuel do not discount the price of their blended fuel by the market price of the RIN, then their blended fuel would be priced higher than the same fuel where the producer has discounted the fuel by the price of the RIN, and the non-discounted fuel would never sell. Therefore, in order to price their products competitively in the fuels market, parties that blend renewable fuel into transportation fuel must reduce the price of their blended fuel by the price of the RIN (RIN discount). Thus, the revenue from the RIN sale is used to offset the discounted sales price of the blended fuel and is passed through to consumers through reduced market prices for the blended fuels. Moreover, the RFS program imposes the same cost on all parties that produce (or import) gasoline or diesel fuel nationwide[41] because the market price for all gasoline and diesel fuel increases to reflect this RIN price (RIN cost passthrough), much as it would increase in response to a new tax. This relationship between RIN prices and the market prices for blended fuels was first analyzed by EPA in 2015.[42]

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[40] Burkholder Memo, pg. 24.

[41] In this document, the term "nationwide" refers to the RFS "covered location," which the RFS regulations define as "the contiguous 48 states of the United States, Hawaii, and any state or territory that has received an approval from the Administrator to opt-in to the RFS program under §80.1443." 40 CFR 80.1401.

[42] Burkholder Memo, pg. 22.

In this document we refer to an obligated party's ability to recover the cost of the RINs it acquires for compliance as "RIN cost passthrough," since obligated parties are passing these costs through to wholesale purchasers. We refer to the lower prices received for blended fuel (i.e., gasoline and diesel fuel blended with renewable fuel) enabled by the sale of RINs as "RIN discount," since the sale of the RIN allows blenders to discount the price of the blended fuel. We find that all types of obligated parties have the same cost to acquire RINs, and that all types of obligated parties recover these costs when they sell the gasoline and diesel fuel they produce (or import) at the market price (RIN cost passthrough). Further, we find that blenders use revenue from RIN sales to discount the price of blended fuel (RIN discount). We therefore conclude that compliance with the RFS program cannot cause DEH for small refineries.[43]

D. History of SREs

A small refinery is defined by the CAA as "a refinery for which the average aggregate daily crude oil throughput for a calendar year . . . does not exceed 75,000 barrels."[44] Both the original RFS statutory provisions

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[43] The economic theory supporting EPA's findings on RIN cost passthrough and the RIN discount, the market data we have evaluated in reaching these findings, and more detailed explanations on how various parties in the fuels market are affected by the RFS program are discussed in Section IV.D.2.

[44] CAA section 211(*o*)(1)(K). Thus, a "small refinery" is determined based on the annual volume of crude oil processed at the refinery, not on the size of the company that owns the refinery. Indeed, many "small refineries" are owned by large multi-national companies.

enacted pursuant to the Energy Policy Act (EPAct) and the current text of the statute as amended by the Energy Independence and Security Act (EISA) provided all small refineries an initial blanket exemption from their obligations under the RFS program until calendar year 2011.[45] Under EPA's regulations, small refineries that were producing either "gasoline" under RFS1[46] or "transportation fuel" under RFS2[47] were required to notify EPA that they qualified for the temporary exemption by submitting verification letters stating their average crude oil throughput rate during the applicable qualification period.[48] Further discussion of EPA's past and current interpretation of small refinery eligibility criteria is provided in Section IV.A.

The CAA includes two additional provisions regarding extensions of the SRE for the period after the initial blanket exemption expired:

1) Under the first statutory mechanism, applicable to 2011 and 2012, if DOE determined, through a study mandated under the CAA, that compliance with the RFS requirements would impose DEH on a small refinery, EPA was required to extend the small refinery's exemption by at least two

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[45] CAA section 211(*o*)(9)(A)(i).

[46] "Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program," 72 FR 23900 (May 1, 2007).

[47] 40 CFR 80.1441(a)(1).

[48] 72 FR 23900, 23924 (May 1, 2007); 40 CFR 80.1441(b). EPA's regulations allowed for small refineries that had submitted verification letters to qualify for the original statutory exemption under EPAct / RFS1 to also qualify under the SRE provisions in EISA / RFS2. The small refineries were not required to re-certify their throughput to maintain eligibility under the RFS2 program.

years.[49] In 2009, DOE completed its study and found that, in a liquid and competitive RIN market, compliance with the RFS requirements would *not* impose DEH on any small refinery. Subsequently, some members of Congress directed DOE to revisit the 2009 DOE Small Refinery Study[50] and in so doing to solicit input from the small refineries themselves.[51] In 2011, DOE completed a second study that used the small refinery input to develop a set of financial and operational metrics intended to inform DOE whether a small refinery was likely to experience DEH.[52] Contrary to the 2009 DOE Study, the 2011 DOE Study did not assume that RFS compliance costs would be the same for all refineries in a competitive market, and instead, assumed that small refineries could face higher compliance costs by purchasing RINs when compared to large integrated refiners that would acquire RINs through blending. Furthermore, neither study considered the possibility that refineries would recover the cost of RINs through higher prices for their products.[53] DOE organized the metrics into a two-part ma-

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[49] CAA section 211(*o*)(9)(A)(ii)(II).

[50] "EPACT 2005 Section 1501 Small Refineries Exemption Study," Office of Policy and Internation Affairs, U.S. Department of Energy, February 2009 (hereinafter the "2009 DOE Study").

[51] Senate Report 111-45, at 109 (2009).

[52] "Small Refinery Exemption Study, An Investigation into Disproportionate Economic Hardship," Office of Policy and International Affairs, U.S. Department of Energy, March 2011 (hereinafter the "2011 DOE Study").

[53] *See infra*, Section IV.D.

trix with sections addressing "disproportionate impacts" and "viability impairment."[54] DOE also developed a scoring protocol for the matrix that required the score in both sections of the matrix to exceed an established threshold for DOE to find that DEH existed at a given small refinery. Using this regime, the 2011 DOE Study found that DEH existed at 14 small refineries, but again, assumed that small refineries bore a higher cost of compliance in the acquisition of RINs and that no refineries recovered the RIN compliance costs in the prices for their products. As required by the statute, EPA granted those small refineries a two-year extension of the original exemption (through 2012).

2) The second statutory mechanism provided that small refineries "may at any time petition the Administrator for an extension of the exemption under [section 211(*o*)(9)(A)] for the reason of [DEH]."[55] The Supreme Court recently opined on the meaning of "extension" in the context of CAA section 211(*o*)(9)(B), overturning one holding in the Tenth Circuit's *RFA* opinion that required a small refinery to have continuous exemptions to be eligible for further exemption extensions.[56] When evaluating SRE petitions, the Act directs the Administrator, "in consultation

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[54] 2011 DOE Study at 32-36.

[55] CAA section 211(*o*)(9)(B)(i).

[56] *See HollyFrontier*, 114 S. Ct. at 2181. Consistent with that decision, small refineries that received the initial blanket exemption but have not received continuous exemption extensions remain eligible to petition for future exemptions.

> with the Secretary of Energy," to "consider the findings of the study under [CAA section 211(*o*)(9)(A)(ii)(I)] and other economic factors."[57] After DOE conducted its 2011 DOE Study and EPA granted two-year extensions to the 14 refineries the study identified, additional refineries came forward to EPA to seek exemptions for 2011 and 2012. EPA shared these new petitions with DOE, which applied the matrix scoring methodology developed in the 2011 DOE Study and shared the scoring results with EPA. EPA chose to satisfy the statutory requirements for consultation and consideration of the 2011 DOE Study by using DOE's scoring results in its evaluation of each SRE petition. Consistent with the extensions of exemptions it granted to the 14 small refineries through the 2011 DOE Study, EPA then decided to grant an extension of the exemption to an additional ten small refineries for 2011, and to nine for 2012. Since 2013, EPA has shared all incoming SRE petitions and supplemental information with DOE.[58]

Since 2013, DOE and EPA have changed their treatment of the scoring matrix several times as informed by direction from members of Congress, court decisions, and changing administration policies. For DOE, the

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[57] CAA section 211(*o*)(9)(B)(ii).

[58] DOE continued to make findings to EPA based on its scoring matrix, which does not assess the degree to which small refineries recover their RFS compliance costs in higher prices for their refined products (i.e., it does not consider RIN cost passthrough). *See infra*, Section IV.C, for a description of EPA's current consultation process.

most significant change in approach did not involve the matrix evaluation or the scoring methodology. Rather, in 2016 DOE modified the finding it provided to EPA for a given score on the matrix (i.e., as described below, DOE implemented new direction from Congressional report language to recommend 50% exemptions, as opposed to the exclusively 0% or 100% recommendations in prior years). For EPA, the changes involved the weight EPA afforded DOE's findings relative to the "other economic factors" EPA considered when evaluating SRE petitions. However, in none of these years did EPA require small refineries to demonstrate that they faced RFS compliance costs that were higher than for other obligated parties (i.e., disproportionate), nor did EPA require a demonstration that the hardship was caused by compliance with the RFS program, including an explanation for how compliance costs harmed them in a market characterized by RIN cost passthrough.

In some prior decisions, DOE and EPA concluded that DEH existed only when a small refinery experienced both disproportionate impacts and viability impairment, as measured by the matrix. In response to concerns that the two agencies' threshold for establishing DEH was too stringent, Consolidated Appropriations Act report language directed DOE to recommend 50% relief when a small refinery's score on either section of the matrix exceeded the applicable threshold.[59]

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[59] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at 161 Cong. Rec. H9693, H10105 (daily ed. Dec. 17, 2015): "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner."

Subsequent Senate Report language directed EPA to follow DOE's recommendation, and to report to Congress if it did not.[60] This direction was not included in the Explanatory Statements for the 2022 fiscal year appropriations bill.[61]

The Congressional direction, along with changing administration policies, prompted EPA to change its approach to finding DEH at a small refinery. Whereas EPA had previously exercised discretion in evaluating "other economic factors" in its analysis of a small refinery's petition, EPA changed its approach to instead rely on DOE's findings and began granting a full exemption whenever DOE findings indicated that the small refinery could receive at least 50% relief, based on its matrix score.[62] Under this approach, EPA exempted small re-

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[60] Senate Report 114-281, 71 ("When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016. Should the Administrator disagree with a waiver recommendation from the Secretary of Energy, either to approve or deny, the Agency shall provide a report to the Committee on Appropriations and to the Secretary of Energy that explains the Agency position. Such report shall be provided 10 days prior to issuing a decision on a waiver petition.").

[61] Consolidated Appropriations Act, 2022, Pub. L. No. 117-103 (2022). ("The Committees recognize that the Renewable Fuel Standard (RFS) under Clean Air Act Section 211(*o*)(9) provides that EPA may exempt small refineries from compliance with the RFS in certain circumstances and that a small refinery "may at any time petition the Administrator for an extension of the exemption . . . for the reason of disproportionate economic hardship.")

[62] We note that under this approach, EPA granted full SREs to some very profitable refineries. A substantial number of small re-

fineries from their RFS obligations solely based on this DOE finding, which was derived from metrics that assumed some refineries faced higher RFS compliance costs and that did not account for RIN cost passthrough. Thus, neither EPA nor DOE required any demonstration that the DEH a small refinery claimed to experience was due to the RFS program. Nor did EPA reconcile this reasoning with EPA's own finding that the costs of RINs used for compliance with the RFS program are the same for all obligated parties and passed through by all obligated parties to consumers (RIN cost passthrough).

EPA's approach to evaluating SRE petitions has been challenged several times by small refineries and other parties in different U.S. Courts of Appeals, as well as in the Supreme Court.[63] The approach to evaluating DEH we apply in this action is informed by the outcome of the *RFA* litigation in the Tenth Circuit. Biofuels groups led by the Renewable Fuels Association challenged EPA's actions in granting three individual SREs, and the affected small refineries intervened on EPA's behalf.[64] The court vacated and remanded EPA's ac-

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fineries that showed no viability impairment on the matrix received a 50% waiver finding from DOE, based only on the small refinery's disproportionate impacts score.

[63] *See e.g., Hermes Consol., LLC v. EPA*, 787 F.3d 568 (D.C. Cir. 2015); *Lion Oil Co. v. EPA*, 792 F.3d 978 (8th Cir. 2015); *Sinclair Wyoming Refining Co. v. EPA*, 887 F.3d 986 (10th Cir. 2017); *Ergon-West Virginia, Inc. v. EPA*, 896 F.3d 600 (4th Cir. 2019) (*EWV-I*); *Ergon-West Virginia, Inc. v. EPA*, 980 F.3d 403 (4th Cir. 2020) (*EWV-II*); *Renewable Fuels Ass'n, et al. v. EPA*, 948 F.3d 1206 (10th Cir. 2020) (*RFA*); *Renewable Fuels Ass'n., et al. v. EPA*, No. 19-1220 (D.C. Cir.).

[64] *RFA* at 1206.

tions for three reasons. First, under the Tenth Circuit's reading of the CAA, a small refinery would be eligible for SRE relief only if it has received extensions of the initial exemption in every year since 2010.[65] Second, the court found that EPA may grant relief only when it finds that the small refinery would suffer DEH caused by compliance with the RFS program and not due, even in part, to other factors.[66] Third, the court held that EPA had acted arbitrarily and capriciously by failing to explain how granting the exemptions was consistent with the Agency's longstanding findings on RIN cost passthrough.[67]

After the Tenth Circuit's *RFA* opinion, the small refinery intervenors petitioned the Supreme Court for a writ of certiorari, appealing only the Tenth Circuit's first holding that, in order to be eligible for exemption, a small refinery needed a continuous, uninterrupted exemption history.[68] The Supreme Court granted the petition for a writ of certiorari and reviewed the Tenth Circuit's holding. EPA—which changed its prior litigation position—and RFA filed briefs in opposition, arguing that the Court should uphold the Tenth Circuit's ruling. On June 25, 2021, the Supreme Court held that the term "extension" as used in CAA section 211(*o*)(9)(B) does not include a continuity requirement and reversed the Tenth Circuit opinion only on that issue.[69] The Supreme Court did not review the other two holdings in *RFA* as those were not appealed by the small refineries,

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[65] *RFA* at 1244-49.

[66] *Id.* at 1253-54.

[67] *Id.*

[68] Pet. for Writ of Certiorari at (i), *HollyFrontier*.

[69] *HollyFrontier*, 141 S. Ct. at 2183.

and on July 29, 2021, the Tenth Circuit issued its mandate in *RFA*. On August 19, 2021, EPA filed a motion for clarification regarding the legal effect of the court's mandate. The Agency stated that, if the court concluded no further clarification was needed, EPA would proceed with its understanding that the alternative holdings of RFA remain in effect and the SRE decisions at issue in *RFA* are remanded to EPA without vacatur.[70]

On August 26, 2021, the court denied EPA's motion.[71] Accordingly, EPA considers the remaining holdings of *RFA* to remain in effect, as explained to the court in its motion.

After the Supreme Court issued its opinion in the *HollyFrontier* case, EPA met with several of the petitioning small refineries in individual meetings,[72] received additional supplemental information from petitioning small refineries,[73] informed all petitioning small refineries of the opportunity to submit additional information to EPA for consideration,[74] and conducted an

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[70] EPA's Motion for Clarification of the Court's July 29, 2021 Mandate at 2, *RFA*, 948 F.3d 1206 (10th Cir. August 19, 2021).

[71] Order, *id.* (10th Cir. August 26, 2021).

[72] *See* "Memorandum on EPA Meetings with Individual Small Refinery Petitioners Between June 25, 2021, and December 7, 2021," available in the docket for this action.

[73] These supplemental materials were submitted under claims of confidentiality and are, therefore, not included in the public record. Where the supplemental information was not confidential or such that EPA could aggregate and summarize it, we have done so and provided this information and our responses to it in Appendix B. We have also responded to confidential information through confidential, refinery-specific appendices to this action.

[74] Email from Karen Nelson, EPA, sent bcc to all SRE petitioners (August 17, 2021) (email on record with EPA).

open meeting with the small refineries, inviting them to participate and provide feedback.[75] EPA then issued its Proposed Denial[76] on December 7, 2021, which initiated a public comment period allowing all interested parties to inform this final analysis and decision.[77] We especially sought additional information that would support or refute the proposed finding that small refineries do not experience DEH *caused* by compliance with the RFS program. We also requested information demonstrating that the cost of compliance with the RFS program is the same for all obligated parties and is passed on to consumers.

On December 8, 2021, the U.S. Court of Appeals for the D.C. Circuit granted EPA's motion for voluntary remand without vacatur of EPA's final action granting or denying 36 SRE petitions for the 2018 compliance year and ordered EPA to issue new decisions by April 7, 2022. EPA had requested remand without vacatur to reconsider the final action in light of the intervening judicial opinions and to provide a more robust explanation for any action taken on remand.[78] After the court granted EPA's motion for remand, EPA notified the 2018 SRE petitioners of the remand via emails to each individual petitioner, requesting comment on "whether or not to

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[75] Email from Byron Bunker, EPA, with meeting invite sent bcc to all SRE petitioners (August 16, 2021) (email on record with EPA).

[76] "Proposed RFS Small Refinery Exemption Decision," EPA-420-D-21-001, December 2021 (hereinafter the "Proposed Denial").

[77] 86 FR 70999 (December 7, 2021).

[78] *See, e.g.,* EPA's Motion for Voluntary Remand Without Vacatur, *Sinclair Wyoming Refining Co. v. EPA*, No. 19-1196 (D.C. Cir. August 25, 2021), pg. 5.

include those 36 petitions under the Proposed Denial of other pending SRE petitions or to adjudicate the petitions separately," and inviting comment on "any aspect of this issue."[79] On April 7, 2022, EPA denied the 36 remanded SRE petitions for the 2018 compliance year. EPA is now taking final action on 69 SRE petitions consistent with the April 2022 SRE Denial and the Proposed Denial.

III. EPA's Approach to Determining DEH When Evaluating SRE Petitions

This section describes EPA's approach to evaluating SRE petitions based on DEH, as explained in more detail in the remainder of this document. Section 211(*o*)(9)(B)(i) of the CAA authorizes the EPA Administrator to temporarily exempt small refineries from their RFS obligations for the reason of DEH. The statute directs EPA, in consultation with DOE, to consider the DOE Study and other economic factors in evaluating SRE petitions. The statute does not define "disproportionate economic hardship" and identifies no particular "economic factors" to be considered, giving EPA "substantial discretion" for purposes of implementing these exemption provisions.[80] EPA, however, must interpret

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[79] "Memorandum: Scope of Action and Notification," EPA-HQ-OAR-2021-0566-0027.

[80] *Hermes*, 787 F.3d at 575 ("The statute gives no further instruction and identifies no particular economic factors or metrics to be considered. That sort of statutory silence about the particular factors that an agency must consider conveys 'nothing more than a refusal to tie the agency's hands' (internal citation omitted). As long as EPA consults with DOE and considers the 2011 Study and 'other economic factors,' EPA retains substantial discretion to decide how to evaluate hardship petitions.").

these provisions in a reasonable manner, consistent with the purpose of the statutory provisions at issue.

In the past, EPA's approach to interpreting these statutory provisions and evaluating SRE petitions was that a small refinery could receive an exemption from its RFS obligations by demonstrating it was experiencing DEH for any reason, including reasons unrelated to RFS compliance.[81] In this action, EPA is applying the approach proposed on December 7, 2021, and adopted in the April 2022 SRE Denial, requiring the small refinery to demonstrate that compliance with the RFS program is the cause of the DEH experienced by the small refinery. EPA has previously performed analyses and reviewed academic studies on the RIN market that verify the passthrough of RFS compliance costs to wholesale purchasers. However, our prior approach to evaluating SRE petitions did not require a showing that DEH was caused by RFS compliance because we concluded that our consideration of "other economic factors" extended beyond economic factors addressing DEH caused by RFS compliance. The Tenth Circuit in *RFA* determined that EPA's prior approach was contrary to the language of the CAA authorizing exemptions only due to DEH *caused by* compliance with the requirements of the RFS program.[82] Under our current approach, a small refinery must demonstrate a direct causal relationship between its RFS compliance costs and the DEH it alleges; assertions regarding other real but unrelated financial difficulties a small refinery may be experiencing will not satisfy this requirement. Additionally, a small refinery must demonstrate how its specific RFS

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[81] *See supra*, Section II.D.

[82] *RFA*, 948 F.3d at 1253-54.

compliance costs are disproportionate compared to other refineries' RFS compliance costs and are of sufficient magnitude to warrant the exemption. EPA has weighed several considerations in developing this new approach and this interpretation is consistent with the language of the Act, the purpose of the SRE provisions, and is the most reasonable approach for implementing the RFS program.[83]

Our change in approach is primarily informed by the *RFA* opinion, which laid out a rationale for the Tenth Circuit's conclusion that the statutory SRE provisions require DEH to be caused by RFS compliance.[84] Additionally, the court in *RFA* held that EPA had acted arbitrarily and capriciously when the Agency ignored the relevant evidence in granting three SREs without addressing EPA's long-standing position that RIN costs are passed through by refineries and ultimately borne by consumers. After review of the court's decision, EPA agrees that these holdings both reflect a better interpretation of the Act and comport with EPA's long-standing conclusions regarding RIN cost pass-through.[85]

Our change in approach is also supported by DOE's definition of DEH in the 2011 DOE Study. Under the CAA, DOE was directed to "conduct for the Administrator a study to determine whether compliance with the requirements of [the RFS] would impose a [DEH] on small refineries."[86] In the 2011 DOE Study, DOE

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[83] *See infra*, Section IV.D.1.

[84] *RFA*, 948 F.3d at 1253-54.

[85] *See infra*, Section IV.D.2.

[86] CAA section 211(*o*)(9)(A)(ii)(I).

stated that DEH "must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations."[87] In other words, for a small refinery to demonstrate DEH, it must have disproportionate RFS compliance costs and actual economic hardship due to those disproportionate RFS compliance costs. The approach adopted in the April 2022 SRE Denial, and applied in this action, aligns with DOE's definition: EPA's analysis shows that the costs of compliance with the RFS program through blending or buying RINs are the same; therefore, small refineries do not have disproportionate RFS compliance costs.[88] Additionally, the RIN cost passthrough analysis demonstrates that there is no economic hardship caused by RFS compliance costs; therefore, no small refinery experiences DEH as a result of compliance with the RFS program.[89] EPA now has data to demonstrate that the assumption DOE relied on in the 2011 DOE Study that RINs generated through blending renewable fuels would be free to those generating them—whereas RINs purchased through the market would represent a disproportionately high costs of compliance on obligated parties that complied that way—is false.[90]

EPA also considered "other economic factors" in evaluating whether a small refinery's RFS compliance costs cause DEH. While the CAA does not require EPA to consider any particular number or types of economic factors, it does require that DEH be caused by

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[87] 2011 DOE Study at 3.

[88] *See infra*, Section IV.D.2.

[89] *Id.*

[90] *See infra* Section IV.D.2.

compliance with the RFS program. Thus, it is clear that the "other economic factors" EPA may consider when evaluating SRE petitions must still be related to determining whether the small refinery's compliance with its RFS obligations is what caused its alleged DEH. EPA may not consider economic factors in its evaluation of SRE petitions that may show a small refinery is struggling financially when those struggles are unrelated to its RFS compliance. By performing the analyses described in Section IV.D.2, and in the responses to comments in Appendix B and in the confidential, refinery-specific appendices, EPA has evaluated and considered many "other economic factors," including, but not limited to, the dynamics and characteristics of the fuels and RIN markets, publicly available price data, confidential financial and other refinery-specific data submitted by the petitioning small refineries, and all the data other commenters submitted on the Proposed Denial. Fundamentally, EPA has reviewed all the information the small refineries and other interested parties submitted to ensure the Agency has considered all the appropriate "other economic factors" provided in determining that small refineries do not experience DEH caused by RFS compliance.

Using this new approach, we evaluated the information and data available to us, including data we received responding to our request for comment, to assess whether any of the petitioning small refineries demonstrated DEH. The data confirm that the market-based design of the RFS program with the RIN system for compliance has equalized the cost of compliance among all market participants, making it highly unlikely any one refinery would face a disproportionate cost of compliance. We have evaluated an extensive amount of

data and available literature, including academic and commissioned studies submitted by commenters, and our analysis shows that the cost of RINs is the same whether refineries acquire the RINs by blending renewable fuel or by buying RINs on the open market.[91] The data and available literature also informed our finding that RFS compliance costs are passed through in the price of refined products. Therefore, considering all of this information and analysis as more fully explained in later sections of this document, we find that no small refinery experiences DEH due to its compliance with the RFS program.

As described in the April 2022 SRE Denial, when an agency changes its position, it must "provide a reasoned explanation for its action" and "display awareness that it is changing position."[92] In doing so, EPA does not need to show "that the reasons for the new policy are *better* than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better, which the conscious change of course adequately indicates." [93] The approach explained in this final action is reasonable as it is supported by the language and construction of the CAA and data analyses performed by EPA and independent parties.[94] For the reasons described herein, EPA believes that this approach is the best interpretation of—and the

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[91] *See infra*, Section IV.D.2.

[92] *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

[93] *Id.* (emphasis in the original).

[94] *See infra*, Section IV.D.

most reasonable way to implement—the statutory SRE provisions. Therefore, we apply it here.

IV. EPA Evaluation

This section explains in detail EPA's evaluation of the 69 SRE petitions on which it is taking final action, including its evaluation of eligibility for the exemption, of DEH, and of other economic factors.

A. Eligibility to Petition for Extension of a Small Refinery Exemption

EPA is denying 69 pending SRE petitions for failing to demonstrate DEH. In addition, we determine that two of the refineries receiving denials were additionally ineligible to petition for SREs for the 2019 and 2020 compliance years, each for failing to meet one or more requirements for eligibility. One refinery is ineligible because its throughput exceeded 75,000 barrels per day (bpd) in a petitioning year—making it ineligible to petition for an SRE in the petitioning year and the subsequent year—and also because it did not receive the initial RFS blanket exemption under CAA section 211(*o*)(9)(A).[95] The second refinery is ineligible because it did not receive the initial blanket exemption.

In making this finding, we are adopting the interpretation proposed in the Proposed Denial and applied in the April 2022 SRE Denial interpreting the RFS statute to mean that only small refineries that received the initial blanket exemption are eligible to petition for an extension of that initial exemption, consistent with a prior

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[95] This initial exemption is sometimes called the "blanket exemption" since it could be obtained by all eligible small refineries producing transportation fuel for the years 2006-2010.

EPA interpretation.[96] Note that this does not mean that any refinery that met the definition of "small refinery" at the start of the RFS program is qualified to seek exemption for later years; the small refinery must have actually received the blanket exemption for the years before 2011 pursuant to the RFS statute and implementing regulations. This means that the small refinery must have been producing transportation fuel, such that it was an obligated party under the RFS program to qualify for the blanket exemption from the RFS requirements (i.e., a refinery processing fewer than 75,000 bpd of crude oil into products only other than transportation fuel could not have received an exemption from an RFS obligation it did not have). This is why, under the RFS program, a refinery that met the definition of a "small refinery" was additionally required to submit a verification letter to EPA confirming its status as a small refinery before receiving the blanket exemption.

1. Definition of Small Refinery

As part of EPAct, Congress defined a small refinery as "a refinery for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels."[97] This definition was main-

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[96] At the same time, we are maintaining our approach to size-based eligibility—only small refineries with an average aggregate daily crude oil throughput that does not exceed 75,000 bpd for the calendar year they petition and the prior year are eligible to petition for an SRE. *See* CAA section 211(*o*)(1)(K), 40 CFR 80.1401, 40 CFR 80.1441(e)(2)(iii).

[97] CAA section 211(*o*)(1)(K); EPAct of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

tained in EISA.[98] These definitions informed EPA's implementing regulations in 2007 and 2010, which similarly defined a small refinery as processing less than 75,000 bpd in 2004 and 2006, respectively, for purposes of determining eligibility for the initial blanket statutory exemption from 2006-2010.[99] In 2014, EPA promulgated regulations related to eligibility and requirements for SRE petition extensions.[100] In these regulations, EPA modified the eligibility requirements such that small refineries qualified to seek exemption extensions based on their crude oil throughput for the petition year and the prior year.[101] This requirement is still in effect and means that, to qualify as a small refinery eligible to seek an extension of its exemption, a refinery must have processed no more than 75,000 bpd of crude oil in both the year for which the refinery requests an exemption and the prior year.[102]

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[98] EISA of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007).

[99] 40 CFR 80.1101(g), 72 FR 23900 (May 1, 2007); 40 CFR 80.1401, 80.1441(a)(1), 75 FR 14670 (March 26, 2010).

[100] 79 FR 42128 (July 18, 2014).

[101] 40 CFR 80.1441(e)(2)(iii) ("In order to qualify for an extension of *its* small refinery exemption, a refinery must meet the definition of 'small refinery' in § 80.1401 for the most recent full calendar year prior to seeking an extension and must be projected to meet the definition of 'small refinery' in § 80.1401 for the year or years for which an exemption is sought. Failure to meet the definition of small refinery for any calendar year for which an exemption was granted would invalidate the exemption for that calendar year." (emphasis added)). *See also* 79 FR 42128 (July 18, 2014).

[102] 40 CFR 80.1401. We are not modifying this regulation in this action.

2. Requirement to Have Received Initial Blanket Statutory Exemption

In 2016, EPA took an action finding a refinery ineligible to petition for an exemption extension because the refinery did not exist in 2006 and, thus, could not have received the initial blanket exemption.[103] In that adjudication, EPA relied on the RFS regulations that state "a refiner may petition the Administrator for an extension of *its* small refinery exemption. . . . " (emphasis added).[104] Additionally, EPA reasoned that "newer small refineries have the ability to consider whether they believe the establishment of the RFS program and its requirements will cause economic hardship before beginning operations."[105] Beginning in 2017, EPA shifted to a different approach to small refinery eligibility and granted exemptions for refineries that had not received the initial blanket exemption. With the April 2022 SRE Denial, consistent with the Supreme Court's holding in *HollyFrontier*, we adopted and applied the requirement that, to be eligible to petition for an SRE, a refinery must have actually been an obligated party under the RFS program prior to 2011 and received the initial blanket exemption, though a small refinery need not have had a continuous exemption since the original statutory exemption. In this action, we are again applying this interpretation.

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[103] *See* Pet. for Review, *Dakota Prairie Refining, LLC v. EPA*, No. 16-2692, at 8 of 17 (8th Cir. June 13, 2016).

[104] 40 CFR 80.1441(e)(2).

[105] Pet. for Review, *Dakota Prairie* at 8-9 of 17.

3. Changed Approach to Eligibility

In the April 2022 SRE Denial, EPA explained that it had changed its approach to SRE eligibility to require that a petitioning small refinery must have received the initial statutory exemption prior to 2011 in order to qualify for an extension of the initial exemption under CAA section 211(*o*)(9)(B) because we believe this policy aligns with the text of the CAA, which describes a small refinery's ability to "at any time petition the Administrator for an extension *of the exemption in subparagraph (A)* for the reason of [DEH]."[106] Furthermore, we believe this interpretation best supports the policy interests of implementing the RFS program in promoting greater use of renewable fuels. This is particularly true since exemptions provide a significant windfall profit to exempted small refineries, as the small refineries pass-through their RIN costs and then, when exempted, sell any RINs they had acquired or generated. Such a result would be particularly unfair if granted to new participants in the RFS program that were not producing transportation fuel during the statutory blanket exemption period of 2006-2010 because these new participants would have had the opportunity to prepare and plan for compliance with the RFS program prior to starting operations or otherwise being subject to an RFS obligation, unlike the refineries that received the initial blanket exemption.[107] Additionally, refineries that exceeded the 75,000 bpd throughput threshold in 2006 were not the intended recipients of the initial exemption for small refineries, and new entrants to the transportation fuels industry after this blanket exemption ended have know-

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[106] CAA section 211(*o*)(9)(B)(i) (emphasis added).

[107] *See infra*, Section IV.D.2.

ledge of the requirements of the RFS program, and make an informed decision whether to enter the transportation fuels business. Thus, we are acting consistently with congressional intent by continuing to exclude these parties from receiving an SRE.

While the Supreme Court has held that a small refinery need not have had a continuous exemption since receiving the initial blanket exemption, the Court's decision suggests that an exemption must have existed at some point for it to be extended.[108] The Court agreed with the Tenth Circuit that, as used in CAA section 211(*o*)(9), the word "extension" has a temporal meaning (i.e., an extension of time), and not the alternative meaning of "extension" to grant or offer.[109] The Court, however, clarified that an extension may still be given after

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[108] *See HollyFrontier*, 141 S. Ct. at 2177 ("It is entirely natural—and consistent with ordinary usage—to seek an "extension" of time even after some lapse."); *id.* at 2181 ("And fairly read, the key phrase at issue before us—'A small refinery may at any time petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship'—simply does not contain the continuity requirement the court of appeals supposed."); *id.* at 2184 (Barrett, J. dissenting) ("Yet, HollyFrontier insists, the term "extension" is not *always* used that way. Instead, it might *sometimes* refer to a "non-continuous extension"—in other words, an extension of something that used to exist but no longer does. . . . [T]he Court concludes that Holly-Frontier's reading must be right—which means that EPA can provide an "extension" of an exemption that is no longer in effect."); *id.* at 2177-78 (the Court's extension analogies assume something existed initially to be extended, i.e. "a term paper after the deadline has passed, the tenant who does the same after overstaying his lease, or parties who negotiate an 'extension' of a contract after its expiration.").

[109] *See supra*, Section II.D.

a lapse.[110] In order for something to lapse, it must have existed to begin with. The Court applied several analogies to illustrate this, including that of a student requesting an extension of a deadline to submit a paper after the deadline has already passed.[111] Applying that analogy to a small refinery that did not receive the original exemption, but requests an extension of that exemption, would be like a student that was never in the class asking the professor for an extension of a deadline for a paper that was never assigned to that student to begin with (i.e., there is no due date for the professor to extend just as there is no exemption period for EPA to extend). Thus, the language of the statute indicates that, without having received "the exemption under subparagraph (A)," there is nothing for a small refinery to petition EPA to extend temporally.[112] Thus, if a small refinery did not receive the original statutory blanket exemption,

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[110] *HollyFrontier*, 141 S. Ct. at 2177 ("Ultimately, however, we agree with the renewable fuel producers and the court of appeals that subparagraph (B)(i) uses "extension" in its temporal sense—referring to the lengthening of a period of time."). The *HollyFrontier* decision is further discussed in Section II.D.

[111] *Id.* at 2177-78.

[112] *Id.* at 2181-82 ("Indeed, the dissent finds it 'odd' that our reading would permit hardship relief only to small refineries in existence in 2008 and not to new ones, *post*, at 2189-2190 . . . Nor is there anything odd about the fact that Congress chose only to protect existing small refineries rather than new entrants. Often Congress chooses to protect existing market participants from shifts in the law while applying new restrictions fully to future entrants.")

it is ineligible to have EPA extend the duration of that exemption.[113]

4. Alternative Eligibility Determinations for Two Refineries

In this final action, EPA is denying four SRE petitions for the 2019 and 2020 compliance years from two refineries, not just because they have failed to demonstrate DEH, but also on alternative grounds: EPA here determines that both refineries are ineligible to petition for SREs. These two refineries submitted refinery-specific comments under claims of confidentiality specifically addressing their eligibility to submit SRE petitions. EPA addresses general eligibility comments in Appendix B and addresses refinery-specific eligibility comments in confidential, refinery-specific appendices to this action.

For the first refinery, EPA determines that it is ineligible to petition for an SRE under the approach described in Section IV.A.3. The refinery did not receive the initial blanket exemption because it did not qualify as a "small refinery" in 2004 or 2006, since its average aggregate daily crude oil throughput exceeded 75,000 bpd during those qualification years.[114] The refinery, therefore, did not submit the verification letter required by regulation to receive the initial blanket exemption, and, because it did not receive that exemption, it is ineligible to petition for an SRE. EPA additionally deter-

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[113] We note that this issue was not before the courts in *RFA* or in *HollyFrontier* because the three small refineries at issue in those cases had all received the initial blanket exemption.

[114] 40 CFR 80.1141(a)(1), 72 FR 23900 (May 1, 2007); 40 CFR 80.1441(b), 75 FR 14670 (March 26, 2010).

mines that this refinery is ineligible for to petition for an SRE for the 2019 and 2020 compliance years because it exceeded the 75,000 bpd throughput limit in 2019, thereby making the refinery ineligible to petition for an SRE in both 2019 and 2020.[115] This eligibility determination is alternative and added to our denial of its 2019 and 2020 SRE petitions because the refinery did not demonstrate that it experienced DEH caused by RFS compliance as described generally for all small refineries in Section IV.D.2, based on our review of the petitions, supplemental information, and comments submitted by the refinery. As such, even if this refinery was eligible to petition for an SRE for the 2019 and 2020 compliance years—which EPA determines it was not—the petitions are denied on DEH grounds.

For the second refinery, EPA determines that it is also ineligible to petition for an SRE under the approach described in Section IV.A.3. The refinery did not receive the initial blanket exemption because it was not an RFS obligated party at the time the initial blanket exemption was available prior to 2011. Even though this refinery met the statutory definition of a "small refinery," it did not receive the blanket exemption because it did not produce transportation fuel from 2006-2010; therefore, it had no RFS obligation, and thus, there was nothing to exempt. Therefore, the refinery did not submit the verification letter required by the RFS regulations to receive the initial blanket exemption, and because it did not receive that exemption, it is ineligible to petition for an SRE. This eligibility determination is alternative and added to our denial of its 2019 and 2020 SRE petitions because the refinery also did not demon-

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[115] 40 CFR 80.1441(e)(2)(iii).

strate that it experienced DEH caused by RFS compliance described generally for all small refineries in Section IV.D.2 for these compliance years, based on our review of the petitions, supplemental information, and comments submitted by the refinery. As such, even if this refinery was eligible to petition for an SRE for the 2019 and 2020 compliance years—which EPA determines it was not—the petitions are denied on DEH grounds.

B. Compliance with SRE Petition Requirements

When submitting an SRE petition to EPA, the small refinery bears the burden of demonstrating that compliance with the requirements of the RFS program causes DEH for that small refinery. The RFS regulations require that an SRE petition specify the factors that demonstrate DEH, provide a detailed discussion regarding the hardship the refinery would face in complying with the RFS requirements, and identify the date by which the small refinery anticipates that compliance with the RFS requirements can reasonably be achieved.[116] Since the Tenth Circuit issued its opinion in *RFA*, many small refineries have contacted EPA to supplement their original SRE petitions and to provide additional information about their financial situations. In addition, EPA received extensive input in response to its request for comment on the Proposed Denial. EPA greatly appreciates this information. EPA has completed a thorough evaluation of the data and information provided in the SRE petitions, supplemental submissions, and comments to determine if any of the petitioners have demonstrated that the cost of compliance with the RFS is the

[116] 40 CFR 80.1441(e)(2).

cause of their alleged DEH and that such costs are not passed through by that small refinery to the wholesale purchasers under the RIN cost passthrough principle.[117]

C. DOE Consultation and EPA Consideration of the DOE Study

CAA section 211(*o*)(9)(A)(ii) required that EPA grant exemptions for "not less than 2 additional years" (i.e., 2010 and 2011) upon DOE's determination that a small refinery "would be subject to a disproportionate economic hardship."[118] Section 211(*o*)(9)(B), in contrast, provides how EPA will evaluate petitions, "in consultation with the Secretary of Energy," but does not dictate any particular action that EPA must take following that consultation, nor does it not provide any further direction on the form EPA's consultation with DOE must take. In fact, "Congress placed no limits on how DOE should provide its consultation to EPA under [the RFS]."[119] This absence of direction provides "substantial discretion" to the agencies to determine how DOE will provide consultation for the pending SRE petitions.[120] Both agencies previously relied on DOE's findings through its application of the DOE scoring matrix to effectuate DOE's consultation on each SRE petition.[121] For this action, EPA shared all SRE petition and comment information with DOE. However, DOE did not apply the scoring matrix because it was not de-

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[117] See *infra*, Appendix B, for a summary of the comments and EPA's responses.

[118] *See supra*, Section II.D.

[119] *Hermes*, 787 F.3d at 577.

[120] *Id.* at 575.

[121] *See supra*, Section II.D.

signed to account for RIN cost passthrough. Rather, EPA consulted with DOE through discussions in meetings and phone conversations regarding the pending SRE petitions, the supplemental supporting information the small refineries provided, other comments submitted in response to the Proposed Denial, and the analysis and determinations that supply the basis for this final action.[122]

In evaluating petitions for SREs under CAA section 211(*o*)(9)(B), EPA is directed to "consider the findings of the [DOE] study." DOE, in fact, conducted two studies, one in 2009 and an update to the study in 2011.[123] The original 2009 DOE Study concluded that small refineries would not face DEH from compliance with the RFS program given the proportional obligations of the program as a function of their gasoline and diesel fuel production and the opportunity for refineries to comply by blending or by purchasing RINs, provided that the RIN market proved to be liquid and competitive. The RIN market has developed to be open, competitive, liquid, and functioning as intended;[124] hence, the 2009 DOE Study accurately forecasted what was likely to occur given the highly competitive fuels market with which DOE was familiar.

When DOE expanded its study in 2011, it posited that small refineries could face DEH "*if* blending renewable

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[122] While not legally required, EPA has added a memorandum to the docket for this action describing the EPA-DOE consultation process. *See* "Memorandum on DOE Consultation from Byron Bunker," available in the docket for this action (hereinafter the "DOE Consultation Memo").

[123] *See supra*, Section II.D.

[124] *See infra*, Section IV.D.2.

fuel into their transportation fuel or purchasing RINs increase[d] their cost of products relative to competitors."[125] DOE expressed a similar possibility another way noting, "*If* certain small refineries must purchase RINs that are far more expensive than those that may be generated through blending, this will lead to disproportionate economic hardship for those affected entities."[126] Looking to a potential future where RIN prices rose significantly (as they have since done), DOE projected, "there are numerous circumstances when RIN prices could rise, increasing the cost of compliance and *perhaps* increasing the cost of compliance more for refineries that rely on [purchasing] RINs for compliance compared to those that do not."[127] To make clearer the circumstances it was envisioning where such disproportionate costs *could* arise, DOE provided a detailed appendix (Appendix B) that laid out scenarios for three refiners in different circumstances relative to the RFS program.[128] The first case was a refiner that blends all its production with ethanol and does not have to purchase ethanol RINs. The second case was for a refiner that does not do any blending and must purchase all its RINs to meet its RVOs. Finally, the third case was for a refiner with excess RINs to sell into the market. DOE assumed in Appendix B that the refiner that got its RINs through blending ethanol would get the RINs at nearly no cost, while the refiners that had to buy RINs would be forced to pay the higher market cost for compliance. Based on this assumption, DOE projected

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[125] 2011 DOE Study at vii (emphasis added).

[126] *Id.* at 2 (emphasis added).

[127] *Id.* at 3 (emphasis added).

[128] *Id.* at B-4.

that some refineries *could* face a disproportionate cost of compliance. Through the matrices in its report, DOE evaluated whether those disproportionate costs rose to a level such that a refinery faced DEH due to those higher costs. DOE articulated bringing those two elements together when it stated: "[d]isproportionate economic hardship must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations." [129] However, DOE did not assess in its 2011 study whether its assumptions that refiners bear different costs for blending or purchasing RINs and that they may not be able to pass these costs on to wholesale purchasers in the marketplace would actually occur.[130]

A number of small refineries have stated to EPA that DOE's projection in the 2011 DOE Study is exactly what has come to pass, reiterating these assertions in their comments on the Proposed Denial. Ethanol (D6) RIN prices have risen significantly, and small refineries argue that they bear these higher RIN costs while integrated refiners (refiners that blend renewable fuels) and non-obligated blenders receive RINs at almost no cost. Further, they argue that these disproportionate costs are significant enough that they constitute DEH for the refineries just as DOE articulated. EPA has carefully reviewed data, contracts, and other information from small refineries to evaluate if, as DOE posited in 2011, refineries that acquire RINs through blending get them at a lower cost than do refineries that

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[129] *Id.* at 3.

[130] *See* DOE Consultation Memo.

purchase RINs on the open market.[131] What we have found is that the RIN discount phenomenon applies—blenders, in fact, discount their sales price for E10 by the market price of the RIN (i.e., the sales price of E10 reflects the cost to buy ethanol minus the market price for selling the RIN). Hence, while the blender gets the RIN for "free" when it purchases a gallon of ethanol, it has to discount the price of that ethanol when sold as E10 by the full current market price of the RIN. This means the blending refinery pays the full market cost of the RIN through the discount it gives in the price of the E10 it sells. The 2011 DOE Study did *not* consider that blending refineries would have to discount blended fuel by the price of the RIN; therefore, the projections envisioned by the 2011 DOE study *have not occurred* in practice. Rather, as the 2009 DOE Study anticipated, the competitive market forces have resulted in the same cost of compliance whether that cost comes through the purchasing of RINs on the open market or through the discounting of the price for blended fuel sold by blenders. Moreover, neither the 2009 DOE Study nor the 2011 DOE Study anticipated the even more significant finding that, without regard to how refineries experience their RFS compliance costs, the RIN cost pass-through phenomenon applies—refineries pass those higher costs through to their customers in higher prices for the refined products they sell.

For the reasons described above and after considering the "other economic factors" described in Section IV.D.2, we find small refineries do not face disproportionate costs to comply with the RFS program. Further, we find there is no economic harm—much less a

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[131] *See infra*, Section IV.D.2.

hardship significant enough to impair refinery operations —that qualifies as DEH caused by RFS compliance. For these reasons, we find, consistent with the broad criteria for relief described in the 2009 and 2011 DOE Studies, that DEH is not demonstrated in the 69 SRE petitions EPA has evaluated and is denying in this action.

D. Hardship Must Be Caused by RFS Compliance

1. The CAA Requires That DEH Must Be Caused by RFS Compliance

As discussed above, the best reading of the statutory provisions at CAA section 211(*o*)(9) is that EPA's authority to grant an SRE "for the reason of (DEH)" requires that the hardship is caused by RFS compliance. This interpretation aligns with the statutory text as well as with the purpose of the RFS program and the SRE provisions. EPA has considered the comments received on this interpretation and provides specific responses to those comments in Appendix B. This section summarizes EPA's analysis supporting its conclusions.

a. The Text of the Statute Provides That DEH Must Be Caused by Compliance with the RFS Program

On January 24, 2020, the Tenth Circuit in *RFA* held that the EPA only has the authority to grant SREs when the refinery experiences DEH caused by the RFS program.[132] The court pointed to statements in the three decision documents at issue indicating that relief from the RFS obligations could relieve the refinery's hardship "in whole or in part," and concluded that granting relief on the basis of something other than DEH caused

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[132] *RFA*, 948 F.3d at 1254.

by RFS compliance was impermissible.[133] We have evaluated the court's opinion and the text of the statute, and, in this final action and going forward, we will require that petitioning small refineries demonstrate that DEH is caused by RFS compliance as discussed further in this section.

The CAA's SRE provisions are structured in two sections. Section "(A) Temporary exemption" provides the blanket exemption to all small refineries through 2010 and then lays out the conditions in which a small refinery may receive an extension of the initial exemption following the study conducted by DOE. Section "(B) Petitions based on [DEH]" addresses ongoing case-by-case SRE petitions and the basis for EPA's evaluation of those petitions.

Section A refers to the "requirements of paragraph [211(*o*)(2)]," which provides, among other things, the applicable annual volume targets for the required categories of renewable fuel. The "requirements of paragraph [211(*o*)(2)]" are utilized in describing what an exemption means: "The requirements of paragraph [211(*o*)(2)] shall not apply to small refineries until calendar year 2011,"[134] as well as identifying the subject of the DOE's study: "[T]he Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph [211(*o*)(2)] would impose a [DEH] on small refineries."[135] It also describes the basis under which an exemption can be extended: "[i]n the case of a small refinery that the

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[133] *Id.*

[134] CAA section 211(*o*)(9)(A)(i).

[135] CAA section 211(*o*)(9)(A)(ii)(I).

Secretary of Energy determines under subclause (I) would be subject to a [DEH] *if required to comply with paragraph [211(o)(2)]*, the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years."[136] These repeated references to paragraph 211(*o*)(2) indicate a direct link between the RFS requirements, SREs, and DEH. Given the focus by Congress in the SRE provisions on compliance with the RFS volume requirements, the best reading of the statutory language is that compliance with the RFS program must be the reason for DEH warranting an SRE under section A. DOE reached the same conclusion in the 2011 DOE Study: "Disproportionate economic hardship must encompass two broad components: a high cost of [RFS] compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations."[137] This means that a small refinery may not simply experience a year of poor economic performance or struggle with disadvantageous operational or market constraints to merit an SRE because these impacts are not based on compliance with the RFS program. Nor can a refinery rely on unplanned and unanticipated events like a fire or a natural disaster, or on planned events unrelated to RFS compliance, such as paying out stock dividends or other capital purchases/loans to qualify for relief from its RFS obligations.[138] Rather, section A of the SRE provisions provides that

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[136] CAA section 211(*o*)(9)(A)(ii)(II) (emphasis added).

[137] 2011 DOE Study at 3.

[138] *RFA*, 948 F.3d at 1254 ("Granting extensions of exemptions based at least in part on hardships not caused by RFS compliance was outside the scope of the EPA's statutory authority.").

DEH must be caused by the small refinery's compliance with the requirements of the RFS program.[139]

Section B of the SRE provisions states that a small refinery may "at any time petition the Administrator for an extension of the exemption *under subparagraph (A)* for the reason of [DEH]."[140] By making any future SREs "extension[s] of the exemption under subparagraph (A)," Congress carried over the causal requirement in section A to section B.[141] While section B uses the language "for the reason of [DEH]" without a modifying clause tying it to compliance with the RFS program, section B cannot be read outside of the context of section A; section B is merely providing an opportunity for small refineries to request continuation of the exemption in section A. Therefore, the causal requirement in section A tying DEH to RFS compliance applies to section B as well. Additionally, it is section A that provides the basis on which DEH must be founded: compliance with the RFS program. Thus, even if the exemption under section B could be interpreted as a distinct exemption from the exemption under section A, it must be "for the reason of [DEH]" as defined in section A as being "impose[d]" by, or existing "if [a small refinery was] required to comply with" its RFS obligations. In this way, the use and meaning of "disproportionate economic hardship" is the same in both sections A and B. Therefore, we agree with the Tenth Circuit that the "language of these provisions indicates that renewable fuels compliance must be the cause of any disproportion-

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[139] *Id.*

[140] CAA section 211(*o*)(9)(B)(i) (emphasis added).

[141] *RFA*, 948 F.3d at 1253.

ate hardship."[142] As described above, EPA believes this is the best interpretation of the interrelated provisions of CAA sections 211(*o*)(9)(A) and (B) and is therefore adopting this interpretation going forward.

b. The Purpose of the RFS Program Supports a Requirement That DEH Must Be Caused by Compliance with the RFS Program

Requiring that DEH be caused by RFS compliance also furthers the goals of the RFS program, which include encouraging the use of renewable fuel and reducing greenhouse gas emissions from the transportation sector. Historically, SREs have resulted in reductions in the volume of renewable fuel required to be used in the United States.[143] Moreover, allowing relief from RFS obligations for hardship unrelated to the RFS program would be an inappropriate use of the SRE provisions, particularly where the text of the statute requires demonstration of a causal relationship between the hardship and the RFS program. Had Congress intended that EPA provide relief for hardship due to something other than the RFS program, it could have easily done so, and the statutory language would have been more explicit in providing such broad authority. Instead, Congress adopted a "temporary hardship" provision followed by the ability to petition for an "extension" of the temporary exemption based on the same type of hardship. This limited approach to providing hardship relief all but precludes an interpretation that

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[142] *Id.*

[143] We acknowledge that beginning in 2020, we have projected the amount of SREs such that when the projections accurately reflect the volume of fuel exempted, the volume of renewable fuel required under the RFS program is not reduced by the granting of SREs.

the exemption is available to provide financial assistance to small refineries for reasons wholly unrelated to the RFS program, the program from which an exemption would provide relief. It would only make sense that, in implementing the RFS program, EPA would provide relief from impacts of the RFS program that result from the RFS program itself. It is hard to imagine that Congress intended the SRE provisions be used to provide relief from the financial distress some small refineries may otherwise face, especially when other legal and policy options exist to provide compliance flexibility, and, significantly, when that distress may be caused by a broad array of circumstances unrelated to the RFS program, ranging from higher transportation and production costs to adverse business decisions.[144]

Finally, in light of EPA's findings regarding RIN cost passthrough, granting SREs would mean that exempted small refineries would not only be relieved of their RFS obligations, but would also get a financial *benefit* through the sale of their petroleum fuel that includes the value of the RIN but no associated RFS compliance costs.[145] This windfall to small refineries does not further the goals of the RFS program, and only provides a disproportionate net benefit to small refineries granted exemptions in comparison to other refineries

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[144] For example, a small refinery may not choose to pay discretionary dividends and simultaneously claim DEH in an SRE petition. The D.C. Circuit in *Hermes* said of this method, "Allowing small refineries to perpetuate that manner of self-inflicted hardship would conflict with the terms of the statute which contemplate a "*[t]emporary* exemption" for small refineries with an eye toward eventual compliance with the renewable fuels program for all refienries." 787 F.3d at 578.

[145] *See infra*, Section IV.D.2.

that are either ineligible to petition for an exemption or are denied an exemption on the lack of merit of their petition.[146] Furthermore, when small refineries gain this benefit through exemption, RFS compliance is incrementally shifted to other parties that, in turn, pass on that increment in their compliance costs to wholesale purchasers. In essence, the significant financial benefit of exemptions granted to small refineries is still paid for by wholesale purchasers in higher transportation fuel costs.[147]

2. DEH and RIN Cost Passthrough

An additional holding of the Tenth Circuit in *RFA* was that EPA failed to explain how a finding of DEH comports with EPA's findings on RIN cost passthrough.[148] In this action, we are adopting an interpretation of the statute that DEH must be caused by compliance with the RFS program. It follows, then, that in making a finding of DEH we must explain how the RFS program could cause DEH for a small refinery in light of EPA's longstanding and consistent findings on RIN cost passthrough. EPA considers RIN cost passthrough as part of its consideration of "other economic factors" when evaluating SRE petitions. As such, the section that follows presents EPA's consideration of "other economic factors" in evaluating the SRE peti-

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[146] *See*, e.g., Comments from API on 2020 RFS Annual Rule, Docket Item No. EPA-HQ-OAR-2019-0136-0721.

[147] In the 2020 RFS Annual Rule, EPA finalized regulations that shift the projected exempted volumes for small refineries to the remaining obligated parties instead of reducing the renewable fuel volumes as had been common practice in prior years. 85 FR 7016 (February 6, 2020).

[148] *RFA*, 948 F.3d at 1256-57.

tions and determining that compliance with the RFS program does not impose DEH on small refineries. In other words, the analysis in this section, and the data that it relies on, is part of EPA's careful consideration of "other economic factors" relevant to demonstrating whether RFS compliance will cause DEH. Additional "other economic factors" EPA considered in its evaluation of SRE petitions are described in the responses to comments in Appendix B and in the confidential, refinery-specific appendices.

After reviewing the available data and analysis, including analyses conducted by EPA and outside parties,[149] as well as data and analyses submitted by petitioning small refineries, and comments, data, and analyses submitted in response to the request for comment on the Proposed Denial, we find that all obligated parties recover the cost of acquiring RINs by selling the gasoline and diesel fuel they produce at the market price, which reflects these RIN costs (RIN cost passthrough). Further, we find that blenders use the revenue from RIN sales to discount the price of the blended fuel they sell (RIN discount). Furthermore, since refining and fuel blending markets are highly competitive, we find that: (1) The RFS obligation is the same for every gallon of gasoline and diesel fuel; (2) RINs are generally widely available in an open and liquid market; and (3) The cost of acquiring RINs is the same for all parties. All types of obligated parties bear the same cost from compliance with the RFS program as these aspects of the RFS program and the RIN market facilitate the RIN cost passthrough and the RIN discount

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[149] These outside parties include academics as well as consultants associated with one or more petitioning small refineries.

principles discussed above. While some parties dispute EPA's findings on RIN cost passthrough and the RIN discount, those same parties have made business decisions over the last decade that implicitly acknowledge that RIN cost passthrough and RIN discount do occur. For example, if RIN cost passthrough did not exist, we would expect to see refiners shift production to non-obligated fuel (e.g., heating oil, jet fuel) and/or export fuel in order to avoid RFS obligations. We would also expect to see actions to expand or modify their business models to include additional blending of renewable fuel to reap the alleged rewards that they claim independent blenders and marketers enjoy. However, we see neither of those practices occurring. Therefore, for all these reasons taken together, we conclude that the RFS program does not impose DEH on small refineries.

Assessing the impact of the RFS program on refiners and blenders is complicated for several reasons. First, many parties may operate in several different roles, such as merchant refiners, integrated refiners, and blenders, in any given year.[150] Second, the impact of RIN costs on the price of fuels is not often apparent in the market pricing data.[151] Third, while market prices for renewable fuel with RINs attached are readily available in posted prices, renewable fuel is less commonly traded without RINs and hence prices of renewable fuel without the RIN are also rarely available outside of contracts between parties that are claimed as confidential.[152] Finally, terminology and accounting practices

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[150] *See infra*, Section IV.D.2.c.

[151] *See infra*, Section IV.D.2.b.

[152] *See infra*, Section IV.D.2.d.

vary between different parties, often making apples-to-apples comparisons less obvious.[153]

In this section, we again present the data and analysis that we provided in the Proposed Denial and the April 2022 SRE Denial to support our findings that small refineries do not suffer DEH from their RFS obligations because RIN costs are fully passed through to wholesale purchasers. We include some brief discussion of the comments here, but primarily respond to comments submitted on this analysis in Appendix B. Here, we show that any such RFS compliance costs are not disproportionate because the cost to acquire RINs, whether via blending or through the RIN market, are the same, making the costs of RIN acquisition the same for all parties. After presenting some of the assertions made by small refineries below, we provide a brief description of prior publications on RIN cost passthrough and the RIN discount. We then reiterate the general economic theory that supports the premises of RIN cost passthrough and the RIN discount before briefly discussing the different market participants and how we expect their operations to be affected based on economic theory. Finally, we analyze the most current data available to the Agency to determine whether the finished fuel and RIN markets move in the way the economic theory predicts.

Small refineries alleging DEH generally claim that: (1) They are unable to recover the cost of the RINs they purchase in the sales prices of the gasoline and diesel fuel they produce because of their geography or market position; and/or that (2) They face higher costs for ac-

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[153] *See infra*, Section IV.D.2.d.ii.

quiring RINs than their competitors (usually integrated refiners or non-obligated blenders) that acquire RINs by blending qualifying renewable fuel. In the first case, petitioners argue that they are unable to recover the added cost of RIN purchases needed for RFS compliance and/or that the market price for gasoline and diesel fuel does not fully reflect these costs. In the second case, petitioners argue that their competitors (non-obligated blenders and/or integrated refiners) do not have to discount the blended fuel they sell to wholesale purchasers by the price of the RIN and, therefore, are able to acquire these RINs at a lower net cost than parties that purchase RINs. EPA has not found evidence to support either of these arguments, as shown by the data and analysis presented below. It is notable that the data we evaluated in doing this analysis and the market behavior they describe are very consistent with each other across the markets we observed. Some comments we received on the Proposed Denial included studies and market analyses that suggested different market behavior in certain geographical locations and therefore questioned EPA's conclusions about RIN cost passthrough. We respond to those studies and analyses in Appendix B and in confidential, refinery-specific appendices to this action.

a. Assessments of RIN Market Dynamics

The degree to which the cost is "passed through" to wholesale purchasers (RIN cost passthrough) and revenue from RIN sales is used to discount the price of blended fuel (RIN discount) has been a longstanding area of interest, especially since D6 RIN prices increased dramatically in 2013. EPA first published results of an assessment of obligated parties' ability to

"pass through" RIN costs and the impact of RIN prices on the price of blended fuel in a technical memorandum in 2015.[154] EPA explained the economic principles at work that enabled obligated parties to recover their RIN costs through RIN cost passthrough and the discount of renewable fuel blends by the price of the RIN. EPA then examined several sources of market data to test those principles. We concluded that both the costs in refined products and discounts in blended fuel prices due to RINs were being fully passed through to wholesale purchasers.

EPA next considered this issue in the context of petitions to reconsider the point of obligation in the RFS program in 2017.[155] While RIN cost passthrough was not the only topic at issue in our consideration of changing the point of obligation in the RFS program, the degree to which RIN costs and the RIN discount were passed through to wholesale purchasers was a central argument in the various petitions. In considering these requests, EPA again examined available market data, as well as studies by outside parties and numerous public comments.[156] Once again, EPA concluded that the RIN

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[154] *See* Burkholder memo.

[155] "Denial of Petitions for Rulemaking to Change the RFS Point of Obligation," EPA-420-R-17-008 at 21-31, November 2017 (hereinafter the "POO Denial").

[156] C.R. Knittel, B.S. Meiselman, & J.H. Stock, "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard," Journal of the Association of Environmental and Resource Economists, 2017. C.R. Knittel, B.S. Meiselman, & J.H. Stock, "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard: Analysis of Post-March 2015 Data," Working Paper. *See also* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket

costs and RIN discount were fully passed through to wholesale purchasers and reflected in the market prices of petroleum fuel and blended fuel, and that blenders used revenue from RIN sales to discount the price of blended fuel. This decision was reviewed and upheld by the U.S. Court of Appeals for the D.C. Circuit.[157]

In evaluating the SRE petitions currently before the Agency, EPA has again evaluated the available market data, and has evaluated data from additional markets submitted in comments to supplement that analysis. EPA has examined data through 2020 to determine whether more recent data continues to support EPA's views on the economic principles at play in the RIN market and whether these new data reconfirm our prior conclusions about both RIN cost passthrough and the RIN discount. EPA's prior analyses were generally based

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Item No. EPA-HQ-OAR-2016-0544-0014; Letter from QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028.

[157] *Alon Refining Krotz Springs, Inc v. EPA*, 936 F.3d 628 (D.C. Cir. 2019). In its decision, the D.C. Circuit found that in determining whether refiners recover the cost of the RINs they purchase for RFS compliance, EPA "grounded that conclusion in studies and data in the record." *Id.* at 649. The D.C. Circuit also supported EPA's findings that there is a cost for integrated refiners and non-obligated blenders to acquire RINs, even if they do not purchase separated RINs, through lower prices for blended fuels. "In a competitive market there's no such thing as a free lunch, and blenders and integrated refiners pay their tab just as other do; they just do so indirectly. To offer finished fuel without attached RINs at a competitive price, these entities must discount their blended fuel by roughly the value of the RINs that they detach and kept for themselves." *Id.* at 650.

on publicly available data reported by the Energy Information Administration (EIA), which reports spot fuel prices for large fuels markets such as the New York Harbor and the Gulf Coast. Several small refineries claimed that, while RIN cost passthrough and the RIN discount may occur in these larger and more competitive fuels markets, RIN cost passthrough and the RIN discount were not occurring in the local markets into which these small refineries sold gasoline and diesel fuel. To assess these claims, EPA analyzed the data we received, including data sets provided by some of the small refinery petitioners located in smaller markets. The petitioners submitted the datasets to disprove EPA's conclusions on RIN cost passthrough. However, EPA found that the available data, including the more recent data through 2020 and the data received in comments, either could not be used to draw conclusions regarding RIN market dynamics, or, in contrast to the petitioner's claims, actually *supported* the conclusions that RIN costs are passed through in higher refined product prices and that blended fuel prices are discounted by the price of the RIN and passed through to wholesale purchasers.[158] In light of EPA's prior assessments of RIN cost passthrough, its recent assessment for the Proposed Denial and April 2022 SRE Denial, and its latest assessment of the comments and data provided in response to the Proposed Denial, EPA continues to conclude that no obligated party has a structural advantage or disadvantage from the RFS program. EPA found these conclusions held not only in the large fuels market previously assessed, but also in the smaller markets EPA examined using non-public market data, as well as

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[158] *See infra*, Section IV.D.2.d.

the data submitted by the small refineries. Each of these assessments is discussed in further detail in the following sections.

While EPA recognizes that much of this data may not be specific to the compliance years at issue in this action, it demonstrates the price dynamics in the fuels and RIN markets. Moreover, EPA's prior analyses indicate that RIN costs were passed through prior to and during the 2016-2021 compliance years.[159] EPA's analysis provided herein confirms and supports our prior findings regarding RIN cost passthrough using more recent data.

b. Economic Principles of RIN Cost Passthrough

The market for gasoline and diesel fuel in the United States is extremely competitive at all levels from the wholesale level (terminals and refinery racks) to the retail level (gas stations and truck stops). At the wholesale level, there are currently more than 1,300 terminals across the United States.[160] At the retail level, there are currently about 145,000 retail stations across the United States.[161] The majority of these stations are owned by parties that own fewer than ten retail stations, and, in many cases, only a single retail station.[162] All of

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[159] *See* Burkholder memo. *See also* POO Denial.

[160] Internal Revenue Service, Active Fuel Terminals, February 28, 2022, available at https://www.irs.gov/pub/irsutl/tcn-db.pdf.

[161] National Association of Convenience Stores, *Convenience Stores Sell the Most Fuel*, March 10, 2022, https://www.convenience.org/Topics/Fuels/Who-Sells-Americas-Fuel.

[162] *Id.* According to this data, 57.1% of retail fuel stations are owned by parties that own only one station, and an additional 3.8% of all retail fuel stations are owned by parties that own 2-10 retail stations.

these parties are selling fungible products (gasoline and diesel fuel) to a consumer base that is very sensitive to fuel prices, with prices posted on large signs making prices transparent. At the wholesale level, there are 129 petroleum refineries in the United States.[163] The market for renewable fuel and RINs is similarly very competitive. In 2020, more than 300 companies generated RINs for qualifying renewable fuel.[164] On average, approximately 5 billion RINs are traded between registered parties each month.[165] Prices for petroleum fuel, renewable fuel, and RINs are regularly reported by a variety of price reporting services.[166]

Refineries within the United States compete with each other, as well as with many other refineries overseas, and importers capable of sourcing gasoline and diesel fuel from a global fuels market. Low transportation costs for gasoline and diesel fuel, enabled by an extensive pipeline network, and the low cost of shipping

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[163] According to data from EIA, there were 129 operable refineries in the United States as of January 1, 2021 (EIA, *When was the last refinery built in the United States?*, Frequently Asked Questions (FAQs), June 25, 2021, https://www.eia.gov/tools/faqs/faq.php?id=29&t=6). Some of these refineries are located outside of the RFS covered location or do not produce gasoline or diesel fuel, and thus are not subject to the RFS program.

[164] The number of companies that generated RINs is from data accessed from EPA's Moderated Transaction System (EMTS).

[165] RIN trade and price information reported to EMTS is available at https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information.

[166] *See*, e.g., fuel price data from EIA (https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm) and RIN price data from EPA (https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information).

these fuels via pipeline, barge, and petroleum tankers, mean that fuels markets across the United States are linked and that refiners are not only competing with other local refineries, but with parties across the country and in many cases the world. This can be seen clearly in the structure of many fuel supply contracts across the country that establish pricing based on the price of fuel at a major market (e.g., Houston or New York Harbor) plus or minus transportation costs between the local market and the major market, depending on the direction of product flow.[167] If a small refinery is facing competition in its local market from a larger remote market, the local price will typically be higher than the price in the major market, reflecting the cost of shipping the fuel to the local market from the larger remote market.[168] Conversely, if the small refinery is shipping its fuel to the larger remote market to sell, it will need to price its fuel below the larger remote market price to cover the cost of shipping the fuel to the larger remote market. Through thousands of decisions made by all the market participants each day, the prices between the markets generally equilibrate to the same level, offset by the transportation costs between the

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[167] Scott Berhang, "Pricing 101 Part 3: Wholesale Rack Fuel Pricing Essentials," September 12, 2017, available at http://blog.opisnet.com/wholesale-rack-fuel-pricing-essentials. Several small refinery petitioners included examples of contracts, some of which were based on the fuel price at a larger fuel market plus (or minus) transportation costs. This information has been claimed as confidential by the petitioners.

[168] This is because the price in the local market will be set by the marginal supplier of fuel. In a market with both a local and remote supplier, the marginal supply price will be no lower than the fuel sourced from the remote market, which will include transportation costs.

markets. This means at the terminals where wholesale gasoline and diesel fuel are sold, competition forces all of the market participants to accept the same price for their products in the same way that gas stations across the street from each other must price their fuel at the same price.[169]

Economic theory suggests that in competitive markets like the fuels market where demand is nearly inelastic, competitive market forces would drive market participants to pass through the costs and revenue from RINs to wholesale purchasers in the prices of the products they sell.[170] This means that higher RIN prices should not advantage any one group of refineries over another, and that RIN prices should not impact refining margins. As an initial assessment of the impact of RIN prices on refineries, EPA examined the refining margins for three groups of refineries—small refineries, large refineries, and all refineries—based on available public data (e.g., financial data from publicly traded

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[169] There are very minor variations at the wholesale and retail level where branded fuels that include proprietary fuel additives command a marginally higher price than do unbranded fuels which retail consumers may perceive as being of lower quality. These differences in the prices for the products are unrelated to RFS because there are no distinguishing features or branding of the renewable components in gasoline or diesel fuel (i.e., one E10 fuel blend does not sell for more than another because it contains "higher quality" branded ethanol).

[170] RBB Economics, "The price effect of cost changes: passing through and here to stay," December 2014, available at https://www.rbbecon.com/downloads/2014/12/RBB_B48_Brief_WEB.pdf. RBB Economics, "Cost pass-through: theory, measurement, and potential policy implications," December 2014, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/320912/Cost_Pass-Through_Report.pdf.

companies) and confidential data, including data provided by petitioners. We compared these refining margins (operating profit per gallon of fuel produced) to the average RIN cost per gallon (the per gallon cost to acquire the RINs necessary to meet a refinery's RVO).[171] These data are presented in Figure IV.D.2.b-1. Consistent with the economic theory, we see no correlation between refining margins and RIN prices, nor do we see any indication that higher RIN prices put small refineries at an advantage or disadvantage relative to large refineries. This result is consistent with findings of Burkhardt 2019: "full passthrough of RIN costs to nationwide output prices on average, and no statistical difference between pass-through rates for large and small refineries."[172] Figure IV.D.2.b-1 also includes an estimate of the refining margin for small refineries if they received an exemption from their RFS obligations. The estimate was calculated by adding the RFS RIN compliance cost per gallon to the refining margins for small refineries each year, since exempting small refineries from their RFS obligations means they do not have to acquire RINs. This estimate demonstrates that exempting small refineries from their RFS obligations results in small refineries, as a class, having consistently higher refining margins than large refineries or the average of all refineries. This advantage is significant and increases as RIN prices increase.

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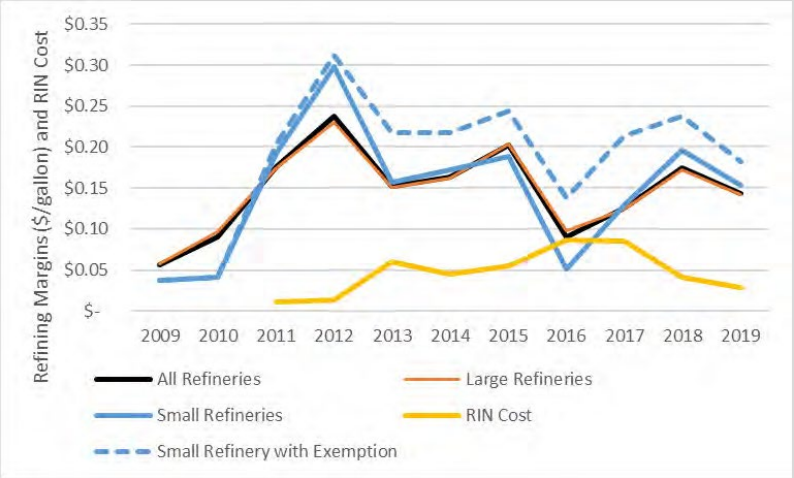
[171] We calculated the RIN cost per gallon based on the RFS obligation and the average RIN prices for each year.

[172] Jesse Burkhardt, "The impact of the Renewable Fuel Standard on US Oil refineries," 130 Energy Policy 429, 435 (2019) available at https://doi.org/10.1016/j.enpol.2019.03.058.

Figure IV.D.2.b-1: Refining Margins and RIN Costs (2009-2019)[a]



Data from SRE petitions and financial statements from publicly traded companies.

[a] The "Small Refinery with Exemption" line was calculated by adding the "RIN cost" line to the "Small Refineries" line. If a small refinery had already accounted for the financial benefit of an SRE in their reported margin for a given year, the effect would be to make the "Small Refinery with Exemption" line slightly less than shown for that year.

Understanding the impacts of the RFS program on the various parties that participate in the fuels market is complicated by the fact that different parties may participate in different activities within the fuels market. When analyzing the impact of the RFS program on the fuels market, we generally consider three different types of market participants: (1) Parties that produce

and sell petroleum fuel, including blendstocks[173] (generally referred to as merchant refiners); (2) Parties that purchase petroleum fuel and renewable fuel, and sell blended fuel (blenders); and (3) Parties that produce petroleum fuel, purchase renewable fuel, and sell blended fuel (integrated refiners). The latter two of these market participants compete directly with each other at the wholesale fuel terminals where gasoline and diesel fuel "breaks bulk" and is sold into tanker trucks for delivery to retail stations. A typical fuel terminal may have a dozen different companies that sell the gasoline and diesel fuel dispensed from the terminal.[174] A simplified version of the business activities each of these parties engage in, as well as the impact of the RFS program on their costs and revenue, is illustrated in Figure IV.D.2.b-2.

Merchant refiners produce, market, and sell petroleum fuel and buy the RINs they need for compliance with their RFS obligations; they do not purchase or blend renewable fuel. Integrated refiners also produce petroleum fuel, but unlike merchant refiners, they also purchase and blend renewable fuel to produce, and ultimately sell, blended fuel that contains some volume of renewable fuel. Integrated refiners generally do not purchase RINs, but instead purchase renewable fuel with attached RINs and acquire most of the RINs they need for compliance when they blend the renewable

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[173] A "blendstock" is defined as "any liquid compound or mixture of compounds (not including fuel or fuel additive) that is used or intended for use as a component of a fuel." 40 CFR 1090.80.

[174] Kristi Moriarty, "High Octane Fuel: Terminal Backgrounder," NREL, February 2016, available at: https://afdc.energy.gov/files/u/publication/hof_terminal_backgrounder.pdf.

fuel.[175] Non-obligated blenders do not produce petroleum fuel components, but instead purchase these products from merchant refiners. They then purchase renewable fuel with attached RINs that they use to produce, and ultimately sell, blended fuel (e.g., E10 and B5[176]). Because these parties do not have RFS obligations, they can also sell the RINs associated with the renewable fuel they blend. In practice there are few refineries that fall entirely into a single category, with most refiners having business interests that fall into at least two categories. Nevertheless, these distinctions help to clarify the context for RIN cost passthrough and the RIN discount in the price of blended fuel.

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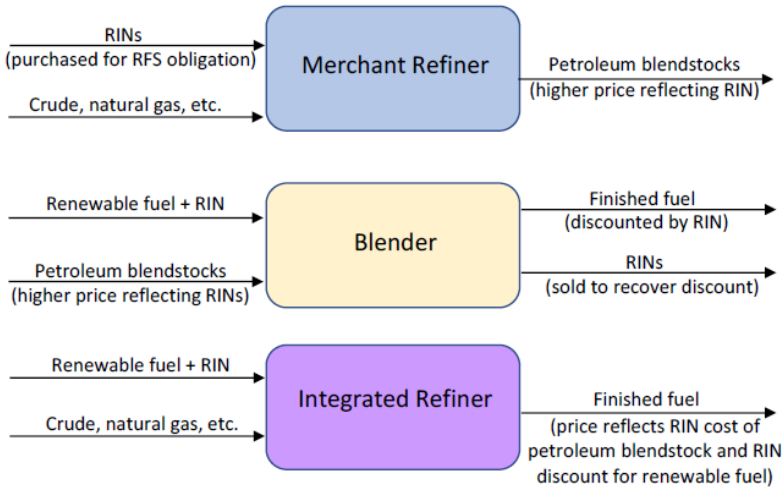
[175] Very few, if any, integrated refiners acquire all the RINs they need by blending renewable fuel. Petroleum fuel is subject to an RFS obligation for all four categories of renewable fuel, but it is generally only blended with one type of renewable fuel (i.e., ethanol in the case of gasoline and biodiesel or renewable diesel in the case of diesel fuel). Based on the 2020 RFS percentage standards, integrated refiners would generate a small amount of excess conventional biofuel (D6) RINs when blending ethanol as E10, but would need to purchase a small number of advanced biofuel (D5), biomass-based diesel (D4), and cellulosic biofuel (D3) RINs to meet the RFS obligation associated with the petroleum-based portion of the E10 blend. Similarly, integrated refiners that blend biodiesel as B5 would generate excess D4 RINs but would need to purchase D6 and D3 RINs to meet the RFS obligation associated with the petroleum-based portion of the B5 blend. In practice, nearly every gallon of blended fuel produced by an integrated refiner generates some quantity of excess RINs of one type and simultaneously incurs an obligation for other types of RINs.

[176] B5 refers to diesel fuel blended with 5% biodiesel.

Figure IV.D.2.b-2: Simplified Illustration of Fuels Market Participants



The place in the fuel supply chain where we can see the *cost* of the RIN being passed through to wholesale purchasers is in the price of the petroleum products. Since all parties have the same cost to acquire RINs (on a per gallon basis),[177] whether they blend renewable fuel or purchase separated RINs, one would expect the price for petroleum fuel subject to an RFS obligation (i.e., gasoline and diesel fuel) to increase when RIN prices increase and to decrease when RIN prices decrease. Just as the prices of gasoline and diesel fuel increase if fuel taxes increase,[178] they also increase when RIN prices increase. Merchant refiners fully recover the cost of their RFS obligations when the difference be-

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[177] *See infra*, Section IV.D.2.c.

[178] EIA, *Gasoline explained: Factors affecting gasoline prices*, March 15, 2022, https://www.eia.gov/energyexplained/gasoline/factors-affecting-gasoline-prices.php.

tween the market price of gasoline and diesel fuel and the market price for these fuels in the absence of the RFS obligation is equal to the cost of purchasing the RINs to satisfy the RFS obligation. Equations showing the expected RIN price impacts on the prices of gasoline and diesel fuel, assuming RIN costs are fully passed through, are shown below.

Equation 1: Expected Impact on Gasoline (E0) Prices Assuming Full RIN Cost Passthrough

Gasoline Price = Gasoline Price with no RFS Obligation + RIN Costs

Equation 2: Expected Impact on Diesel Fuel (B0) Prices Assuming Full RIN Cost Passthrough

Diesel Fuel Price = Diesel Fuel Price with no RFS Obligation + RIN Costs

EPA once again examined these economic principles by looking at available market data, including recent market data that was submitted by commenters.[179] The data EPA examined show that the market prices for gasoline and diesel fuel operate as shown in Equations 1 and 2, supporting EPA's findings that all obligated parties recover the cost of their RFS obligations in the sale prices for the gasoline and diesel fuel they produce.[180] The ability for an obligated party to recover its RIN

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[179] EPA's analysis of the market data to determine the degree to which RIN costs are passed through to wholesale purchasers through higher prices for gasoline and diesel fuel is provided in Section IV.D.2.d.i.

[180] *See infra*, Figures IV.D.2.d.i.1 through 4, where EPA compared the price difference between a fuel subject to an RFS obligation to a very similar fuel not subject to an RFS obligation and the RIN cost per gallon of diesel fuel.

costs is not dependent on the obligated party's ability to set the price for these fuels in the markets where they are sold. Rather, because all obligated parties face the same RIN costs per gallon of gasoline and diesel fuel produced nationwide,[181] the market prices for these fuels rise and fall with changes in RIN prices in all markets by the same amount on any given day (after accounting for other factors that impact the prices of these fuels), such that all parties that sell gasoline and diesel fuel recover their RIN costs.[182]

The place in the fuel supply chain where we see the RIN discount is the point at which renewable fuel is blended with gasoline or diesel fuel and sold for distribution to fuel retailers (i.e., at bulk terminals). Parties that blend renewable fuel with gasoline or diesel fuel to produce blended transportation fuel must discount the price of the blended fuel by the price of the associated RIN.[183] These parties can then separate any RINs that are attached to the renewable fuel and either use these RINs to demonstrate compliance with their RFS obligations (if they are an obligated party) or sell these RINs to other parties. In either case, the point at which they acquired the RIN at the market price, or, rather, incurred a market rate cost for the RIN, is what determines the cost to acquire the RIN. This distinction is

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[181] *See infra* Section IV.D.2.d.ii, *see also* the "RVO ¢/USG" value reported in the Argus Americas Biofuels Report, which reports the RVO cost per gallon of fuel produced based on current RIN prices.

[182] *See infra* Section IV.D.2.d.i.

[183] Another way to think about the RIN discount is that, to remain competitive, parties that blend renewable fuel must base the final price for the blended fuel on the net price of the renewable fuel (after accounting for the sale of the RIN) rather than on the price they paid for the renewable fuel with an attached RIN.

not necessarily intuitive as many market participants assume the cost to acquire the RIN is set when the renewable fuel is purchased at a cost that includes the RIN rather than when the renewable fuel is blended and sold as described further below.

The sale of a RIN by a party that blends renewable fuel and separates the RIN creates a separate revenue stream in addition to the revenue from the sale of the blended fuel itself. Competitive forces require that blenders price their blended fuel based on the *net* price of renewable fuel, or the price of the renewable fuel less the price of the RIN associated with the fuel (e.g., net ethanol price = ethanol price - D6 RIN price; net biodiesel price = biodiesel - 1.5*D4 RIN price[184]). Any party that attempts to retain the revenue from the RIN sales, rather than passing it on to wholesale purchasers via the RIN discount, is unable to offer blended fuel at a competitive price. If the market price for blended fuel is equal to the prices of the fuels used to create the blended fuel (e.g., 0.9 gallons of gasoline blendstock and 0.1 gallons of ethanol in the case of E10) without discounting the price for the renewable fuel by the price of the RIN, the RIN sales would result in profits for the blender. In the competitive fuels market, however, blenders are forced to reduce the price of the blended fuel to be competitive, consistent with the RIN discount phenomenon. If they do not, their competitors will give up the revenue from the sale of RINs to maximize profits by increasing fuel sales. These competitive forces require that blenders use the revenue from the RIN

[184] Each gallon of biodiesel generates 1.5 RINs.

sales to effectively subsidize the price of the blended fuel they sell.

This market phenomenon has been relatively obvious to program participants looking at the market for biodiesel blends where it was understood from the start of the RFS2 program that a higher D4 RIN price was necessary to reduce the effective market price of biodiesel to make it equivalent to petroleum diesel fuel. Integrated refiners and non-obligated blenders pay the higher cost for renewable fuel through their purchase and blending. Merchant refiners pay the non-obligated blenders the incremental cost of the renewable fuel for doing the blending of renewable fuel on their behalf when they purchase the separated RINs. As an illustrative example, if petroleum diesel fuel is selling at $3.00 per gallon, and it costs $4.50 per gallon to produce biodiesel (net of tax credits and state LCFS credits) and generate 1.5 D4 RINs, the price of a D4 RIN would need to be $1.00 for biodiesel to compete with petroleum diesel fuel so that the revenue from the sale of the 1.5 D4 RINs for $1.50 would lower the effective cost of the biodiesel to match the cost of the petroleum diesel fuel.[185] Any blender attempting to retain the revenue from the sale of the D4 RINs (rather than using it to discount the price of the blended fuel) could not offer a competitively-priced blended fuel, since any biodiesel the blender used in its product would increase the cost of the fuel blend.

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[185] In this example we are assuming that the RIN value tracks the cost of biodiesel production after accounting for the federal biodiesel tax credit and state LCFS credits (if applicable) in order to bring the net or effective price of biodiesel to parity with diesel fuel.

As described in greater detail below both in terms of economic principles and the recent data EPA received from small refineries, this market dynamic was previously not well understood when applied to the blending of ethanol to make E10. From the start of the RFS program until recently, there was no need to discount ethanol to create parity with gasoline blendstocks because ethanol had been relatively inexpensive and highly valued as an octane improver when blended to produce E10. As a result, both in the period prior to the RFS program and for the early parts of the RFS program, the market price for E10 was simply the weighted price for gasoline blendstock and ethanol. When D6 RIN prices increased, it was not obvious to many program participants how these high RIN prices impacted E10 prices, which many program participants simply assumed should continue to reflect the weighted costs of gasoline blendstock and ethanol. In fact, what has happened is that the high RIN prices have increased the production cost of gasoline blendstock (i.e., the RIN cost passthrough described in the preceding section) while simultaneously lowering the net cost of ethanol in almost equal proportion (the RIN discount), resulting in little change in the actual cost of E10 to consumers.[186] While this competitive market response has meant little change in E10 prices due to the RFS program, it has created confusion among market participants who per-

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[186] This does not mean that there is no cost to the RFS program. The RFS program requires the use of renewable fuels, which often have higher prices than the petroleum fuels they displace. This is particularly true for advanced biofuels such as biodiesel and renewable diesel. By requiring the use of higher cost fuels, the RFS program marginally increases the cost of transportation fuel in the United States.

ceive that D6 RINs are "free" to parties that blend E10, while obligated parties that must buy the D6 RINs at market prices bear a very high cost.[187] Instead, as we will show here based both on economic theory and the new small refinery data submissions, all sellers of E10 discount the price of E10 by the *price* of the D6 RIN, meaning fuel blenders pay for the RIN through this discounted E10 price at the same cost as if they purchased the RIN on the open market. As a result, parties that acquire RINs through fuel blending and parties that acquire RINs from the open market incur the same cost to acquire RINs.

Equations showing a generalized fuel blending example, and an example specific to E10, are provided below. These equations and the discussion that follows describe what one would expect if RIN prices are fully passed through to wholesale purchasers. The subsequent sections examine market data to test these equations and determine the degree to which RIN prices are passed through to wholesale purchasers.

Equation 3: Generalized Fuel Blending Example Assuming Full RIN Discount

Blended Fuel Price = PFP * PF% + (RFP - RIN Value) * RF%

Where: PFP = Petroleum Fuel Price

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[187] In fact, the RFS compliance cost estimates that small refineries submit to EPA as part of their SRE petitions reflect this misunderstanding by estimating the D6 RIN cost as the gasoline price minus the ethanol pricing meaning that, when ethanol is less expensive than gasoline, D6 RIN prices are negative.

PF% = Petroleum Fuel Percentage in the fuel blend

RFP = Renewable Fuel Price

RIN Value = RIN Price * Equivalence Value[188]

RF% = Renewable Fuel Percentage in the fuel blend

Equation 4: Fuel Blending Example for E10 Assuming Full RIN Discount

E10 Price = Gasoline Blendstock Price * 90% + (Ethanol Price - D6 RIN Price) * 10%

EPA's analysis of the market data confirms these economic principles that the RIN value is passed through to wholesale purchasers in the price of blended fuel.[189] The analysis— comparing the market prices for petroleum fuel, ethanol, RINs, and E10—shows that the market prices for blended fuel operate as shown in Equations 3 and 4, supporting EPA's findings that blenders are passing on the value of the RIN to wholesale purchasers.[190] Importantly, this means that, although blenders do not purchase RINs directly, there is still a cost for blenders to acquire RINs. This cost is

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[188] The equivalence value is an RFS regulatory term that relates the number of RINs generated per gallon of renewable fuel produced. Ethanol has an equivalence value of 1.0. Other renewable fuels have equivalence values that are determined by their energy content relative to ethanol. For example, biodiesel has an equivalence value of 1.5 RINs per gallon of biodiesel reflecting that biodiesel has approximately 150% the energy content of ethanol.

[189] *See infra*, Section IV.D.2.d.

[190] *See infra*, Section IV.D.2.d.ii.

realized when blenders discount the price for the finished blended fuel, pricing it based on the net price of the renewable fuel, after accounting for the sale of any RINs attached to the renewable fuel. The data EPA analyzed support our finding that the RIN value is fully passed through from blenders to wholesale purchasers, as described in Equations 3 and 4. Because the market is competitive, a blender cannot attempt to sell RINs at higher prices, as wholesale purchasers would merely go to a competitor selling at the market price. Thus, the cost of acquiring a RIN by blending renewable fuel and the cost of purchasing a separated RIN are equal as would be expected from the design of the RFS program and RIN system. Commenters submitted studies that they claim refute EPA's analysis; however, these studies are imperfect and, as described in Appendix B, EPA did not find it appropriate to rely on the conclusions presented in those comments and the studies they included.

c. Impacts on Different Market Participants

Before turning to the data analysis of RIN cost passthrough and the RIN discount as reflected in the prices of refined products and blended fuel, respectively, we first provide an illustrative example to examine the implications of RIN cost passthrough and the RIN discount on the three types of market participants described above: a merchant refiner, an integrated refiner, and a non-obligated blender. We present examples for producing both E10 and B5, two common fuel blends present in many fuels markets. Each of these parties produces, purchases, and sells different products within the E10 and B5 markets, but, as this example demonstrates, no party has a structural advantage or

disadvantage since both the RIN cost and the RIN discount are passed through to wholesale purchasers.

As briefly discussed previously, in reality very few parties fit entirely within only one of these three categories. Most refiners, both small and large, sell some volume of petroleum fuel (acting as merchant refiners) and blend some of their petroleum fuel with renewable fuel (acting as integrated refiners). Some also purchase gasoline or diesel fuel from other parties and blend it with ethanol to sell as E10 (acting as non-obligated blenders). Further, some refiners are also renewable fuel producers that produce the renewable fuel they blend rather than purchasing it from other parties and sell excess renewable fuel to others. Therefore, to better understand how various parties are affected by the RFS program and RIN prices, it is better to consider the role the party is playing in the fuels market (producing gasoline or diesel fuel, blending renewable fuel, etc.) than the predominant role of the company.

To illustrate the impact of the RFS program and RIN prices on parties acting in each of these roles, EPA evaluated scenarios with fuel prices, RIN prices, and RVOs as they existed on December 30, 2020. EPA also evaluated an alternative scenario where there was no RFS obligation. The fuel and RIN prices used in these scenarios, as well as the sources of these prices, are shown in Table IV.D.2.c-1 for the E10 example and Table IV.D.2.c-3 for the B5 example. The costs, revenue, and profit/loss for each party, both with and without the RFS program, are shown in Table IV.D.2.c-2 for E10 and Table IV.D.2.c-4 for B5. We recognize that fuel and RIN prices have changed, in some cases significantly, since December 30, 2020, and again since the

Proposed Denial. However, because the purpose of these tables is to provide illustrative examples of how various parties are impacted by fuel and RIN prices and demonstrate that RIN cost passthrough occurs, and because several commenters reference these tables as provided in the Proposed Denial, we believe it is appropriate to maintain consistent examples between the Proposed Denial and this SRE Denial. Accordingly, we have not updated the price data used in these examples. We have, however, provided updated examples using more recent price data in Appendix V, which show that the outcome of our analysis does not change.

The 2011 DOE Study included a very similar hypothetical value breakdown for various types of refiners in Appendix B of that study.[191] At the time, DOE projected that *if* integrated refiners did not have to discount the E10 that they sell, then they could acquire RINs through blending at little or no cost. In this hypothetical scenario, integrated refiners that acquired RINs at little or no cost through blending renewable fuel would have a significant advantage relative to merchant refiners that purchased RINs at a higher market price. However, as the examples below illustrate, integrated refiners must compete with non-obligated blenders in the blended fuels market. To offer competitively priced blended fuel, integrated refiners (like blenders) must discount the price of the blended fuel by the price of the RIN attached to the renewable fuel contained in the blended fuel. Market data reviewed by EPA confirm that the price of blended fuel reflects the RIN discount.[192] Thus, contrary to the hypothetical example in

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[191] *See supra*, Section II.D.

[192] *See infra*, Section IV.D.2.d.ii.

the 2011 DOE Study,[193] we find that all obligated parties have the same cost to acquire RINs, whether they acquire RINs through blending renewable fuel or purchasing separated RINs. We address comments on these findings in a generalized manner in Appendix B and in confidential refinery-specific appendices to this action.

[193] DOE's example in Appendix B of the 2011 DOE Study included a comparison of Company A that blends all its production with ethanol and does not need to purchase ethanol RINs, with Company B that does not do any blending and must purchase RINs to meet its entire RFS obligation, and with Company C that blends in excess of its obligation and has RINs to sell into the market. In DOE's hypothetical case, Company A acquired RINs at no cost (n/a in the estimate) while Company B faced a 15 cent per RIN cost to purchase RINs. 2011 DOE Study at B-4.

Table IV.D.2.c-1: BOB,[194] Ethanol, E10, and RIN Prices on December 30, 2020[195]

Product	Price	Data Source
BOB Cost of Production	$1.34	Assumed to be equal to the BOB Market Price without RIN Cost
BOB Market Price without RIN Cost	$1.34	Calculated (BOB Market Price with RIN Cost less RIN Cost)
BOB Market Price with RIN Cost	$1.44	EIA
Ethanol Market Price	$1.50	OPIS
E10 Market Price with the RFS Program	$1.37	Calculated using BOB Market Price with RIN Cost, Ethanol Market Price, and D6 RIN Price
E10 Market Price without the RFS Program	$1.36	Calculated using BOB Market Price without RIN Cost and Ethanol Market Price
D6 RIN Price	$0.77	OPIS
RIN Cost per Gallon of BOB	$0.10	Calculated from 2020 RVO and OPIS RIN Prices
D6 RIN Cost per Gallon of E10	$0.06	Calculated from 2020 RVO and OPIS RIN Prices
D3, D4, and D5 RIN cost per gallon of E10	$0.03	Calculated from 2020 RVO and OPIS RIN Prices

[194] BOB is an intermediate petroleum product that is used in making finished gasoline and is generally blended with ethanol to make E10. BOB represents the petroleum-based portion of blended gasoline that has a RIN obligation attached to it. Therefore, BOB can be used to show the price impacts of the RIN market on the petroleum component of blended fuel.

[195] Updated examples using more recent price data are provided in Appendix V.

Table IV.D.2.c-2: Illustrative Costs, Revenue, and Profit for E10 Production

Line		Merchant Refiner		Integrated Refiner		Non-Obligated Blender	
		With RFS	No RFS	With RFS	No RFS	With RFS	No RFS
2-1	0.9*BOB Cost of Production	$(1.21)	$(1.21)	$(1.21)	$(1.21)	-	-
2-2	0.9*RIN Cost	$(0.09)	-	$(0.09)	-	-	-
2-3	0.9*BOB Market Price	$1.30	$1.21	-	-	$(1.30)	$(1.21)
2-4	0.1*Ethanol Market Price (with RIN)	-	-	$(0.15)	$(0.15)	$(0.15)	$(0.15)
2-5	0.1*Net Ethanol Market Price (no RIN)	-	-	$(0.07)	$(0.15)	$(0.07)	$(0.15)
2-6	E10 Market Price (per Gallon)	-	-	$1.37	$1.36	$1.37	$1.36
2-7	D6 RIN Purchases	$(0.06)	-	-	-	-	-
2-8	D3, D4, and D5 RIN Purchases	$(0.03)	-	$(0.03)	-	-	-
2-9	D6 RIN Sales	-	-	$0.02	-	$0.08	-
2-10	Profit/Loss per Gallon E10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Table IV.D.2.c-3: Diesel Fuel, Biodiesel, B5 and RIN Prices on December 30, 2020

Product	Price	Data Source
ULSD[196] Cost of Production	$1.38	Assumed to be equal to the ULSD Market Price without RIN Cost
ULSD Market Price without RIN Cost	$1.38	Calculated (ULSD Market Price with RIN Cost less RIN Cost)
ULSD Market Price with RIN Cost	$1.48	EIA
Biodiesel Market Price	$3.66	OPIS
Biodiesel Tax Credit	$1.00	N/A
B5 Market Price with the RFS Program	$1.46	Calculated using ULSD Market Price with RIN Cost, Biodiesel Market Price, and D4 RIN Price, and Tax Credit Price
B5 Market Price without the RFS Program	$1.44	Calculated using ULSD Market Price without RIN Cost, Biodiesel Market Price, and Tax Credit Price
D4 RIN Price	$1.00	OPIS
RIN Cost per Gallon of ULSD	$0.10	Calculated from 2020 RVO and OPIS RIN Prices
D4 RIN Cost per Gallon of B5	$0.02	Calculated from 2020 RVO and OPIS RIN Prices
D3, D5, and D6 RIN cost per gallon of B5	$0.07	Calculated from 2020 RVO and OPIS RIN Prices

[196] ULSD stands for "ultra-low-sulfur diesel" fuel.

Table IV.D.2.c-4: Illustrative Costs, Revenue, and Profit for B5 Production

Line		Merchant Refiner		Integrated Refiner		Non-Obligated Blender	
		With RFS	No RFS	With RFS	No RFS	With RFS	No RFS
4-1	0.95*ULSD Cost of Production	$(1.31)	$(1.31)	$(1.31)	$(1.31)	-	-
4-2	0.95*RIN Cost	$(0.09)	-	$(0.09)	-	-	-
4-3	0.95*ULSD Market Price	$1.41	$1.31	-	-	$(1.41)	$(1.31)
4-4	0.05*Biodiesel Market Price (with RIN)	-	-	$(0.18)	$(0.18)	$(0.18)	$(0.18)
4-5	0.05*Tax Credit	-	-	$0.05	$0.05	$0.05	$0.05
4-6[197]	0.05*Net Biodiesel Price			$(0.06)	$(0.13)	$(0.06)	$(0.13)
4-7	B5 Market Price (per Gallon)	-	-	$1.46	$1.44	$1.46	$1.44
4-8	D4 RIN Purchases	$(0.02)	-	-	-	-	-
4-9	D3, D5, and D6 RIN Purchases	$(0.07)	-	$(0.07)	-	-	-
4-10	D4 RIN Sales	-	-	$0.05	-	$0.07	-
4-11	Profit/Loss per Gallon E10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

The illustrative examples presented in Tables IV.D.2.c-2 and 4 demonstrate several important points about the impact of the RFS program and RIN prices on merchant refiners, integrated refiners, and non-obligated blenders. First, since the RIN cost (lines 2-2 and 4-2) and the RIN discount (blended fuel prices based on net renewable fuel prices; lines 2-6 and 4-7) are fully passed through to wholesale purchasers, no party benefits or is harmed by the RFS program, either in ab-

[197] The equation for this line was mistakenly described as "0.95*Net Biodiesel Price" in both the Proposed Denial and the April 2022 SRE Denial. However, this error was merely a typo in the line description for line 4-6, and not in the corresponding calculations presented in that line. Thus, the values presented in this table in both the Proposed Denial and the April 2022 SRE Denial were correct and calculated using "0.05*Net Biodiesel Price" as line 4-6 appears here.

solute terms or relative to their competitors.[198] This can be seen in lines 2-10 and 4-11. In each of the examples, the revenues and costs of various products change as a result of the RFS program, but the profit/loss and, thus, the potential harm for each of these three parties is identical with and without the RFS program.

Second, a merchant refiner's ability to recover its RIN costs in the price of the fuel it produces does not depend on its ability to be a "price setter" or to receive a price for its fuel that is above the market price. Instead, the market price for fuel increases to account for the RIN cost associated with producing the fuel (RIN cost passthrough). Whether and the degree to which a refiner is a "price setter" or "price taker" is not influenced by the RFS program. Rather, the RFS program merely shifts upward the price at which this competitive dynamic is at play. This price impact can be seen by comparing the market prices for gasoline and diesel fuel with and without the RFS program (lines 2-3 and 4-3 respectively). Merchant refiners automatically receive a price for their fuel that reflects the cost increase due to the RFS program (i.e., the cost of the RIN) when they sell the fuel at the market price.

Third, if a refiner (merchant or integrated) has a higher cost of production than the market price without the RFS program, it will lose money for each gallon of fuel it produces. This is true both with and without the RFS program. Any party that has a higher cost of production than the market price for the goods it produces will lose money when selling those goods. However,

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[198] Throughout Section IV.D.2.c, references to "lines" are to Table IV.D.2.c-2 (lines beginning with 2-) and Table IV.D.2.c-4 (lines beginning with 4-).

the higher market prices for fuels can obscure these underlying fundamentals. In the example presented in Table IV.D.2.c-1, if a merchant refiner's cost to produce 0.9 gallons of gasoline is $1.30, it may appear that the refiner would break even by selling gasoline at the market price (line 2-3) but for the RIN purchases (lines 2-7 and 2-8). Several petitioners have made this very claim, that their refineries would be profitable if they did not have to purchase RINs but are not profitable after accounting for their RIN costs. However, such claims ignore the fact that in the absence of the RFS program, the market price for 0.9 gallons of gasoline (line 2-3) would fall to $1.21, resulting in a $0.09 loss. If a refiner's cost of production exceeds the marginal supply price for its market, the refiner will lose money for every gallon of fuel it produces due to its high cost of production, regardless of the presence or absence of the RFS program. As demonstrated by the identical results for all parties in Tables IV.D.2.c-2 and 4, the RIN compliance costs associated with the RFS program do not have a differential impact on the refiner's situation.

Fourth, while integrated refiners that do their own blending have the same cost to acquire RINs as merchant refiners, they spend less on separated RIN purchases when they produce E10 or B5 (lines 2-7 and 4-8, respectively). Integrated refiners are acting both as merchant refiners (producing fuel that carries an RFS obligation) and as blenders (blending renewable fuel and separating the attached RINs) at the same time. However, rather than purchasing all the RINs they need from other parties or selling all the RINs they acquire through blending renewable fuel, integrated refiners keep the RINs they need for compliance from blending renewable fuel rather than purchasing these RINs.

The transfer of RINs from the blending operation of an integrated refiner to the refining operation is an internal transfer, rather than an external purchase or sale that is easier to see in financial reports. While it may appear that integrated refiners are at an advantage relative to merchant refiners under the RFS program because they purchase fewer RINs per gallon of fuel produced (lines 2-7 and 4-8) than merchant refiners, they also sell fewer RINs than non-obligated blenders (lines 2-9 and 4-10). These two impacts—the higher RIN purchases relative to merchant refiners and the lower RIN sales relative to non-obligated blenders—offset each other such that integrated refiners neither benefit from the RFS program, nor are at a disadvantage relative to merchant refiners or non-obligated blenders under the RFS program.

Another way to understand the impact of the RFS program on integrated refiners is to consider the opportunity cost to these parties of selling blended fuel rather than petroleum fuel. Integrated refiners are competing with non-obligated blenders when they sell blended fuel (lines 2-6 and 4-7). These blenders must discount the price of the blended fuel they sell because of the revenue they realize when they sell the RINs associated with the renewable fuel (lines 2-9 and 4-10). Integrated refiners generally keep the RINs they acquire when they blend renewable fuel, so they do not have this revenue source to reduce the price of their blended fuel to compete with blenders. Instead of revenue from RIN sales, integrated refiners can use their own production of petroleum fuel, which has a lower cost of production than the market price for the fuel (lines 2-1 and 2-3 and lines 4-1 and 4-3), to produce blended fuel. Access to these lower-cost fuels allows integrated refiners the

ability to offer blended fuel at the same price as non-obligated blenders—which use the revenue from RIN sales to discount the price of their blended fuel—despite the fact that they use the RINs they acquire through blending for RFS compliance, rather than selling them to other parties. In doing so they give up the opportunity to sell their petroleum fuel at the higher market rate, which reflects the RIN cost (lines 2-2 and 4-2).

Fifth, the fact that refiners are able to recover the cost of the RINs they need for compliance and that blenders pass through the RIN discount to wholesale purchasers does not mean that the RFS program has no impact on fuel prices.[199] The RFS program functions as a cross-subsidy, where RINs increase the market price of petroleum fuel (lines 2-3 and 4-3) and decrease the net price of renewable fuel (lines 2-5 and 4-6). This means that the RFS program reduces the market price for fuel with higher renewable fuel content (e.g., E85 or B20) and increases the market price for fuel with little or no renewable content (e.g., E0 or B0). Notably, the RIN cost and the RIN discount are not the same for all blended fuels. RIN costs (lines 2-2 and 4-2) are proportional to the quantity of petroleum fuel in the blended fuel while the RIN value used to discount the price of the renewable fuel is proportional to the quantity and type (D6 ethanol, D4 biodiesel, etc.) of renewable fuel in the blended fuel. In the two examples in Tables

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[199] The RFS program requires the use of renewable fuels, which often have higher prices than the petroleum fuels they displace. This is particularly true for advanced biofuels such as biodiesel and renewable diesel. By requiring the use of higher cost fuels, the RFS program marginally increases the cost of transportation fuel in the United States.

IV.D.2.c-2 and 4, the RIN cost and the RIN discount for E10 and B5 are very similar and as a result the prices for E10 and B5 with and without the RFS program (lines 2-6 and 4-7, respectively) are very similar. This is not the case for fuels with significantly higher or lower proportions of renewable fuel.

Finally, while non-obligated blenders realize revenue from RIN sales (lines 2-9 and 4-10), this revenue is not a windfall profit. Instead, RIN revenues result in lower net prices for renewable fuels (lines 2-5 and 4-6). The prices of the blended fuel (lines 2-6 and 4-7) then reflect the lower net cost for the renewable fuel under the RFS program. For fuels such as E10 and B5, when the RIN value of the renewable fuel in the blend is approximately equal to the RIN cost associated with the petroleum fuel in the blend, it can be difficult to see the impact of the RFS program in the blended fuel price. For fuels with significantly higher or lower renewable fuel content, the impact is more pronounced. RINs decrease the price for fuel with a high renewable content (e.g., B20 or E85), while RINs increase the price for fuel with little or no renewable content (e.g., E0 or B0). This is the mechanism by which the RFS program was intended to increase the production and use of renewable fuel in the United States.

In the calculations in Tables IV.D.2.c-2 and 4, we have made several simplifying assumptions. First, we have assumed that the fuel cost of production for both the merchant refiner and the integrated refiner (lines 2-1 and 4-1) is equal to the market price for the fuel without the RFS program. In practice, the marginal cost to supply fuel to any given market sets the market price. Each refiner's refining margin would, therefore, be de-

termined by its actual fuel cost of production relative to the market price for the fuel. RIN costs increase the market price for the fuel by an amount equal to the RIN cost, since all parties have the same RIN costs. However, since the market price for fuel reflects the RIN cost, the merchant refiner's profit/loss is determined by its cost of production relative to the marginal cost of production for its market, with or without the RFS program. Said another way, different refineries in a market will have differing profit margins for the fuel they produce and ultimately distribute to terminals. But since RFS compliance costs (i.e., RINs) apply equally to every gallon of fuel produced, these costs directly impact all gasoline and diesel fuel volumes equally, raising the marginal supply price for these products. Thus, RIN prices increase a refinery's costs and the market price for their production, but the difference between the refining margins for the different refineries will remain the same with and without the RFS program.

Similarly, in this example we have assumed no blending margin or cost for blending beyond the purchase of petroleum fuel and renewable fuel. This is a simplification that does not reflect the fact that, in addition to the cost of purchasing fuel, blenders—whether operating at a gasoline terminal or their own truck rack—also have operating costs and fixed costs. These costs include, among others, labor costs, maintenance costs, and capital recovery costs. Blenders must earn a margin when they sell blended fuel to cover these fixed and operating costs, and the market price for blended fuel reflects the fixed and operating costs of the marginal fuel blender.[200]

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[200] We note that, in some of the contracts that have been submitted to EPA, this blending margin is represented by a fixed price,

However, not all blenders will have the same fixed and operating costs. Much like the previous example, we would expect a blender's (or integrated refiner's) profit/loss for blending renewable fuel to be equal to its fixed and operating costs relative to the fixed and operating costs of the marginal blender. Blenders and integrated refiners with relatively low blending costs are expected to earn greater profits through blending, while blenders and integrated refiners with relatively high blending costs are expected to earn relatively lower profits (or losses) through blending. This is true independent of the RFS program, as RIN costs/revenues are neutral. Notably, the design of the RFS program enables the market to function efficiently by allowing those refiners that have relatively high fixed and operating costs of blending renewable fuel to purchase RINs from blenders that have lower fixed and operating costs of blending renewable fuel. We acknowledge this simplification and note that our decision to exclude a blending margin from the examples presented in Tables IV.D.2.c-2 and 4 does not affect the conclusions highlighted above.

d. EPA Evaluation of Available Market Data

EPA analyzed the available market data to verify the economic principles at work and to verify that the RIN cost and the RIN discount are being reflected in the re-

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while in other cases the fuel purchaser appears to be accepting slightly less than full passthrough of the RIN value, possibly to pay for part or all of the blending margin or blending cost. In either case, these blending margins are negotiated between fuel buyers and fuel blenders and are generally not made public. EPA has provided a more detailed assessment of the individual refinery contracts provided to the Agency in the confidential refinery-specific CBI appendices.

tail price of blended fuel.[201] These analyses, including analyses conducted for previous assessments of the passthrough of both the RIN cost and the RIN discount, as well as new analyses using more recent data, are presented in this section. These analyses confirm that both the *cost* of the RINs—which is reflected in the prices for fuel and blendstocks—and the *discount* of the RINs are passed through to wholesale purchasers in the marketplace in the price they pay for blended fuel. In Appendix B, we address the RIN market studies included in the comments we received on the Proposed Denial. Some small refineries also submitted analyses specific to their operations under claims of confidentiality, and we have responded to those in confidential, refinery-specific appendices to this action.

i. Assessment of Data on RIN Cost Passthrough

EPA first assessed available data to determine whether refiners are able to recover the *cost* of the RINs they need to demonstrate compliance with their RFS obligations through higher prices for the petroleum fuel they produce, as described in Equations 1 and 2. This analysis is complicated by the fact that the terms in Equations 1 and 2 for the gasoline price with no RFS obligation and the diesel fuel price with no RFS obligation cannot be found in market data from the United States, as the reported data will always reflect the cost of the RFS obligation. As described below, however, there are market data on the prices of fuels that are very similar (and in some cases identical) where one fuel has an RFS obligation and the other does not.

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[201] *See supra*, Section IV.D.2.b.

In 2015, EPA identified prices for near-identical fuels (in terms of technical fuel specifications, and, therefore, presumably cost of production) except for the fact that one fuel was subject to an RFS obligation while the other was not.[202] We then used the price of the non-obligated fuel to approximate what the cost of the obligated fuel would be in the absence of the RFS obligation. We then compared the price difference between these two fuels, which represents the increase in the market price of the obligated fuel as a result of its RFS obligation, to the RIN cost for producing or importing a gallon of fuel subject to an RFS obligation. The strong correlations between the price differences for similar fuels with and without an RFS obligation and the RIN cost per gallon of obligated fuel led to the conclusion that the market prices for gasoline and diesel fuel are higher than they would otherwise be in the absence of the RFS program. Further, the observed price difference was equal to the cost of purchasing the RINs needed to meet the compliance obligations for a gallon of gasoline or diesel fuel. We therefore concluded that all refiners recovered the full cost of the RINs they purchase through the prices of the fuel they sell.

EPA subsequently repeated the analytical techniques first developed in 2015 using more recent data from 2017-2020. Figure IV.D.2.d.i-1 shows the price difference in New York Harbor between ULSD, which is subject to an RFS obligation, and heating oil, which is essentially an identical product except that it is not subject to an RFS obligation. As expected, there is a very strong correlation between these data sets, as shown in Figure IV.D.2.d.i-2. The market price premium for

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[202] *See* Burkholder memo.

ULSD over that for heating oil consistently matches the RIN cost (i.e., the cost of purchasing the RINs needed to meet the RFS obligation). EPA received both public and confidential comments on its analysis, and has responded to those comments in Appendix B and in confidential, refinery-specific appendices to this action.

Similarly, Figure IV.D.2.d.i-3 shows the price difference in the Gulf Coast between ULSD, which is subject to an RFS obligation, and jet fuel, which is not. However, as shown in Figure IV.D.2.d.i-4, the correlation between the price difference of ULSD and jet fuel and the RIN cost is not as strong as the correlation between the price difference of ULSD and heating oil and the RIN cost. This is to be expected, as there are more significant product quality differences between ULSD and jet fuel such that they are not one-for-one replacements of each other. Furthermore, they are used primarily in different markets with distinct supply/demand dynamics that would also contribute to differences in their market prices.[203] Thus, there is more noise in these data, but a general relationship between the price difference among these fuels and the RIN cost can be seen. Also apparent in Figure IV.D.2.d.i-3 is the impact of the COVID-19 pandemic. In late March 2020, air travel and demand for jet fuel decreased dramatically, resulting in an over-supply of jet fuel and a spike in the price premium for ULSD over jet fuel.[204] Over time, as de-

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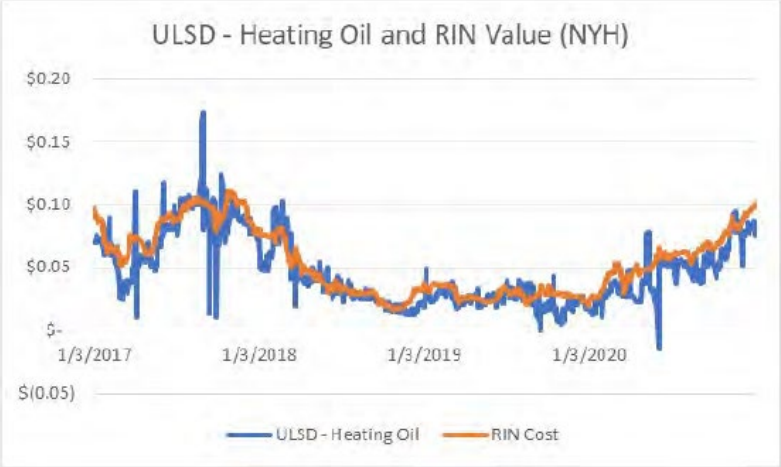
[203] Jet fuel generally contains more sulfur than ULSD. While the properties of jet fuel are closer to #1 diesel than to #2 diesel, EPA's public data does not contain prices for #1 diesel.

[204] EIA, *COVID-19's impact on commercial jet fuel demand has been significant and uneven*, Today in Energy (August 7, 2020), https://www.eia.gov/todayinenergy/detail.php?id=44676.

mand for jet fuel gradually increased and refiners adjusted their production to better match fuel demand, the price difference between jet fuel and ULSD returned to match the RIN cost. Taken together, these more recent data confirm EPA's original conclusion that the market prices for gasoline and diesel fuel reflect the RIN cost, and, therefore, all refiners are able to recover their RIN costs through the sales prices of these fuels.

Figure IV.D.2.d.i-1: Price Difference Between ULSD and Heating Oil in New York Harbor and RIN Cost (2017-2020)[205]



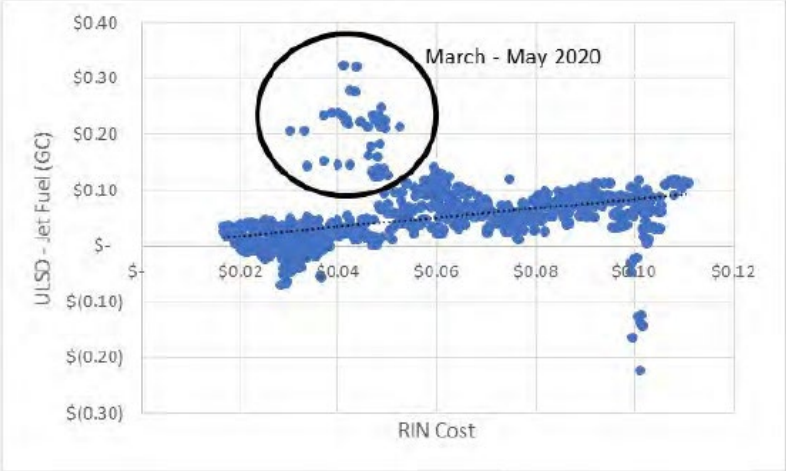
[205] Prices for ULSD and heating oil are reported by EIA and are available at https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm.

Figure IV.D.2.d.i-2: Correlation Between Price Difference of ULSD and Heating Oil and RIN Cost (2017-2020)

Figure IV.D.2.d.i-3: Price Difference Between ULSD and Jet Fuel in the Gulf Coast and RIN Cost (2017-2020)[206]

[206] Prices for ULSD and jet fuel are reported by EIA and are available at https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm.

Figure IV.D.2.d.i-4: Correlation Between Price Difference of ULSD and Jet Fuel and RIN Cost (2017-2020)



In their SRE petitions and in their subsequent comments on the Proposed Denial, several small refineries submitted examples of fuel pricing contracts in their local markets under claims of confidentiality. EPA has responded to the general comments in Appendix B and to the confidential information in confidential refinery-specific appendices to this action. Notably, many of these contracts indexed the sales price for fuel in the typically smaller markets into which the small refineries sell fuel to larger fuels markets, usually with the addition of transportation costs. The structure of these contracts supports EPA's finding that the inclusion of the RIN cost in the price of obligated fuel is not unique to larger, coastal fuels markets, but is true across the United States. If the RIN cost is reflected in the sales price of fuel in New York Harbor and the Gulf Coast, it is certainly reflected in markets (including smaller markets) that *index* their pricing to these larger markets.

One piece of evidence that the pricing of fuel in smaller markets is commonly indexed to the price in larger spot markets is the reporting of the Spot Replacement Index (SRI) by a major industry source of fuel pricing information. A contractor to EPA described the SRI as follows:

> "The starting point for both the gasoline and ULSD SRI is the average of the prior-day's closing spot range in each of the seven U.S. spot markets. Each day the price reporting service surveys traders and brokers and publishes a full day range (high, low, mean, settlement) that represents their assessment of the value of spot transactions for gasoline and diesel fuel that day. The price service provider has mapped over 250 rack markets from their theoretical spot origin points. From the full day spot price assessment, the service provider then adds current pipeline tariffs based on the distance that product flows in the line from the spot origin point to the destination rack terminal location. The price provider then adds in line loss (due to evaporation in the line), terminaling and storage (transfer) fees if product moves from line to line, an estimated fee for proprietary additives (when required), a cost of money factor (based upon transit time from origin to destination), pipeline security charges and trucking fees for applicable markets where product requires transportation using vehicles in addition to pipelines. For distillates, the service provider also approximates the cost of various additives (lubricity, red dye, etc.). For each date in the analysis the day's SRI shows yesterday's closing spot price delivered into a specific market. The service provider developed this methodol-

ogy after more than a year of discussion with major oil suppliers, marketers, and resellers."[207]

EPA considers the existence and common use by the refining industry of the SRI as strong evidence that the prices in local markets are indexed to the seven major U.S. spot markets; otherwise this tool would be of little use to the industry participants that helped to create and use it.

Furthermore, because of the highly connected and competitive nature of fuels markets across the United States, one would expect every fuels market to reflect these same pricing dynamics. To date, no petitioning small refinery has provided EPA with data that contradict this position, either in their SRE petitions or in their comments on the Proposed Denial, nor have we found other data that is in conflict with this expectation. In fact, small refineries that participate in both larger markets and smaller markets have consistently highlighted to EPA that they are in direct competition with larger and better resourced refineries regardless of their location. Even in cases where the small refineries themselves may not distribute fuel beyond a relatively small geographic area, the large integrated refiners with which they compete in those local markets do sell fuels into the larger distributed markets. It would not make economic sense for these large integrated refiners, which have access to larger fuels markets where market prices reflect the cost of RINs, to choose to sell into the smaller markets occupied by small refineries unless the market prices in those smaller markets also

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[207] Economic Analysis of Fuel Blending, prepared for the Environmental Protection Agency by Stillwater Associates LLC, February 9, 2022, p. 3.

reflected the RIN cost. Some small refineries asserted that large refineries engage in predatory pricing (i.e., the illegal act of setting prices low to attempt to eliminate the competition) in the local markets where the small refineries compete. The U.S. Federal Trade Commission (FTC) has looked into such claims in the past and has generally found that in "markets with a large number of sellers, such as gasoline retailing, it is unlikely that one company could price below cost long enough to drive out a significant number of rivals and attain a dominant position."[208] Even if such claims were true, such predatory pricing would presumably be for the purpose of increasing the predatory refinery's share of the refined products market (the thing they produce) and not the renewable fuels market (the thing they also buy). In other words, such predatory pricing for refined products would not be a basis for EPA to find DEH due to the cost of compliance with the RFS program. Consistent with the historic findings of the FTC, EPA in its review of the materials submitted by small refineries in their SRE petitions and comments has not found a basis to conclude that the wholesale fuel markets are anything but highly competitive.

Another important observation from these data is that neither the RIN cost nor the additional revenue a refiner receives for an obligated fuel compared to a non-obligated fuel (the premium for obligated fuel versus a similar non-obligated fuel) are static. There has been significant variation in these prices from 2017-2021,

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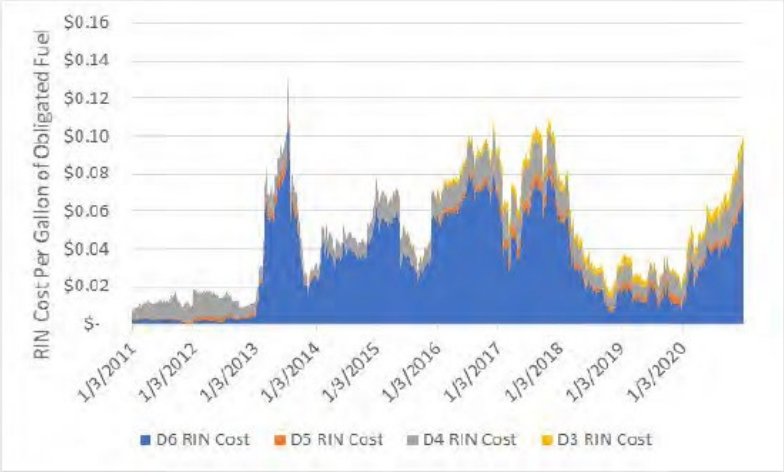
[208] United States Federal Trade Commission (FTC), "Predatory or Below-Cost Pricing," available at https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/single-firm-conduct/predatory-or-below-cost-pricing.

from approximately $0.10 per gallon in late 2017 and late 2020, to a low of approximately $0.03-0.04 per gallon throughout 2019. RIN prices have generally held stable in the first quarter of 2021, though they continued to increase in 2021, with prices at the end of 2021 for most RIN categories 50-100% greater than RIN prices at the end of 2020 (see Figure IV.D.2.d.i-5).[209]

Figure IV.D.2.d.i-5: RIN Cost Per Gallon by RFS Category (2011-2020)



Obligated parties that choose to purchase the RINs they need for compliance on a ratable basis (i.e., purchase on a systematic, regular basis the number of RINs needed to satisfy their obligation for all the fuel sold each day) will recover the cost of the RINs they purchase in the sales price of the petroleum fuel they sell. Conversely, obligated parties that choose to delay RIN

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[209] EPA, RIN Trades and Price Information, available at https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information.

purchases, or to purchase excess RINs in advance of producing or importing petroleum fuel, may recover more or less than the price they paid for RINs in the sales price of the petroleum fuel they sell, depending on whether the RIN price on the purchase date is higher or lower than the RIN price on the date the petroleum fuel is sold. For example, based on the data presented in Figures IV.D.2.d.i-1 and 3, an obligated party that sold fuel in July 2020 received approximately $0.06 per gallon more than it would have in the absence of the RFS program. If that obligated party delayed purchasing RINs until the end of 2020, the RIN cost would have been approximately $0.10 per gallon. Conversely, if the obligated party had purchased excess RINs in January 2020, the RIN cost would have been approximately $0.03 per gallon. Thus, the decision to delay RIN purchases until December 2020 would have cost an obligated party an additional $0.04 per gallon of fuel produced in July 2020; whereas purchasing excess RINs in January 2020 would have resulted in an additional $0.03 per gallon profit for every gallon of fuel produced in July 2020. By purchasing RINs ratably, all obligated parties have the ability to match their RIN costs with the price they receive when they sell their fuel (i.e., to pass through their RIN costs). Alternatively, refineries can try to time their purchases in the RIN market, which may result in greater or lesser RIN costs. EPA strongly disputes any notion that costs resulting from individual refinery's business decisions, including the choice to delay RIN procurement in hopes of receiving an SRE, or an attempt to time the transaction to profit from the fluctuation in the RIN market prices over time, represent DEH *caused by* the RFS program.

A number of small refineries have argued that, because the RFS program does not require RINs to be purchased ratably, EPA is obligated to provide hardship relief if purchasing RINs in any manner allowed under the RFS program would lead to a small refinery having a higher cost of compliance than other program participants. EPA does not agree that RFS program flexibilities, including those that allow refineries to choose when they acquire RINs, can be a basis for hardship relief. The purpose of the RFS program and the regulations EPA promulgated to implement it are to "ensure that gasoline sold or introduced into commerce in the United States, [] on an annual basis, contains the applicable volume of renewable fuel."[210] Currently, these regulations require refineries to ensure that renewable fuel volumes equivalent to approximately 11-12 percent of their annual gasoline and diesel fuel production are entered into commerce. In accomplishing that program requirement, the industry as a whole accomplishes that product mix each day and month of the year with some small variation due to seasonal sales patterns for some fuels. In the absence of the RIN credit program, refineries would have to directly ensure renewable fuel blending. In such a program design, a small refinery could, under the annual compliance provisions, choose to delay any renewable fuel blending until the last month of the year and then attempt to sell exclusively renewable fuel in the last month of the year at a volume to meet the obligation it accrued through the preceding 11 months. Such an approach would almost certainly lead to a much higher cost of compliance than would have occurred had the small refinery worked to demonstrate

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[210] CAA section 211(*o*)(2)(A)(i).

compliance on an ongoing basis each month through the year. As alleged by small refinery commenters, EPA would then be compelled to provide hardship relief due to the higher cost of RFS compliance for the small refineries that chose such a compliance mechanism. Such an approach, where the business decisions of the individual companies are made within the regulations but contrary to the purpose of the program, does not constitute DEH *caused* by the cost of compliance with the RFS program, and therefore cannot be a basis for hardship relief. Otherwise, all small refineries could simply choose such an impossible compliance approach, and then, having made this choice, be assured of relief from the RFS obligations. Similarly, individual business decisions made by an obligated party not to ratably accrue RINs as their obligation accrues, but instead to either purchase RINs in advance or delay RIN purchases until a later date, are business choices that companies may lawfully make. However, as discussed in detail in Section III, EPA may not consider these individual business choices in determining if a small refinery faces DEH due to compliance with the RFS program. EPA addresses these and other similar comments on the Proposed Denial in Appendix B.

ii. Assessment of Data on the RIN Discount

To verify that fuel blenders are passing through the RIN discount to wholesale purchasers through the price of blended fuel as described by Equations 3 and 4, EPA considered information from a variety of sources, including the information received from commenters. We evaluated the issue by analyzing market pricing data for petroleum fuel, renewable fuel, RINs, and blended fuel (including data submitted by petitioners), state-

ments from blenders in publicly-available earnings reports, and fuel pricing contracts submitted by petitioners. Each of these data sources support EPA's finding that revenue from RIN sales does not represent a windfall profit for fuel blenders. Rather, they demonstrate that blenders pass through the full value of the RIN to wholesale purchasers in discounts on the price of the blended fuel they sell and, therefore, do not retain any revenue from the sale of RINs. We address the information received from commenters on the Proposed Denial in Appendix B and in confidential, refinery-specific appendices to this action.

There are a limited number of markets where prices for each of these fuels are reported, but all of those we have evaluated confirm our conclusions that fuel blenders are passing through the RIN discount to wholesale purchasers through the price of blended fuel.[211] In 2015, EPA analyzed market data from Des Moines, Iowa and demonstrated that there was a very strong correlation between the difference in the posted price for E10 in Des Moines and the calculated E10 price based on the component fuels (gasoline blendstock and ethanol), and the RIN price per gallon of E10.[212] These data indicated that fuel blenders are selling blended fuel based on the net price of the renewable fuel (after accounting for the sale of any associated RINs). This means that the price of the blended fuel was lower than the cost to purchase the components of the fuel blend (gasoline blendstock and ethanol with a RIN) and that revenue

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[211] This same point was raised in one small refinery's petition, along with data to illustrate it. The small refinery claimed its petition and all supporting information as CBI.

[212] *See* Burkholder memo.

from RIN sales offset these costs. The result of this pricing behavior is that 100% of the revenue from RIN sales was passed on to wholesale purchasers.

Prior to the issuance of the Proposed Denial, two petitioning small refineries submitted data to EPA on fuel prices in their markets that enabled EPA to analyze current data in additional markets using a methodology similar to the analysis we conducted for Des Moines in 2015.[213] Both parties claimed this data presented supported their claims of DEH. One petitioner used monthly gasoline and ethanol pricing data from a local terminal, along with RIN pricing data, to determine a monthly calculated E10 price from 2010 to the present using an equation nearly identical to Equation 2.[214] The petitioner then plotted these calculated E10 prices, which assume that 100% of the RIN value is passed through to wholesale purchasers through lower prices for blended fuel, against the posted prices for E10 at that same terminal. The petitioner found an extremely strong correlation ($R2 = 0.9976$) between the calculated E10 price (assuming 100% RIN passthrough) and the posted E10 price, demonstrating for this terminal that the RIN value has been fully passed through to wholesale purchasers since 2010.[215]

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[213] We do not present the data here because the petitioners have claimed it contains CBI.

[214] The only difference between Equation 2 and the equation used by the petitioner to determine the calculated E10 price was that the petitioner included an additional terminaling and throughput charge that applies regardless of the RFS program and is not relevant to this discussion.

[215] This petitioner acknowledged that the RIN was used to discount the price of blended fuel at their terminal. However, the

Another petitioning small refinery's fuel pricing data allowed EPA to conduct a similar analysis for yet another market.[216] This petitioner provided daily pricing information for E10 from a local terminal, as well as daily pricing information for gasoline blendstock and ethanol from a nearby market along with the cost to transport these fuels to the petitioner's local market. Daily prices were provided from January 1, 2019, through June 21, 2021. EPA used the data to calculate an E10 price using Equation 2 and compared these calculated E10 prices (assuming the E10 price was based on the net price of the ethanol, passing through 100% of the RIN in the discounted price of E10) to the posted E10 prices at the local terminal. As with the data provided by the other petitioner, we again find an extremely strong correlation (R_2 = 0.9991) between these two prices, further confirming our previous findings that the RIN price is fully passed through to wholesale purchasers as a discount on the price of the renewable fuel when petroleum fuel and renewable fuel are blended and then sold.

Support for EPA's finding that the RIN discount is fully reflected in the price of blended fuels and is accordingly passed through to wholesale purchasers by fuel blenders can also be found in public statements by the

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petitioner further argued that the RIN cost could not be recovered in the cost of the gasoline and used to discount the price of the blended fuel. As discussed further in Section IV.D.2.c, both the economic principles and the market data demonstrate that this is incorrect. Refiners recover the cost of the RIN through the sales of their petroleum fuel and the RIN is used to discount the price of blended fuel.

[216] We do not present the data here because the petitioner has claimed it contains CBI.

blenders themselves. Several parties directly involved in fuel blending supported EPA's findings in comments[217] on EPA's Point of Obligation denial.[218] More recently, R. Andrew Clyde, President, CEO & Director of Murphy USA, a large fuel blender and retailer, was asked if the recent high RIN prices positively affected Murphy USA's margins in a Q1 2021 earnings report. He responded:

> The reality is RINs and RIN prices are immaterial to our business. Historically, and you can look back over the last 3 years annual results, we've made $0.02 to $0.03 per gallon on product supply and wholesale net of RINs. And so during the quarter on the average, we generated about the equivalent of $0.07 a gallon per RIN, but net of the negative spot to rack margins of $0.04, we netted a little bit over $0.03 . . . If RINs are high, the refiner gate price is high and like it was in this quarter, our refinery gate spot to rack margin is negative . . . So RIN prices don't matter. The product supply margin plus the RINs is going to be about $0.02 to $0.03.[219]

Mr. Clyde describes a market dynamic wherein blenders experience negative blending margins (due to

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[217] *See* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0014; Letter from QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028.

[218] 81 FR 83776 (November 22, 2016) and 82 FR 56779 (November 30, 2017).

[219] Murphy USA Inc. FQ1 2021 Earnings Call Transcripts (April 29, 2021).

competitive market forces requiring that the RIN price be reflected in the market price of blended fuel) that are offset by revenue from selling RINs, with total margins (including fuel blending and RIN sales) relatively stable and independent of RIN prices.[220] These dynamics are exactly what one would expect to see if blenders are passing through 100% of the RIN price as a discount to wholesale purchasers in the price of blended fuel.[221]

Several petitioning small refineries also provided EPA with examples of contracts for fuel sales.[222] While there were some differences among these contracts, they generally showed that the sales price for blended E10 was discounted by the value of the RIN associated with the ethanol blended into the fuel blend. Many of the pricing formulas shown in these contracts looked very similar to Equation 4, with some referencing petroleum fuel and/or ethanol prices in nearby markets and including transportation costs. In some cases, the contracts stipulated that the purchase price would be the lower of the calculated price based on the prices of the petroleum fuel and the net price of ethanol (thus passing through 100% of the RIN price to wholesale purchasers) or the posted price of E10 at the local terminal, whichever was lower. These contracts provide yet more evidence that the price of the RIN is reflected in the sales price for blended fuel, and further that the passthrough

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[220] Petitioners' claims of "RIN theft" and windfall profits from RIN sales by Murphy USA and other blenders are further addressed in Section IV.D.2.a.

[221] *See supra*, Section IV.D.2.b.

[222] We do not present the contract data here because the petitioners have claimed it contains CBI.

of the RIN price to wholesale purchasers is not limited to any particular market in the United States.

3. EPA Responses to Small Refinery Arguments for Exemption

The petitioning small refineries raise many similar arguments in their petitions and in supplemental information they submitted to support receiving an exemption from their RFS obligations. Because these arguments are repeated by most, if not all, SRE petitioners, EPA is addressing them in this section at a level of generality needed to maintain the claims of CBI asserted by the small refineries in their respective petitions. The refineries generally argue eight overarching themes in their petitions and supplemental information. However, EPA recognizes that this list is not comprehensive. After reviewing the comments submitted in response to the Proposed Denial, EPA found that the small refineries repeated many of the same arguments that they had raised in the SRE petitions that were addressed in the Proposed Denial. To the extent that EPA addressed or responded to these assertions in the Proposed Denial, EPA has not responded to them again in Appendix B. EPA addresses the unique arguments raised by the small refineries in their comments on the Proposed Denial in Appendix B and in confidential, refinery-specific appendices to this action.

The general themes small refineries have articulated are: (a) They face unique challenges that prevent them from achieving RIN cost passthrough and that EPA must consider their specific circumstances; (b) EPA's Point of Obligation denial did not address their situations and does not apply to them; (c) The Point of Obligation denial is out of date and inapplicable; (d) The rev-

enue from RIN sales allows large retailers to undercut small refineries; (e) Large integrated refiners set prices in fuels markets, undercutting small refineries on price because of their market position and because large integrated refiners have lower or no RIN costs; (f) EPA is incorrect about parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market; (g) Single site refineries are disadvantaged relative to large integrated refiners because they only have access to a limited market; and (h) Small refineries that produce primarily diesel fuel are at a disadvantage since they cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

EPA evaluates and responds to each of these general themes below.

a. Small refineries face unique challenges that prevent them from passing through their RIN costs. EPA must consider each small refinery's specific situation.

Small refineries assert that "EPA must do more than cite to the Burkholder Report's conclusion 'that the refining industry *as a whole* is not burdened by rising RIN prices because refineries may pass that cost to purchasers of the blended fuel.' *Ergon-W. Va., Inc. v. EPA*, 896 F.3d 600, 613 (4th Cir. 2018) (emphasis added)."[223] The small refineries further assert that EPA has, in the past, ignored information specific to individual refineries that demonstrates that they cannot pass through the prices they pay for RINs due to unique operational or local market circumstances.

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[223] Confidential submissions by several small refineries made this assertion.

The small refineries misstate the holding from *EWV-I* and completely ignore the subsequent decision in *EWV-II*. The court in *EWV-I* held that EPA had acted arbitrarily and capriciously when it "failed to squarely address Ergon's petition with regards to RIN costs"[224] and instead relied on the Burkholder memo "as the *sole basis* for its conclusion."[225] (emphasis added). The court found that EPA was not arbitrary and capricious in relying on the Burkholder memo as one of many factors considered in the decision, but rather, that it failed to adequately illustrate how the analysis in that study applied to the circumstances at a particular small refinery (Ergon-West Virginia). On remand, EPA reached the same conclusion as in its first decision and this action was also challenged by Ergon before the Fourth Circuit. The court, in *EWV-II*, reviewed EPA's post-remand denial, which again relied heavily on the Burkholder memo, and found that "EPA's post-remand discussion of Ergon's evidence connected the dots left unaddressed in its original decision[,]" because "EPA thoroughly discussed Ergon's purported evidence of hardship, explained why it rejected Ergon's arguments, and set out other factors that led it to reach an opposite conclusion."[226] Accordingly, in this final action, EPA has evaluated the question of RIN costs in depth for the petitions at issue, starting with an evaluation of the underlying structure of the RFS program and RIN system to ascertain whether and how it might be possible for compliance with the RFS program to cause DEH. EPA then conducted a careful analysis of how the cost and

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[224] *EWV-I*, 896 F3d at 613.

[225] *EWV-II*, 980 F.3d at 417, *rev'd on other grounds*.

[226] *Id.*

value of RINs would be expected to flow through to wholesale purchasers, and analyzed a substantial amount of data, including available local market-specific data, that show how the findings in the Burkholder memo regarding the refining industry as a whole are true for all obligated parties, including small refineries in general and individual small refineries whose SRE petitions are before the Agency in particular.[227] However, due to the confidential nature of much of the information included in SRE petitions, we are presenting overall findings here and are presenting our responses to any refinery-specific data in confidential, refinery-specific appendices to this action. We have reviewed the information in the SRE petitions and the suppmental information provided by small refineries in their comments, and nothing presented in them leads us to conclude that the small refineries are affected by RFS compliance differently than other obligated parties or that they are not able to pass along RFS compliance costs to wholesale purchasers.

The small refineries also state in their SRE petitions and in comments submitted on the Proposed Denial that there are many diverse factors that affect each refinery's profitability and ability to recover the full cost of fuel production, including their RFS compliance costs. The small refineries cite to the 2011 DOE Study to support their assertion, quoting the following language:

The degree to which the costs burdening small refineries will be passed through to the market depends on many factors, including the market power and the relative cost level of a small refiner relative to other market

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[227] *See supra,* Section IV.D.2.

participants. . . . The cost for small refiners to comply with the RFS2 requirements can be substantial. . . . Their limited product slates coupled with an inability to blend renewable fuels means that many of the small refiners must enter the market to buy RINs. The cost to meet their individual RVO makes this aspect the most significant cost ofcompliance.[228]

As explained in Section IV.D.2 and acknowledged by DOE, the 2011 DOE Study did not evaluate empirical evidence pertaining to RIN cost passthrough. Furthermore, DOE has concluded that, if EPA's assertion that the cost of compliance is the same whether refineries buy RINs or blend biofuels to acquire RINs is correct, and EPA's assertion that RFS compliance costs are passed through in the price of refined products is also correct, small refineries would not face a "high[er] cost of compliance relative to the industry average.[229]

The small refineries fail to acknowledge the fact that they may not be profitable or able to pass through the full cost of their fuel production *despite* their RIN costs being passed through. It is important to reiterate that independent market analyses, as well as EPA's own, support the premise that RIN costs are incorporated into the price of finished fuels.[230] This is to say that even *without* RFS compliance costs, these small refineries may not be profitable. This kind of economic hardship is not *caused* by the RFS program, but rather, by the refinery's business model, geographic location, business decisions, and/or other factors independent of

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[228] 2011 DOE Study at 22-23.

[229] *See* DOE Consultation Memo.

[230] *See supra*, Section IV.D.

the RFS program. The CAA only speaks in terms of DEH caused by compliance with the RFS program. Congress tied SREs to compliance with the RFS program by using the language "compliance with the requirements of paragraph (2) would impose a [DEH]"[231] and "would be subject to a [DEH] if required to comply with paragraph (2)."[232] The CAA does not authorize or require EPA to subsidize through compliance exemptions any refinery whose economic hardship is not caused by compliance with the RFS program no matter the seriousness of the economic conditions the refinery may face, particularly since the magnitude of the RIN cost per gallon in comparison to typical refinery margins could turn the least profitable refineries into the most profitable ones.[233]

Additionally, the DOE language the small refineries quote comes from the "[o]ther observations from the interview process,"[234] which DOE "compiled through interviews with several industry participants, including two refineries, three importers, a fuel marketer, and a corn ethanol marketer."[235] This section does not state DOE's own conclusions, but rather summarizes what DOE heard from the stakeholders it reached out to in 2011. This language cannot be treated as DOE's findings, but rather, DOE's statement of the input it solicited and considered. Moreover, even is this were a con-

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[231] CAA section 211(*o*)(9)(A)(ii)(I), paragraph (2) refers to the section where Congress provided the annual applicable renewable volume mandates.

[232] CAA section 211(*o*)(9)(A)(ii)(II).

[233] *See supra*, Section IV.D.2.b. *See also infra*, Section IV.D.3.e.

[234] 2011 DOE Study at 22.

[235] *Id.* at 21.

clusion DOE made, it was based on an analysis that did not account for RIN cost passthrough.

EPA believes the conclusions in the Burkholder memo are applicable to all gasoline and diesel fuel markets nationwide, and, therefore, also applicable to all refineries, including small refineries.[236] Nevertheless, some petitioning small refineries have provided refinery-specific information in comments submitted under claims of confidentiality, attempting to explain why the conclusions in the Burkholder memo do not apply to them. EPA has analyzed the supplemental information and found no evidence supporting the assertions from the petitioning small refineries that their RFS compliance costs are disproportionately greater than for other refineries or that they are not able to pass along their RFS compliance costs to wholesale purchasers.[237] In fact, the data petitioners provided to EPA reflected the price behavior for both RINs and finished fuels that EPA would have expected based on economic principles.[238] EPA responds to these comments in Appendix B and in confidential, refinery-specific appendices to this action. Additionally, other stakeholders with interest and expertise in RIN market behavior and RFS compliance have provided support for and approved of EPA's analysis and conclusions regarding RIN cost passthrough.[239]

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[236] *See supra*, Section IV.D.2.

[237] *See supra*, Section IV.D.2.

[238] *See supra*, Section IV.D.2.

[239] *See supra*, Section IV.D.2. *See also* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0014; Letter from QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-

b. The small refineries' situations are distinguishable from the findings provided in the Point of Obligation denial, and the Point of Obligation denial did not address small refineries.

Petitioners claim that EPA's assessment of RIN cost passthrough in the Point of Obligation denial covered three categories of parties: integrated refiners, non-obligated fuel blenders, and merchant refiners. The petitioners note that small refineries as a group do not fit neatly within any of these categories. They further claim that EPA's conclusions about merchant refiners' ability to recover their RIN costs were based on representations from Valero, which they note is a large, international refiner with efficiency, geographic range, and pricing power. The petitioners state that while these types of merchant refiners may be able to recover the cost of purchased RINs, small refineries without these characteristics cannot.

EPA recognizes that few, if any, small refineries (or any refineries) fit neatly into a single category of integrated refiner, non-obligated blender, and merchant refiner.[240] Rather, we explain that refiners, whether large or small, may operate as an integrated refiner, non-obligated blender, and/or a merchant refiner in var-

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0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028. *See also* comments from API on 2020 RFS Annual Rule, Docket Item No. EPA-HQ-OAR-2019-0136-0721. *See also* comments from Chevron, API, BP, Shell, and Citgo on EPA's Proposed Denial, available in the docket for this action (EPA-HQ-OAR-2021-0566-0029 (Chevron), EPA-HQOAR-2021-0566-0031 (API), EPA-HQ-OAR-2021-0566-0033 (BP), EPA-HQ-OAR-2021-0566-0036 (Shell), EPAHQ-OAR-2021-0566-0042 (Citgo)).

[240] *See supra*, Section IV.D.2.c.

ious fuels markets and in different aspects of their business operations. EPA demonstrates that because both the RIN cost and the RIN discount are ultimately passed through to wholesale purchasers for all three categories, the RFS program does not advantage or disadvantage any of these parties over the others, regardless of how much of their operations fall into one or more of these categories. Importantly, a small refinery's ability to recover its RIN costs in the price of the fuel it produces does not depend on factors such as geographic range or pricing power.[241] Instead, the data and analysis EPA presents demonstrate that the market prices for both refined products and blended fuel reflect the cost of acquiring the RINs necessary to satisfy the RFS obligation associated with the fuel. Merchant refiners do not need to exercise market power and demand a price that is higher than the market price to recover their RIN costs; all parties selling into these competitive markets are recovering the cost of acquiring RINs when they sell their fuel at the market price. Thus, although size and market power can be an advantage for reasons other than RFS compliance, they provide no advantage to non-small refineries in recovering their RFS compliance costs.

c. EPA's assessment in the 2017 Point of Obligation Denial is out of date and not applicable.

Many petitioners state that EPA could not rely on the conclusions of the assessment conducted in 2017 in the context of the Point of Obligation denial to evaluate their recent petitions. The petitioners state that the in-

[241] *See infra*, Section IV.D.3.e.

formation considered in 2017 is now out of date and does not reflect the present realities of the fuels market.

We believe that the analyses conducted in 2017 continue to inform our understanding of the ways in which the RFS program affects small refineries and other fuels market participants. The fact that the data reviewed in 2017 were consistent with what would be expected based on the design of the RFS program with its RIN system and economic principles is strong evidence that it is highly unlikely that the RFS program will cause DEH, and is strong evidence that the conclusions in that action remain true today. Our finding in that decision that the fuels market operates as we would expect in a competitive market remains relevant. As long as the fuels and RIN markets remain competitive, we do not anticipate that the RFS program will cause DEH on small refineries.

Nevertheless, in this decision, we have considered more recent data since 2017—including the additional data the small refinery petitioners themselves submitted in their SRE petitions and in comments on the Proposed Denial—and we find that the more recent data are consistent with the data EPA reviewed in 2017.[242] These data continue to support our finding that both the RIN cost and the RIN discount are passed through to wholesale purchasers and continue to show that the RIN

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[242] The data, and the conclusions we have drawn from the more recent data, are presented in Section IV.D.2.d. and our responses to the public comments are provided in Appendix B. Responses to refinery-specific information are provided in confidential, refinery-specific appendices to this action.

market works in the same way for all market participants, including individual small refineries.

d. Revenue from RIN sales allows large retailers to undercut small refineries.

Petitioners claim that EPA had not considered clear evidence that revenue from RIN sales enabled large retailers such as Murphy USA to undercut the small refineries they compete with that are unable to sell RINs for a profit. The petitioners argue that large retailers (which are generally not obligated parties) can sell blended fuel at a lower cost than the cost of the petroleum fuel and renewable fuel they are composed of because of the revenue they receive by selling RINs. Small refineries must price their blended fuel at the same price as large retailers to be competitive, but they do not receive the benefit of revenue from RIN sales.

Contrary to the petitioners' claims, EPA has considered the ability for non-obligated blenders to sell RINs and to use the RIN sales revenue to discount the price of blended fuel while remaining profitable.[243] We present an illustrative example of how RIN prices affect integrated refiners (which is the role small refineries are taking in the fuels market when they are blending the petroleum fuel they produce with renewable fuel) and non-obligated blenders in Section IV.D.2.c. As shown in Tables IV.D.2.c-2 and 4, neither integrated refiners nor non-obligated blenders benefit from, or are harmed by, higher RIN prices.

The petitioners' description of blenders using revenue from RIN sales to enable them to offer lower prices

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[243] *See supra*, Section IV.D.2.

for the blended fuel they sell is consistent with EPA's findings (i.e., the RIN discount).[244] We also recognize that competitive forces require small refineries selling blended fuel to sell at the market price (which reflects the passthrough of the RIN price as a discount to wholesale purchasers). In their claims about the advantages that the RFS program provides to non-obligated blenders, however, the petitioners have not considered the impact of RIN prices on the market price for fuels.

When small refineries produce and sell blended fuel from the petroleum fuel they produce, they are acting as integrated refiners for that volume of fuel. Generally speaking, integrated refiners are not able to sell the RINs associated with the renewable fuel they blend, as they need these RINs to meet their RFS obligations. But unlike non-obligated blenders, integrated refiners do not typically purchase petroleum fuel to produce blended fuel; instead, they are producing the petroleum fuel themselves. This means that for an integrated refiner, the cost of the petroleum fuel is not the market price for these products (which reflects the marginal cost of production of the fuels plus the cost of purchasing the RINs needed to satisfy the RFS obligation associated with the fuel), but rather simply the cost of production for the petroleum diesel fuel. The lower cost of the petroleum fuel relative to the market price for these products allows the integrated refiner to price its blended fuel competitively with non-obligated blenders and still maintain a positive margin for producing blended fuel

[244] *See supra*, Section IV.D.2.

even though they do not realize revenue from RIN sales.[245]

Both the economic principles and the data EPA reviewed support our finding that the RFS program does not advantage non-obligated blenders over integrated refiners. While RIN sales provide an additional source of revenue for non-obligated blenders, this is offset by the higher price (which reflects the RIN cost) for the petroleum fuel that the blenders pay to merchant refiners to produce blended fuel. Integrated refiners, which are producing petroleum fuel rather than purchasing them at the market price, have access to lower cost petroleum fuel but do not realize revenue from RIN sales. Thus, while the RFS program impacts these parties in different ways, neither enjoys an advantage or disadvantage over the other.

e. Large integrated refiners set the prices in fuels markets, undercutting small refineries on price because of their market position and because the large, integrated operations have no or lower RIN costs.

Petitioners claim that they compete in markets with large integrated refiners, and that they have no market pricing power relative to these parties. Petitioners also state that, because these large integrated refiners have no or lower RIN costs, they are able to undercut small refineries when they price their product. They further note several other advantages that large integrated refiners have relative to small refineries, such as a broader range of assets, economies of scale, and access to more

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[245] A further description of the impact of the RFS program on merchant refiners, integrated refiners, and nonobligated blenders is provided in Section IV.D.2.c.

fuels markets (including exports). We address each of these points in turn.

The market for gasoline and diesel fuel in the United States is extremely competitive.[246] EPA's finding that merchant refiners are able to pass through their RIN costs through higher market prices for the fuel they produce does not depend on merchant refiners having market pricing power in the markets where they sell fuel. Rather, we find that the market price for fuel reflects the RIN value, and therefore all parties in all markets that sell fuel recover their RIN costs when they sell their fuel (RIN cost passthrough).

In Section IV.D.2.c, EPA presented an example of the impact of higher RIN prices on merchant refiners, integrated refiners, and non-obligated blenders, and discussed the impact on each of these parties. In short, integrated refiners spend less money to purchase RINs than merchant refiners; unlike the non-obligated blenders they are competing with in the blended fuels market (i.e., large fuel retailers without refining or import businesses), they do not benefit from revenue from RIN sales. Merchant refiners do benefit from the higher market prices for gasoline and diesel fuel that are the result of higher RIN prices, but they must use this additional revenue to purchase RINs. Said another way, there is an opportunity cost when these integrated refiners blend renewable fuel with the petroleum fuel they produce instead of selling it unblended, as these parties sell blended fuel for a lower price than they could sell the petroleum fuel. This opportunity cost is equal to the savings these parties experience from acquiring

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[246] *See supra*, Section IV.D.2.

RINs by blending renewable fuel rather than purchasing separated RINs.

The many factors mentioned by the petitioners, such as a broader range of assets (upstream, downstream, etc.), economy of scale, and access to more fuels markets, may in fact provide a competitive advantage to large integrated refiners. However, the fact that small refineries have continued to remain in the marketplace and compete with large integrated refiners is evidence of the fact that small refineries typically have other market advantages, such as access to local crude supplies and local markets lowering their distribution costs, specialty products, and niche markets with fewer competitors. None of these market advantages and disadvantages are the result of the RFS program. Each of these factors offered potential advantages (and potential liabilities) before the RFS program existed and continue to do so today. The petitioners have not presented any evidence, nor is EPA aware of any evidence, that would suggest that the RFS program has exacerbated any of the advantages large integrated refiners may have over small refineries.[247] In other words, the competitiveness of small refineries in the fuels market, be it favorable or unfavorable, does not change as a result of RFS compliance obligations.

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[247] EPA acknowledges that the Tenth Circuit in *Sinclair* found that Congress may have understood large integrated refiners to have certain advantages, and EPA has cited that decision itself in support of its prior approach to SRE decisions. *Sinclair* at 989. However, as noted, EPA does not believe that the available evidence supports the conclusion that small refineries are structurally disadvantaged by the RFS program itself.

On the other hand, granting SREs has provided small refineries a unique and significant competitive advantage. When small refineries are exempted from their RFS obligations, they continue to sell their petroleum fuel at the market price, which reflects the RIN cost via RIN cost passthrough. Thus, exempted small refineries recover the cost of the RINs (receive RIN revenue) through their product sales, but do not have any RIN costs when they are granted an exemption. The number of small refineries receiving exemptions, the total volume of gasoline and diesel fuel exempted, the total value of the exemptions, and the value of the exemptions on a per gallon basis are shown in Table IV.D.3.e-1. This table also shows the average net refining margins (an indicator of profitability) for the exempted small refineries, for comparison with the value of the exemptions. The value of the exemptions is typically significant relative to the average net refining margin. For all exemptions granted for the 2013 through 2018 compliance years, the average value of the exemptions (6.76 cents per gallon) was approximately 64% of the average net refining margin of the exempted refineries (10.61 cents per gallon).[248] Any exemptions granted in 2022 would likely be of even greater value since current RIN prices, and therefore the current RIN cost per gallon of fuel produced, are higher than RIN prices when the exemptions for 2013-2018 were granted.

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[248] The 34 remanded SRE petitions for 2016-2018 that were initially granted, but were denied upon remand and reconsideration in the April 2022 SRE Denial and in this action, are included in these calculations.

Table IV.D.3.e-1: Value of SREs (2013-2018)

Compliance Year	Number of Grants Issued	Volume of Gasoline and Diesel Fuel Exempted (billion gallons)	Total Value of the Exemptions ($ Million)[249]	Value of Exemptions (¢ per gallon)	Average Net Refining Margin for Exempted Refineries (¢ per gallon)[250]
2013	8	1.98	118	5.98	-0.65
2014	8	2.30	105	4.57	4.98
2015	7	3.07	171	5.57	12.05
2016	19	7.84	676	8.63	2.11
2017	35	17.05	1,459	8.56	11.76
2018	31	13.42	558	4.16	17.00
Total	108	45.66	3,088	6.76	10.61

f. EPA's conclusion that there is parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market is incorrect. It costs much more to buy RINs, which many small refineries must do.

Several petitioners note that EPA's analyses are based on the assertion that the cost of obtaining a RIN through blending and the cost of purchasing a RIN is the same, and that this assertion is unfounded. To support this claim, the petitioners note that the cost to purchase RINs increased significantly in recent years, and that the cost to purchase RINs was much greater than the cost to blend renewable fuel. The petitioners fur-

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[249] Based on annual average RIN prices calculated by EPA from OPIS data for D3, D4, D5 and D6 RINs.

[250] EPA often grants exemptions in the year(s) following the year for which an exemption is requested. Because of this time lag, refineries sometimes financially account for the value of their exemption in the following year(s). Thus, the value of the exemptions for some refineries may be included in the net refining margin for the following year(s). For example, EPA granted some 2013 exemption in 2014 or later years, so the value of some 2013 exemptions may be included in financial statements for 2014 or later.

ther state that if there was no cost advantage to blending then there would be no reason for non-obligated parties to continue blending. Rather, these parties would stop blending if they could not recoup the loss by selling the RINs on the market.

We are aware that RIN prices increased significantly recently and we extended our analysis of the impact of RIN prices on the fuels market through the end of 2020 to determine whether our previous findings on RIN cost passthrough were supported by more recent data.[251] We concluded that all the data available to EPA, including data submitted by the petitioners and data received in comments on the Proposed Denial, continue to support EPA's findings on RIN cost passthrough. EPA responds to the information received in comments in Appendix B and in confidential, refinery-specific appendices to this action.

EPA's finding that there is parity between the cost to obtain a RIN through blending and the price to purchase a RIN is not an unsubstantiated assertion. Rather, it is strongly supported by both economic principles and fuels market data. As stated previously, the market for blended fuel is highly competitive. If the cost of obtaining a RIN by blending renewable fuel was lower than the market price for a RIN, we would expect to see new blenders enter the market and/or existing blenders increasing their blending to capitalize on this profit opportunity. This activity would result in an increase in the supply of RINs for sale until the demand price for a RIN was equal to the cost of obtaining a RIN through blending. Competitive market situations where

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[251] *See supra*, Section IV.D.2.

the sales price of a good is appreciably higher than the cost to produce a good are short-lived, as market participants will increase production to take advantage of this opportunity until the supply price and demand price are equal.

The market data EPA reviewed support this finding as well.[252] The cost to obtain a RIN by blending renewable fuel is not simply the fixed and operating costs for fuel blending (which are relatively minor), nor is it simply the price difference between renewable fuel and the petroleum fuel into which they are blended (e.g., the price difference between ethanol and gasoline or between biodiesel and diesel fuel). Instead, the cost to a blender to obtain a RIN is the price difference between the cost of the petroleum fuel (e.g., gasoline or diesel fuel) and the renewable fuel used to produce blended fuel and the sales price of the blended fuel (e.g., E10 or B5). The data presented in Section IV.D.2.d demonstrate that the difference between the cost of the petroleum fuel and the renewable fuel used to produce blended fuel and the sales price of the blended fuel is equal to the market price for the RINs associated with the blended fuel.[253]

The finding that there is parity between the cost of obtaining RINs by blending renewable fuel and purchasing RINs does not mean that RINs do not provide an incentive for the blending of renewable fuel. While blending renewable fuel does not result in windfall profits for blenders (since the revenue from RIN sales is passed through to wholesale purchasers in a discount on

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[252] *See supra*, Section IV.D.2.d.

[253] *See supra*, Figures IV.D.2.c-2 and 4.

the price for blended fuel), RIN revenue lowers the effective cost of renewable fuel, allowing blenders to offer blended fuel containing renewable fuel at lower prices. The examples presented in Section IV.D.2.c illustrate this point. In the E10 blending example (Table IV.D.2.c-1), the price of the gasoline is $1.44 per gallon and the price of ethanol is $1.50 per gallon, which is higher than the price of the gasoline. However, the RIN discount allows E10 to sell for $1.37 per gallon, which is lower than the price of the gasoline (line 2-6 from Table IV.D.2.c-2). Similarly, in the B5 blending example (Table IV.D.2.c-3), the price for ULSD is $1.48 and the price for biodiesel is $3.66. Here again the RIN revenue, when combined with the federal tax credit, allows B5 to sell for a lower price ($1.46 from line 4-7 in Table IV.D.2.c-4) than the price of diesel fuel. Fuel buyers are extremely sensitive to prices. The incentive for blenders to continue to blend renewable fuel when there is parity between the cost of obtaining a RIN through blending and the cost to purchase a RIN is not that the revenue from the sale of the RIN represents a windfall profit, but rather that the RIN discount allows blended fuel to sell at a lower (competitive) price relative to unblended fuel after passing through the revenue of the RIN sales to the wholesale purchaser. A fuel blender that declined to offer the cheaper E10, instead selling only more expensive E0, would quickly find itself at a substantial disadvantage in the highly competitive gasoline market. The blenders are themselves likely indifferent to offering E10 or E0, only seeking to offer the mix of fuel products their customers demand based on the price and value of the fuel blends.

g. Single-site refineries only have access to a limited market and are therefore at a disadvantage relative to large integrated refiners.

Several petitioners claim that because they own a single refinery and have access to limited markets for their fuels, they are at a disadvantage compared to large integrated refiners. The petitioners claim that because of their size, they cannot set the market price in such a way as to recover their RIN costs, nor can they sell their fuel into other markets if their local market prices are unfavorable.

As previously discussed, a refiner's ability to recover its RIN costs does not depend on the refiner's ability to set the market price for the fuel it produces.[254] Rather, because all parties have the same cost to acquire RINs, whether they acquire RINs through blending renewable fuel or by purchasing RINs, the market price for all gasoline and diesel fuel reflects the cost of the RINs.

We are aware that the economics of refining crude oil to produce transportation fuel changes over time, and that some fuels markets vary in their profitability relative to other markets. At times it can be an advantage to be in limited markets, and at other times not. Refiners with better access to pipelines and other low-cost ways to transport the fuel they produce are better positioned to react to changes in market dynamics, whether these changes are positive, negative, short-term, or long-term in nature. These varying circumstances, and any hardship they might cause to small refineries, are

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[254] *See supra*, Sections IV.D.2 and IV.D.3.e.

independent of and not caused by compliance with the RFS program.

We received claims of disadvantage from small refineries in isolated markets where they were the main supplier of fuel, from small refineries in markets readily accessible to many other refineries, and from small refineries in every situation in-between. The identical claims from such a broad diversity of refinery situations demonstrates that a small refinery's market has nothing to do with potential impacts from the RFS program. As a result of the nationwide RIN trading program, all refineries have equal access to the RINs they need for compliance with the RFS program and at the same nationwide price.

h. Refineries that produce primarily diesel fuel are at a disadvantage since they generally cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

The claim that small refineries producing a disproportionately high amount of diesel fuel, relative to the amount of gasoline produced, suffer DEH from the RFS program presumes that parties that acquire RINs by blending renewable fuel do so at a lower cost than parties that purchase RINs. These small refineries generally assert that their ability to acquire RINs by blending biodiesel or renewable diesel is limited relative to their competitors that have the ability to blend greater quantities of ethanol into the gasoline they produce.

As previously discussed, all parties have the same cost to acquire RINs, whether they do so by blending

renewable fuel or by purchasing RINs.[255] A party's cost of acquiring RINs, therefore, is unrelated to its ability to blend renewable fuel. Further, it is not necessarily the case that greater quantities of renewable fuel can be blended into gasoline relative to diesel fuel. With the exception of very small quantities of higher-level ethanol blends such as E15 and E85, blending of ethanol into gasoline is limited to 10% by volume. Conversely, many parties regularly sell diesel fuel blended with up to 20% biodiesel or renewable diesel.[256] Parties blending 20% biodiesel or renewable diesel into diesel fuel would acquire more RINs than parties blending 10% ethanol into gasoline, especially after accounting for the higher equivalence values of biodiesel and renewable diesel.

V. Alternative Compliance Demonstration Approach and Proposed Alternative RIN Retirement Schedule

In a separate, concurrent action, EPA is supplementing the April 2022 Compliance Action that provided an alternative approach to demonstrating compliance for the 31 small refineries whose 2018 SRE petitions were originally granted and were denied after remand in the April 2022 SRE Denial to also include three similarly situated SRE petitions that were denied in this action: two for the 2016 compliance year and one for the 2017 compliance year. As explained in the June 2022 Compliance Action, there is a unique confluence of events driving EPA's conclusion that an alternative compliance demonstration approach is necessary in order to ad-

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[255] *See supra*, Sections IV.D.2 and IV.D.3.f.

[256] *See*, e.g., diesel fuel offerings by Pilot Flying J—the largest diesel fuel retailer in the United States—available at https://pilotflyingj.com/fuel-prices.

dress RIN market constraints and ensure RFS program integrity. The June 2022 Compliance Action is separate and addresses only the compliance demonstration required subsequent to EPA's final decision to adjudicate the 34 aforementioned 2016-2018 SRE petitions in this action and the April 2022 SRE Denial.

In another separate, concurrent action, EPA is proposing to provide all small refineries with an alternative RIN retirement schedule for their 2020 RFS obligations. The Alternative RIN Retirement Schedule NPRM would provide small refineries with more time to comply with their 2020 RFS obligations and allow them to use a broader range of RIN vintages to meet their obligations. Neither the June 2022 Compliance Action nor the Alternative RIN Retirement Schedule NPRM address any findings of DEH, as those determinations are made only within the April 2022 SRE Denial and this final decision.

VI. Denial of Petitions and Judicial Review

Section 211(*o*)(9)(B) of the CAA and 40 CFR 80.1441(e)(2) give EPA the authority to grant an SRE petition only when a small refinery demonstrates it is experiencing DEH caused by compliance with the RFS program. Based on our detailed evaluation, careful consideration of all the available information, review of all the additional data and information submitted in comments on the Proposed Denial, consultation with DOE, and consideration of the DOE study and other economic factors, EPA finds that none of the 69 pending SRE petitions for the 2016-2021 compliance years have demonstrated DEH caused by the cost of compliance with therequirements of the RFS program.

The market-based design of the RFS program and the RIN-based compliance system have equalized the cost of compliance among all market participants, such that no refinery would face DEH from its RFS obligations.[257] We have evaluated an extensive amount of data and available information and have concluded that the cost of RINs is the same for all obligated parties, whether the RINs are acquired by blending renewable fuel or by buying them on the market.[258] Hence, small refineries do not face a disproportionate cost of compliance when compared to other refineries, or to each other. Our analysis further shows that the costs of RFS compliance (i.e., RINs) are passed through in the prices of refined products. Hence, in recovering their RIN costs, refineries do not face economic hardship due to compliance with the RFS program. Finding no disproportionate cost of compliance and no economic hardship due to the RFS program, we conclude that small refineries do not face DEH. As such, EPA finds that compliance with the RFS program does not impose DEH on small refineries and, accordingly, is denying 69 pending SRE petitions in this final action.

Section 307(b)(1) of the CAA governs judicial review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the United States Court of Appeals for the District of Columbia Circuit: (i) when the agency action consists of "nationally applicable . . . final actions taken by the Administrator," or (ii) when such action is locally or regionally applicable, but "such action is based on a determination of nationwide scope or effect and if in taking such action

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[257] *See supra*, Section II.B.

[258] *See supra*, Section IV.D.2.

the Administrator finds and publishes that such action is based on such a determination." For locally or regionally applicable final actions, the CAA reserves to the EPA complete discretion whether to invoke the exception in (ii) described in the preceding sentence.

This final action is "nationally applicable" within the meaning of CAA section 307(b)(1). In the alternative, to the extent a court finds this final action to be locally or regionally applicable, the Administrator is exercising the complete discretion afforded to him under the CAA to make and publish a finding that this action is based on a determination of "nationwide scope or effect" within the meaning of CAA section 307(b)(1).[259] This final action denies 69 petitions for exemptions from the RFS program for over 30 small refineries across the country and applies to small refineries located within 15 states in 7 of the 10 EPA regions and in 8 different Federal judicial circuits.[260] This final action is based on EPA's revised interpretation of the relevant CAA provisions and the RIN discount and RIN cost passthrough principles that are applicable to all small refineries no

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[259] In deciding whether to invoke the exception by making and publishing a finding that this final action is based on a determination of nationwide scope or effect, the Administrator has also taken into account a number of policy considerations, including his judgment balancing the benefit of obtaining the D.C. Circuit's authoritative centralized review versus allowing development of the issue in other contexts and the best use of Agency resources.

[260] In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. See H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03.

matter the location or market in which they operate. For these reasons, this final action is nationally applicable or, alternatively, the Administrator is exercising the complete discretion afforded to him by the CAA and hereby finds that this final action is based on a determination of nationwide scope or effect for purposes of CAA section 307(b)(1) and is hereby publishing that finding in the Federal Register.

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit within 60 days from the date notice of this final action is published in the *Federal Register*.

This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking. This action is immediately effective upon issuance.

APPENDIX C

April 2022 Denial of Petitions for RFS Small Refinery Exemptions

April 2022 Denial of Petitions for RFS Small Refinery Exemptions

United States Environmental Protection Agency

EPA United States Environmental Protection Agency

EPA-420-R-22-005
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EXECUTIVE SUMMARY

Small Refinery Exemption (SRE) Denial and Related Compliance Actions

In this action, the Environmental Protection Agency (EPA or "the Agency") is denying 36 petitions from 36 small refineries seeking exemption from their Renewable Fuel Standard (RFS) obligations for the 2018 compliance year.[1] This final action (hereinafter the "SRE Denial") is a single action, but it is comprised of the adjudications of 36 SRE petitions.

On December 7, 2021, EPA proposed to deny 65 pending SRE petitions (the "Proposed Denial") based on a proposed revision of EPA's interpretation of Clean Air Act ("CAA" or "the Act") SRE provisions. In this action, EPA is acting on 36 SRE petitions that were remanded to the Agency by the U.S. Court of Appeals for the D.C. Circuit on December 8, 2021. The D.C. Circuit ordered EPA to "issue new decisions" by April 7, 2022.[2] EPA has received and considered all the comments received on the Proposed Denial and addresses those comments in this action.

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[1] There is one additional 2018 SRE petition that was decided separately from the other 36 2018 SRE petitions and was also remanded to EPA; however, this 2018 SRE petition was remanded by the Fourth Circuit in 2020. This SRE petition is not included in the 36 2018 SRE petitions decided in this action. Hereinafter, when we refer to "the SRE petitions," we refer only to the 36 2018 SRE petitions on remand from the D.C. Circuit.

[2] On January 3, 2022, EPA provided notice that the 36 remanded 2018 SRE petitions were again before the Agency, and that EPA was expanding the Proposed Denial to include them and requesting comment on that approach. Memorandum: Scope of Action and Notification," EPA-HQ-OAR-2021-0566-0027.

In a separate action, EPA is providing compliance flexibility for a subset of the 36 small refineries whose SRE petitions EPA initially granted for the 2018 compliance year, but now, on remand, is denying under this action. This subset includes 31 of the 36 SRE petitions decided in this action. EPA has determined that, if it were to require these small refineries to comply with their newly created 2018 obligations under the existing compliance scheme, the impact on the RFS program as a whole, in addition to the impacts on the individual small refineries, would be unacceptable due to the unavailability of sufficient RINs to satisfy these new obligations. Thus, the concurrent action provides an alternate compliance approach by which these small refineries can demonstrate compliance with their 2018 obligations that they otherwise would not be able to meet.

Grounds for the SRE Denial

The Proposed Denial

EPA issued the Proposed Denial in response to the conclusion of litigation that addressed historical inconsistencies in EPA's treatment of SREs since 2011. First, in *Renewable Fuels Association v. EPA*, the U.S. Court of Appeals for the Tenth Circuit Court found that EPA had exceeded its statutory authority by granting extensions of the SREs held by certain small refineries and remanded those decisions to the Agency for reconsideration. The court held that: (1) In granting exemptions based on economic factors unrelated to compliance with the RFS program, EPA had exceeded its statutory authority to exempt small refineries from their RFS obligations "for the reason of disproportionate economic hardship [DEH]" because the statute authorizes EPA to extend exemptions only where RFS

compliance costs are the cause of the small refinery's hardship; (2) EPA had acted arbitrarily and capriciously in granting exemptions without explaining whether and how the subject SRE grants were consistent with EPA's firmly established position that all parties subject to RFS obligations recover their compliance costs through a feature of the market EPA identified as "RIN cost passthrough;" and (3) In order to be eligible to petition for extension of an SRE, a small refinery needed a continuous, uninterrupted exemption history beginning with the CAA section 211(*o*)(9) blanket statutory exemption period for small refineries.

Following the Tenth Circuit's *RFA* opinion, the small refinery intervenors in that case appealed only the holding that, to be eligible for exemption, a small refinery needed a continuous, uninterrupted exemption history. In *HollyFrontier Cheyenne Refining, LLC, et al. v. Renewable Fuels Association, et al.*, the Supreme Court held that the term "extension" as used in CAA section 211(*o*)(9)(B) does not include a continuity requirement and reversed the Tenth Circuit opinion on that issue.

After evaluating this jurisprudence, refinery-specific materials submitted by many small refineries to support of their SRE petitions in the wake of the Supreme Court's ruling, years of experience and data collected by implementing the RFS program and SRE provisions, and our exhaustive analysis of how the RFS credit market functions, EPA determined that the Tenth Circuit provided the best reading of the SRE statutory provisions and issued the Proposed Denial, based on EPA's conclusion that small refineries cannot demonstrate they suffer DEH caused by the cost of compliance with the RFS program. EPA proposed the following find-

ings: (1) Regardless of the mechanism by which any obligated party—including small refineries—comply with their RFS obligations, RFS compliance costs are the same for all obligated parties and thus no party bears RFS compliance costs that are disproportionate relative to others' costs; (2) Any obligated party—including small refineries—recovers their compliance costs through the market price they receive when they sell their fuel products and thus do not bear a hardship created by compliance with the RFS program; and (3) With no disproportionality and no economic hardship, there can be no DEH pursuant to the statute. EPA therefore proposed to revise its CAA statutory interpretation to extend SREs only to small refineries whose claimed DEH is caused by the cost of complying with the RFS program and not by other factors and to deny 65 pending SRE petitions on this basis. Further, EPA proposed to deny SRE petitions submitted by any small refinery that had not received the initial blanket statutory exemption under CAA section 211(*o*)(9).

The Notice-and-Comment Process

Recognizing the complexity of the Agency's past implementation of the SRE provisions, recent litigation, and the significance and potential ramifications of the proposed changes in SRE interpretations to refineries and the entire RFS program, EPA requested comment on the Proposed Denial to ensure that RFS stakeholders and the public had an opportunity to provide input on the proposed shift in interpretation of the SRE statutory provisions, as well as to submit refinery-specific information related to the proposed SRE petition denials. EPA chose to undertake a notice-and-comment process to provide maximum transparency, as we proposed to

address past inconsistencies in SRE implementation and new case law providing a better read of the SRE statutory provisions.

As set forth herein, EPA received numerous individual comments from various RFS stakeholders, most of which are available in the public docket for this action; however, some of the comments from petitioning small refineries provided unique, refinery-specific information submitted under claims of confidentiality that are therefore being addressed in appendices that will be provided only to the individual commenters. EPA has carefully considered all comments received and provides responses to those comments in Appendix B and in confidential, refinery-specific appendices to this action. While this final action only adjudicates 36 remanded 2018 SRE petitions, many small refineries still have pending SRE petitions for multiple subsequent and prior compliance years, and their comments raised arguments and provided data applicable to more than one of their pending SRE petitions. EPA has considered and responded to all information relevant to the remanded 2018 SRE petitions in this action. EPA will respond to any comments relating only to the still-pending SRE petitions in a subsequent action to address those petitions.

First, EPA received similar comments from most small refineries and their trade associations challenging the validity of the Proposed Denial's approach to DEH. Many submitted refinery-specific information about their operations, finances, and the fuels markets in which they participate to support their arguments that they should receive SREs. Because the same arguments were repeated by most, if not all, SRE petition-

ers, EPA presents and responds to them as a group in Section IV.D.3. These comments articulate the following general themes:

(a) Small refineries face unique challenges that prevent them from achieving RIN cost passthrough and EPA must consider their specific circumstances;

(b) EPA's Point of Obligation denial is not relevant to SRE policy because it did not address their situations and does not apply to them;

(c) The Point of Obligation denial is out of date and inapplicable;

(d) Revenue from RIN sales allows large retailers to undercut small refineries;

(e) Large integrated refiners set prices in fuels markets, undercutting small refineries on price because of their market position and because large integrated refiners have lower or no RIN costs;

(f) EPA is incorrect about there being parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market;

(g) Single-site refineries are disadvantaged relative to large integrated refiners because they only have access to a limited market; and

(h) Small refineries that produce primarily diesel fuel are at a disadvantage because they cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

After addressing the universal comments described above, EPA presents and responds to unique comments received from a range of RFS stakeholders—including refineries and their trade organizations, biofuel producers and their trade organizations, and a number of local, state, and federal officials—in Appendix B and, where applicable, in confidential, refinery-specific appendices to this action. The comments addressed in Appendix B focus on EPA's notice-and-comment process for proposing and finalizing the SRE Denial, EPA's legal authority to take this final action, and how the SRE Denial may affect the RFS program as a whole. The comments addressed in the refinery-specific appendices focus on information submitted by many refineries under claims of confidentiality regarding their specific operations and finances, and studies commissioned based on such confidential information to evaluate the RFS economic findings described in the Proposed Denial.

After careful consideration of all the comments received as well as all other available information regarding the RFS program, the operation of the RIN market, and the validity of our DEH analysis, EPA is here adopting and applying its proposed SRE statutory interpretations and denying 36 pending SRE petitions.

I. Final Adjudication Summary and Process

This section summarizes EPA's final action and the public process the Agency has followed to reach its decision. EPA has determined that any small refinery seeking an exemption from its RFS obligations must: (1) Demonstrate that any DEH it claims to experience is caused by compliance with the RFS program; and (2) Reconcile any such showing with RIN cost pass-

through.[3] EPA has also changed its criteria for assessing a refinery's eligibility to receive an exemption from its RFS obligations; we now require a small refinery to have received the original statutory exemption under CAA section 211(*o*)(9)(A)(i) in order to be eligible to petition for an extension of that exemption, though, consistent with the Supreme Court's holding in *HollyFrontier*[4], a small refinery need not have had continuous exemptions since the original statutory exemption.[5]

On December 7, 2021, EPA issued the Proposed Denial. On December 8, 2021, the D.C. Circuit remanded 36 2018 SRE petitions.[6] On January 3, 2022, EPA provided notice that it was considering deciding the 36 SRE petitions under the Proposed Denial and requested comment on that approach.[7] After analyzing the petitions, applying the new approach to DEH, and for the reasons described in this document, EPA is denying the 36 pending 2018 SRE petitions. EPA received numerous comments on the process utilized in reaching this final ac-

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[3] This approach is described in more detail in Section III. The RIN cost passthrough phenomenon is explained in Section IV.D.2.

[4] *See HollyFrontier Cheyenne Refining, LLC, et al. v. Renewable Fuels Ass'n, et al.*, 114 S. Ct. 2172, 2181 (2021) (*HollyFrontier*).

[5] Refinery eligibility is explained in Section IV.A.

[6] *See, e.g.*, Order, Doc. No. 1925942, Dec. 8, 2021, *Sinclair Wyo. Refining Co. v. EPA,* No. 19-1196 (consol. with 19-1197) (D.C. Cir.).

[7] In this final action, EPA is addressing the 36 SRE petitions for the 2018 compliance year that were remanded by the U.S. Court of Appeals for the D.C. Circuit in four coordinated cases (*see, e.g.*, Order, Doc. No. 1925942, Dec. 8, 2021, *Sinclair Wyo. Refining Co. v. EPA,* No. 19-1196 (consol. with 19-1197) (D.C. Cir.)). The identification of these small refineries is presented in Appendix A, which is redacted to protect information claimed as confidential by the small refineries.

tion, and we have responded to those comments in Appendix B.

In addition to denying 36 pending 2018 SRE petitions on DEH grounds, EPA is also finding that there are alternative grounds to deny two pending 2018 SRE petitions from two refineries because they did not receive the original statutory blanket exemption under CAA section 211(*o*)(9)(A)(i).[8] EPA received comments from these refineries under claims of confidentiality and has responded to those comments in confidential, refinery-specific appendices. EPA has also responded to generalized comments on eligibility to petition for an SRE in Appendix B.

This final agency action therefore adjudicates 36 pending SRE petitions by: (1) Clearly articulating EPA's current interpretation of its statutory authority to grant SREs; (2) Presenting our analysis of all available data on RFS costs and market dynamics, including our response to comments received on the Proposed Denial; and (3) Denying the 36 pending SRE petitions based on the current statutory interpretation and analysis described herein in a single action. EPA's final action on the pending SRE petitions is based on the legal and factual analysis presented herein, after consulting with the Department of Energy (DOE), and considering

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[8] While we determine in this action that these two refineries are ineligible to petition for SREs, this determination is made in the alternative, because EPA has denied these two petitions as part of the 36 pending SRE petitions denied by this action on DEH grounds for the reasons described herein. Therefore, even if the refineries are later deemed eligible to petition for exemptions, their two SRE petitions pending before EPA are denied for substantive reasons.

the 2011 DOE small refinery study, "other economic factors," and public comments submitted in response to our request for comment on the Proposed Denial.[9]

While this single final action adjudicates 36 SRE petitions, we intend for this adjudication to be severable in these articulated ways. First, we intend for the two distinct statutory interpretations we adopt in this action to be severable. If a reviewing court invalidates our interpretation that DEH must be caused by compliance with the RFS program, our interpretation on eligibility to petition for and receive an exemption would still stand. Second, it is our intent that the separate action we are taking to provide an alternative compliance demonstration be severable from the decision to deny the SRE petitions. While the need for the alternative compliance demonstration flows from this adjudication, each action is separate and independent from the other. This adjudication, consistent with the statute and applicable case law, denies 36 SRE petitions. The separate action providing compliance flexibility determines how the identified 31 small refineries will demonstrate compliance with their newly created 2018 obligations.[10] As these actions utilize differing authorities and operate independently, we intend for them to be severable.

This document provides a sequential explanation of EPA's new approach to SRE petition evaluation and the

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[9] EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2021-0566. Supporting materials for this action and comments received on the Proposed Denial can be found there.

[10] "April 2022 Alternative RFS Compliance Demonstration Approach for Certain Small Refineries," EPA-420-R-22-006, April 2022.

data we analyzed to support this approach. It begins, in Section II, by providing background on the RFS program, compliance with the RFS program, and the SRE provisions of that program. Section II also provides a brief history of EPA's approach to evaluating SRE petitions and judicial review of EPA's past SRE decisions. Section III presents the statutory requirements for EPA's evaluation of SRE petitions and EPA's new approach to SRE evaluation. Section IV provides EPA's analysis of the SRE eligibility and petition requirements and statutory construction of the CAA's SRE provisions. It also presents a detailed explanation of RFS market economics including the costs of RFS compliance on obligated parties, and the implications of those costs on DEH. Section IV also includes a description of how EPA satisfied the statutory requirements for this action,[11] then summarizes and responds to the arguments advanced by the petitioning small refineries, and others that commented on the Proposed Denial, as to how and why RFS compliance could cause DEH.[12] Section V describes the separate, concurrent action EPA is taking to provide certain small refineries with an alternative compliance demonstration. Lastly, Section VI

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[11] In evaluating SRE petitions, CAA section 211(*o*)(9)(B)(ii) requires the Administrator, in consultation with the Secretary of Energy, to consider the findings of the DOE study performed under CAA section 211(*o*)(9)(A)(ii)(I) and other economic factors. A memorandum summarizing the consultation between EPA and DOE can be found in the docket for this action.

[12] A summary of the substantive comments EPA received that were not submitted under claims of confidentiality, and EPA's responses to those comments, can be found in Appendix B. EPA has responded to confidential information submitted by the petitioning small refineries in their comments through confidential, refinery-specific appendices to this action.

provides EPA's conclusion to deny 36 SRE petitions based on all the information presented herein and information regarding judicial review of this final action.

II. Background

This section describes the RFS program in general, including the SRE provisions of the program, as well as how EPA has implemented the SRE provisions in the past.

A. RFS Program

In 2005 and 2007, Congress amended the CAA to establish the RFS program.[13] Congress enacted this program to "move the United States toward greater energy independence and security" and to "increase the production of clean renewable fuels," among other purposes.[14] The statute specifies increasing annual "applicable volumes" for four categories of renewable fuel for the transportation sector: total renewable fuel, advanced biofuel, cellulosic biofuel, and biomassbased diesel (BBD).[15] The specified applicable volumes for renewable fuel, advanced biofuel, and cellulosic biofuel are prescribed for each year through 2022, and for BBD through 2012; EPA must determine the applicable volumes for subsequent years.[16]

Congress directed EPA to establish a compliance program and annual percentage standards to ensure

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[13] *See* Energy Policy Act of 2005 (EPAct), Pub. L. No. 109-58, 119 Stat. 594; Energy Independence and Security Act of 2007 (EISA), Pub. L. No. 110-140, 121 Stat. 1492

[14] 121 Stat. 1492.

[15] CAA section 211(*o*)(2)(B)(i)(I)-(IV).

[16] *Id.*

that the applicable volumes are used each year.[17] To calculate these percentage standards, EPA divides the applicable volume for each type of renewable fuel established in the CAA or determined by EPA[18] by the Energy Information Administration's estimate of the national volume of transportation fuel that will be introduced into commerce in that year.[19] For example, if EPA set the percentage standard for total renewable fuel at 10%, an obligated party that produced 1,000,000 gallons of gasoline one year would need to ensure that 100,000 gallons of renewable fuel was introduced into the market that year.

Congress authorized EPA to place the obligation to satisfy the applicable percentage standards on "refineries, blenders, and importers, as appropriate."[20] By regulation, EPA determined that refineries and importers of gasoline and diesel fuel must fulfill the requirements of the RFS program.[21] These "obligated parties" apply the percentage standards to their own annual production (or importation) of gasoline and diesel fuel to calculate their individual renewable volume obligation (RVO or "RFS obligation") for each category of renewable fuel. Thus, the RFS standards place the same obligation on all producers and importers of gasoline and die-

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[17] *Id.*; CAA section 211(*o*)(2)(A)(i), (iii), and (3)(B)(i).

[18] CAA section 211(*o*)(2)(B), (7)(A), and (7)(D)-(F).

[19] CAA section 211(*o*)(3)(A).

[20] CAA section 211(*o*)(3)(B)(ii)(I).

[21] 40 CFR 80.1406. For simplicity this document focuses on refiners; however, the same concepts of RIN costs, RIN cost pass-through, and RIN discount for blended fuel also apply to importers.

sel fuel in proportion to their production (or importation) volume.

B. Renewable Identification Numbers (RINs)

The CAA requires EPA to establish a credit trading program allowing obligated parties that acquire excess credits in one year to apply credits toward compliance in a subsequent year or to sell the credits to another obligated party for use in its own compliance.[22] In conjunction with EPA's authority under CAA section 211(*o*)(2)(B) to put in place implementing regulations for the RFS program, and in compliance with CAA section 211(*o*)(5), EPA designed a flexible and comprehensive system of tradable credits (Renewable Identification Numbers or RINs). Section 211(*o*)(5) required only that EPA allow for the generation and trading of credits for obligated parties that refine, blend, or import excess renewable fuel. The RIN system fulfills that statutory provision, and also creates a fungible system of credit trading by not just obligated parties but also renewable fuel producers and others, creating an open, liquid market for RINs to allow obligated parties to comply with their RFS obligations.

Under the RIN system, producers and importers of renewable fuel generate RINs for each gallon of renewable fuel they import or produce for use in the United States.[23] RINs are "assigned" to batches of renewable fuel by the producers and importers of renewable fuel.[24] RINs may be "separated" from those batches by a party that blends the renewable fuel into gasoline or fossil-

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[22] CAA section 211(*o*)(5)(A)-(C).

[23] 40 CFR 80.1426(a).

[24] 40 CFR 80.1426(e).

based diesel fuel to produce a transportation fuel, heating oil, or jet fuel.[25] Once separated, RINs may be kept for compliance or sold.[26] Obligated parties may use a RIN to demonstrate compliance for the compliance year in which the RIN is generated, or for the following compliance year (for up to 20% of an obligated party's obligations).[27] An obligated party may not use a RIN for any subsequent compliance years because the RIN has expired, is now invalid, and therefore not useable for compliance purposes.[28] Obligated parties meet their RFS obligations by accumulating RINs and "retiring" them in an annual compliance demonstration.[29] The statute and RFS regulations also provide that, in lieu of retiring the requisite number of RINs to show compliance for a particular compliance year, an obligated party may choose to carry forward a RIN deficit into the following compliance year under certain conditions.[30] An obligated party may carry forward a RIN deficit equal to its full or partial RFS obligations in a given compliance year, but must satisfy the deficit in full the subsequent compliance year, along with the obligations for that subsequent year in full (i.e., the obligated party cannot carry forward the subsequent compliance year's obligations as a deficit).

The price of the RIN is expected to reflect the marginal difference between the supply price for the renewable fuel and the demand price for the renewable fuel,

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[25] 40 CFR 80.1429(b).

[26] 40 CFR 80.1425-29.

[27] 40 CFR 80.1427(a)(6), 80.1428(c), and 80.1431(a).

[28] 40 CFR 80.1427(a)(6), 80.1428(c), and 80.1431(a).

[29] 40 CFR 80.1427(a).

[30] CAA section 211(*o*)(5)(D), 40 CFR 80.1427(b).

which is the price the market is willing to pay for the renewable fuel as a transportation fuel.[31] In other words, if it costs more to produce the renewable fuel than consumers are willing to pay for it, the RIN price would be expected to match that cost difference so that, in the end, the fuel price for consumers is the same.[32] The price of the RIN, therefore, provides the "discount" on the renewable fuel necessary for the market to consume the renewable fuel. This dynamic functions to incentivize blending and use of the renewable fuel up to the mandated volume even if the market demand price for the renewable fuel would not cover the cost of its production. In this way, the RIN price facilitates greater use of renewable fuel as the RFS program was designed to do. Throughout this document we refer to the cost difference described here as the "RIN discount."

The design of the RIN trading system enabled parties that were already producing and blending renewable fuel to continue to do so. They could then sell excess RINs to obligated parties that lacked blending capability. This open trading market for RINs provides three main benefits. First, it allows all obligated parties, regardless of size or situation, equal ability to comply with their RFS obligations immediately without hav-

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[31] *See* "A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effect," Dallas Burkholder, Office of Transportation and Air Quality, US EPA, May 14, 2015, pg. 7 (hereinafter the "Burkholder memo").

[32] Throughout this document we use the term "consumer" to refer to wholesale and retail consumers alike as RIN prices pass through both levels of the market. Where we are specifically describing the sale from terminals or refinery racks we refer to the purchaser of the fuel at wholesale as the "wholesale purchaser."

ing to invest capital or resources. They can contract with others already providing the services and/or go into the open market to acquire RINs. Second, this system averts the need for each individual obligated party to purchase and blend renewable fuel into its own gasoline and diesel fuel.[33] Thus, the program was designed to "preserve[] existing business practices for the production, distribution, and use of both [petroleum] and renewable fuel."[34] Third, it levels the playing field for the cost of compliance, with all obligated parties having access to the RINs needed for compliance at the same cost, regardless of whether they acquire the needed RINs by purchasing them on the open market or by blending renewable fuel themselves. The RFS program, through the RIN system, was designed to avoid creating DEH based on whether compliance is achieved through blending of renewable fuel or through purchasing RINs.

C. RFS Compliance and RIN Market Dynamics

Congress structured the RFS program to impose proportional requirements on all obligated parties, including small refineries. The RFS obligations are established as a percentage of an obligated party's production (or importation) of gasoline and diesel fuel;[35] therefore, by definition, the obligation is proportional to the quantity of gasoline and diesel fuel that a party produces

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[33] Complying with such a requirement would have been difficult, if not impractical for obligated parties, as different renewable fuels are blended into gasoline and diesel fuel and pipeline operators normally do not allow gasoline or diesel fuel containing renewable fuel to be transported through their pipelines.

[34] "RFS1 Summary and Analysis of Comments," EPA-420-R-07-006 at 1-6, April 2007.

[35] *See supra*, Sections II.A and B.

(or imports) each year.[36] Obligated parties must acquire RINs to meet their RFS obligations,[37] either through their own blending of renewable fuel or through the purchase of RINs from other parties that produce or blend renewable fuel. Obligated parties must demonstrate compliance annually by retiring RINs requisite with their RFS obligations.

The cost of acquiring RINs is the same for all parties regardless of whether the RINs needed to comply are acquired by blending renewable fuel or by procuring RINs from others.[38] This occurs through the phenomena of RIN discount and RIN cost passthrough, introduced in the Executive Summary and explained in detail throughout this document. Parties that blend more renewable fuel than they need to satisfy their RFS obliga-

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[36] *See* CAA section 211(*o)*(3)(B); 40 CFR 80.1407.

[37] For purposes of the RFS program, transportation fuel is defined as "fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels)." 40 CFR 80.1401. The regulations at 40 CFR 80.1406 establish that "[a]n obligated party is any refiner that produces gasoline or diesel fuel within the 48 contiguous states or Hawaii, or any importer that imports gasoline or diesel fuel into the 48 contiguous states or Hawaii during a compliance period." The regulations at 40 CFR 80.1407 establish that, in practice, an RFS obligation is imposed only on gasoline and ultra-low-sulfur diesel (ULSD) used in motor vehicles, nonroad engines, locomotives, and marine engines (historically called MVNRLM diesel fuel). Such gasoline and diesel fuel only incur an obligation if used in the RFS "covered location" as defined in 40 CFR 80.1401. Throughout this document we refer to fuel that incurs an RFS obligation (i.e., gasoline and diesel fuel) as "obligated fuel" and fuel that does not incur an RFS obligation (e.g., heating oil, jet fuel) as "non-obligated fuel."

[38] *See infra*, Section IV.D.2.

tions may show an apparent revenue source from the sale of those RINs. However, in the competitive fuels market, parties that sell RINs acquired through blending renewale fuels must discount the price of their blended fuel by the value of the RINs associated with the renewable fuel in the fuel blend.[39] If parties that blend renewable fuel into transportation fuel do not discount the price of their blended fuel by the market price of the RIN, then their blended fuel would be priced higher than the same fuel where the producer has discounted the fuel by the price of the RIN, and the non-discounted fuel would never sell. Therefore, in order to price their products competitively in the fuels market, parties that blend renewable fuel into transportation fuel must reduce the price of their blended fuel by the price of the RIN (RIN discount). Thus, the revenue from the RIN sale is used to offset the discounted sales price of the blended fuel and is passed through to consumers through reduced market prices for the blended fuels. Moreover, the RFS program imposes the same cost on all parties that produce (or import) gasoline or diesel fuel nationwide[40] because the market price for all gasoline and diesel fuel increases to reflect this RIN price (RIN cost passthrough), much as it would increase in response to a new tax. This relationship between

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[39] Burkholder Memo, pg. 24.

[40] In this document, the term "nationwide" refers to the RFS "covered location," which the RFS regulations define as "the contiguous 48 states of the United States, Hawaii, and any state or territory that has received an approval from the Administrator to opt-in to the RFS program under § 80.1443." 40 CFR 80.1401.

RIN prices and the market prices for blended fuels was first analyzed by EPA in 2015.[41]

In this document we refer to an obligated party's ability to recover the cost of the RINs it acquires for compliance as "RIN cost passthrough," since obligated parties are passing these costs through to wholesale purchasers. We refer to the lower prices received for blended fuel (i.e., gasoline and diesel fuel blended with renewable fuel) enabled by the sale of RINs as "RIN discount," since the sale of the RIN allows blenders to discount the price of the blended fuel. We find that all types of obligated parties have the same cost to acquire RINs, and that all types of obligated parties recover these costs when they sell the gasoline and diesel fuel they produce (or import) at the market price (RIN cost passthrough). Further, we find that blenders use revenue from RIN sales to discount the price of blended fuel (RIN discount). We therefore conclude that compliance with the RFS program cannot cause DEH for small refineries.[42]

D. History of SREs

A small refinery is defined by the CAA as "a refinery for which the average aggregate daily crude oil throughput for a calendar year . . . does not exceed 75,000 barrels."[43] Both the original RFS statutory provisions

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[41] Burkholder Memo, pg. 22.

[42] The economic theory supporting EPA's findings on RIN cost passthrough and the RIN discount, the market data we have evaluated in reaching these findings, and more detailed explanations on how various parties in the fuels market are affected by the RFS program are discussed in Section IV.D.2.

[43] CAA section 211(*o*)(1)(K). Thus, a "small refinery" is determined based on the annual volume of crude oil processed at the

enacted pursuant to the Energy Policy Act (EPAct) and the current text of the statute as amended by the Energy Independence and Security Act (EISA) provided all small refineries an initial blanket exemption from their obligations under the RFS program until calendar year 2011.[44] Under EPA's regulations, small refineries that were producing either "gasoline" under RFS1[45] or "transportation fuel" under RFS2[46] were required to notify EPA that they qualified for the temporary exemption by submitting verification letters stating their average crude oil throughput rate during the applicable qualification period.[47] Further discussion of EPA's past and current interpretation of small refinery eligibility criteria is provided in Section IV.A.

The CAA includes two additional provisions regarding extensions of the SRE for the period after the initial blanket exemption expired:

1) Under the first statutory mechanism, applicable to 2011 and 2012, if DOE determined, through a study mandated under the CAA, that compliance with the RFS requirements would impose DEH

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refinery, not on the size of the company that owns the refinery. Indeed, many "small refineries" are owned by large multi-national companies.

[44] CAA section 211(*o*)(9)(A)(i).

[45] "Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program," 72 FR 23900 (May 1, 2007).

[46] 40 CFR 80.1441(a)(1).

[47] 72 FR 23900, 23924 (May 1, 2007); 40 CFR 80.1441(b). EPA's regulations allowed for small refineries that had submitted verification letters to qualify for the original statutory exemption under EPAct / RFS1 to also qualify under the SRE provisions in EISA / RFS2. The small refineries were not required to re-certify their throughput to maintain eligibility under the RFS2 program.

on a small refinery, EPA was required to extend the small refinery's exemption by at least two years.[48] In 2009, DOE completed its study and found that, in a liquid and competitive RIN market, compliance with the RFS requirements would *not* impose DEH on any small refinery. Subsequently, some members of Congress directed DOE to revisit the 2009 DOE Small Refinery Study[49] and in so doing to solicit input from the small refineries themselves.[50] In 2011, DOE completed a second study that used the small refinery input to develop a set of financial and operational metrics intended to inform DOE whether a small refinery was likely to experience DEH.[51] Contrary to the 2009 DOE Study, the 2011 DOE Study did not assume that RFS compliance costs would be the same for all refineries in a competitive market, and instead, assumed that small refineries could face higher compliance costs by purchasing RINs when compared to large integrated refiners that would acquire RINs through blending. Furthermore, neither study considered the possibility that refineries would recover the cost of RINs through

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[48] CAA section 211(*o*)(9)(A)(ii)(II).

[49] "EPACT 2005 Section 1501 Small Refineries Exemption Study," Office of Policy and Internation Affairs, U.S. Department of Energy, February 2009 (hereinafter the "2009 DOE Study").

[50] Senate Report 111-45, at 109 (2009).

[51] "Small Refinery Exemption Study, An Investigation into Disproportionate Economic Hardship," Office of Policy and International Affairs, U.S. Department of Energy, March 2011 (hereinafter the "2011 DOE Study").

higher prices for their products.[52] DOE organized the metrics into a two-part matrix with sections addressing "disproportionate impacts" and "viability impairment."[53] DOE also developed a scoring protocol for the matrix that required the score in both sections of the matrix to exceed an established threshold for DOE to find that DEH existed at a given small refinery. Using this regime, the 2011 DOE Study found that DEH existed at 14 small refineries, but again, assumed that small refineries bore a higher cost of compliance in the acquisition of RINs and that no refineries recovered the RIN compliance costs in the prices for their products. As required by the statute, EPA granted those small refineries a two-year extension of the original exemption (through 2012).

2) The second statutory mechanism provided that small refineries "may at any time petition the Administrator for an extension of the exemption under [section 211(*o*)(9)(A)] for the reason of [DEH]."[54] The Supreme Court recently opined on the meaning of "extension" in the context of CAA section 211(*o*)(9)(B), overturning one holding in the Tenth Circuit's *RFA* opinion that required a small refinery to have continuous exemptions to be eligible for further exemption extensions.[55] When evaluating SRE petitions, the

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[52] *See infra*, Section IV.D.

[53] 2011 DOE Study at 32-36.

[54] CAA section 211(*o*)(9)(B)(i).

[55] *See HollyFrontier*, 114 S. Ct. at 2181. Consistent with that decision, small refineries that received the initial blanket exemp-

> Act directs the Administrator, "in consultation with the Secretary of Energy," to "consider the findings of the study under [CAA section 211(*o*)(9)(A)(ii)(I)] and other economic factors."[56] After DOE conducted its 2011 DOE Study and EPA granted two-year extensions to the 14 refineries the study identified, additional refineries came forward to EPA to seek exemptions for 2011 and 2012. EPA shared these new petitions with DOE, which applied the matrix scoring methodology developed in the 2011 DOE Study and shared the scoring results with EPA. EPA chose to satisfy the statutory requirements for consultation and consideration of the 2011 DOE Study by using DOE's scoring results in its evaluation of each SRE petition. Consistent with the extensions of exemptions it granted to the 14 small refineries through the 2011 DOE Study, EPA then decided to grant an extension of the exemption to an additional ten small refineries for 2011, and to nine for 2012. Since 2013, EPA has shared all incoming SRE petitions and supplemental information with DOE.[57]

Since 2013, DOE and EPA have changed their treatment of the scoring matrix several times as informed by

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tion but have not received continuous exemption extensions remain eligible to petition for future exemptions.

[56] CAA section 211(o)(9)(B)(ii).

[57] DOE continued to make findings to EPA based on its scoring matrix, which does not assess the degree to which small refineries recover their RFS compliance costs in higher prices for their refined products (i.e., it does not consider RIN cost passthrough). *See infra*, Section IV.C, for a description of EPA's current consultation process.

direction from members of Congress, court decisions, and changing administration policies. For DOE, the most significant change in approach did not involve the matrix evaluation or the scoring methodology. Rather, in 2016 DOE modified the finding it provided to EPA for a given score on the matrix (i.e., as described below, DOE implemented new direction from Congressional report language to recommend 50% exemptions, as opposed to the exclusively 0% or 100% recommendations in prior years). For EPA, the changes involved the weight EPA afforded DOE's findings relative to the "other economic factors" EPA considered when evaluating SRE petitions. However, in none of these years did EPA require small refineries to demonstrate that they faced RFS compliance costs that were higher than for other obligated parties (i.e., disproportionate), nor did EPA require a demonstration that the hardship was caused by compliance with the RFS program, including an explanation for how compliance costs harmed them in a market characterized by RIN cost passthrough.

In some prior decisions, DOE and EPA concluded that DEH existed only when a small refinery experienced both disproportionate impacts and viability impairment, as measured by the matrix. In response to concerns that the two agencies' threshold for establishing DEH was too stringent, Consolidated Appropriations Act report language directed DOE to recommend 50% relief when a small refinery's score on either section of the matrix exceeded the applicable threshold.[58]

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[58] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at 161 Cong. Rec. H9693, H10105 (daily ed. Dec. 17, 2015): "If the Secretary finds that either of these two components exists, the Secretary is di-

Subsequent Senate Report language directed EPA to follow DOE's recommendation, and to report to Congress if it did not.[59] This direction was not included in the Explanatory Statements for the 2022 fiscal year appropriations bill.[60]

The Congressional direction, along with changing administration policies, prompted EPA to change its approach to finding DEH at a small refinery. Whereas EPA had previously exercised discretion in evaluating "other economic factors" in its analysis of a small refinery's petition, EPA changed its approach to instead rely on DOE's findings and began granting a full exemption whenever DOE findings indicated that the small refinery could receive at least 50% relief, based on its matrix

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rected to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner."

[59] Senate Report 114-281, 71 ("When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016. Should the Administrator disagree with a waiver recommendation from the Secretary of Energy, either to approve or deny, the Agency shall provide a report to the Committee on Appropriations and to the Secretary of Energy that explains the Agency position. Such report shall be provided 10 days prior to issuing a decision on a waiver petition.").

[60] Consolidated Appropriations Act, 2022, Pub. L. No. 117-103 (2022). ("The Committees recognize that the Renewable Fuel Standard (RFS) under Clean Air Act Section 211(*o*)(9) provides that EPA may exempt small refineries from compliance with the RFS in certain circumstances and that a small refinery "may at any time petition the Administrator for an extension of the exemption . . . for the reason of disproportionate economic hardship.")

score.[61] Under this approach, EPA exempted small refineries from their RFS obligations solely based on this DOE finding, which was derived from metrics that assumed some refineries faced higher RFS compliance costs and that did not account for RIN cost passthrough. Thus, neither EPA nor DOE required any demonstration that the DEH a small refinery claimed to experience was due to the RFS program. Nor did EPA reconcile this reasoning with EPA's own finding that the costs of RINs used for compliance with the RFS program are the same for all obligated parties and passed through by all obligated parties to consumers (RIN cost passthrough).

EPA's approach to evaluating SRE petitions has been challenged several times by small refineries and other parties in different U.S. Courts of Appeals, as well as in the Supreme Court.[62] The approach to evaluating DEH we apply in this action is informed by the outcome of the *RFA* litigation in the Tenth Circuit. Biofuels groups led by the Renewable Fuels Association challenged EPA's actions in granting three individual SREs,

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[61] We note that under this approach, EPA granted full SREs to some very profitable refineries. A substantial number of small refineries that showed no viability impairment on the matrix received a 50% waiver finding from DOE, based only on the small refinery's disproportionate impacts score.

[62] *See e.g., Hermes Consol., LLC v. EPA*, 787 F.3d 568 (D.C. Cir. 2015); *Lion Oil Co. v. EPA*, 792 F.3d 978 (8th Cir. 2015); *Sinclair Wyoming Refining Co. v. EPA*, 887 F.3d 986 (10th Cir. 2017); *Ergon-West Virginia, Inc. v. EPA*, 896 F.3d 600 (4th Cir. 2019) (*EWV-I*); *Ergon-West Virginia, Inc. v. EPA*, 980 F.3d 403 (4th Cir. 2020) (*EWVII*); *Renewable Fuels Ass'n, et al. v. EPA*, 948 F.3d 1206 (10th Cir. 2020) (*RFA*); *Renewable Fuels Ass'n., et al. v. EPA*, No. 19-1220 (D.C. Cir.).

and the affected small refineries intervened on EPA's behalf.[63] The court vacated and remanded EPA's actions for three reasons. First, under the Tenth Circuit's reading of the CAA, a small refinery would be eligible for SRE relief only if it has received extensions of the initial exemption in every year since 2010.[64] Second, the court found that EPA may grant relief only when it finds that the small refinery would suffer DEH caused by compliance with the RFS program and not due, even in part, to other factors.[65] Third, the court held that EPA had acted arbitrarily and capriciously by failing to explain how granting the exemptions was consistent with the Agency's longstanding findings on RIN cost passthrough.[66]

After the Tenth Circuit's *RFA* opinion, the small refinery intervenors petitioned the Supreme Court for a writ of certiorari, appealing only the Tenth Circuit's first holding that, in order to be eligible for exemption, a small refinery needed a continuous, uninterrupted exemption history.[67] The Supreme Court granted the petition for a writ of certiorari and reviewed the Tenth Circuit's holding. EPA—which changed its prior litigation position—and RFA filed briefs in opposition, arguing that the Court should uphold the Tenth Circuit's ruling. On June 25, 2021, the Supreme Court held that the term "extension" as used in CAA section 211(*o*)(9)(B) does not include a continuity requirement and reversed the

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[63] *RFA* at 1206.

[64] *RFA* at 1244-49.

[65] *Id.* at 1253-54.

[66] *Id.*

[67] Pet. for Writ of Certiorari at (i), *HollyFrontier*.

Tenth Circuit opinion only on that issue.[68] The Supreme Court did not review the other two holdings in *RFA* as those were not appealed by the small refineries, and on July 29, 2021, the Tenth Circuit issued its mandate in *RFA*. On August 19, 2021, EPA filed a motion for clarification regarding the legal effect of the court's mandate. The Agency stated that, if the court concluded no further clarification was needed, EPA would proceed with its understanding that the alternative holdings of RFA remain in effect and the SRE decisions at issue in *RFA* are remanded to EPA without vacatur.[69]

On August 26, 2021, the court denied EPA's motion.[70] Accordingly, EPA considers the remaining holdings of *RFA* to remain in effect, as explained to the court in its motion.

After the Supreme Court issued its opinion in the *HollyFrontier* case, EPA met with several of the petitioning small refineries in individual meetings,[71] received additional supplemental information from petitioning small refineries,[72] informed all petitioning small

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[68] *HollyFrontier*, 141 S. Ct. at 2183.

[69] EPA's Motion for Clarification of the Court's July 29, 2021 Mandate at 2, *RFA*, 948 F.3d 1206 (10th Cir. August 19, 2021).

[70] Order, *id.* (10th Cir. August 26, 2021).

[71] *See* "Memorandum on EPA Meetings with Individual Small Refinery Petitioners Between June 25, 2021, and December 7, 2021," available in the docket for this action.

[72] These supplemental materials were submitted under claims of confidentiality and are, therefore, not included in the public record. Where the supplemental information was not confidential or such that EPA could aggregate and summarize it, we have done so and provided this information and our responses to it in Appendix B. We have also responded to confidential information through confidential, refinery-specific appendices to this action.

refineries of the opportunity to submit additional information to EPA for consideration,[73] and conducted an open meeting with the small refineries, inviting them to participate and provide feedback.[74] EPA then issued its Proposed Denial[75] on December 7, 2021, which initiated a public comment period allowing all interested parties to inform this final analysis and decision.[76] We especially sought additional information that would support or refute the proposed finding that small refineries do not experience DEH *caused* by compliance with the RFS program. We also requested information demonstrating that the cost of compliance with the RFS program is the same for all obligated parties and is passed on to consumers.

On December 8, 2021, the U.S. Court of Appeals for the D.C. Circuit granted EPA's motion for voluntary remand without vacatur of EPA's final action granting or denying 36 SRE petitions for the 2018 compliance year and ordered EPA to issue new decisions by April 7, 2022. EPA had requested remand without vacatur to reconsider the final action in light of the intervening judicial opinions and to provide a more robust explanation for any action taken on remand.[77] After the court granted

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[73] Email from Karen Nelson, EPA, sent bcc to all SRE petitioners (August 17, 2021) (email on record with EPA).

[74] Email from Byron Bunker, EPA, with meeting invite sent bcc to all SRE petitioners (August 16, 2021) (email on record with EPA).

[75] "Proposed RFS Small Refinery Exemption Decision," EPA-420-D-21-001, December 2021 (hereinafter the "Proposed Denial").

[76] 86 FR 70999 (December 7, 2021).

[77] *See, e.g.,* EPA's Motion for Voluntary Remand Without Vacatur, *Sinclair Wyoming Refining Co. v. EPA*, No. 19-1196 (D.C. Cir. August 25, 2021), pg. 5.

EPA's motion for remand, EPA notified the 2018 SRE petitioners of the remand via emails to each individual petitioner, requesting comment on "whether or not to include those 36 petitions under the Proposed Denial of other pending SRE petitions or to adjudicate the petitions separately," and inviting comment on "any aspect of this issue."[78] EPA is now taking final action on these 36 remanded SRE petitions for the 2018 compliance year.

III. EPA's Approach to Determining DEH When Evaluating SRE Petitions

This section describes EPA's approach to evaluating SRE petitions based on DEH, as explained in more detail in the remainder of this document. Section 211(*o*)(9)(B)(i) of the CAA authorizes the EPA Administrator to temporarily exempt small refineries from their RFS obligations for the reason of DEH. The statute directs EPA, in consultation with DOE, to consider the DOE Study and other economic factors in evaluating SRE petitions. The statute does not define "disproportionate economic hardship" and identifies no particular "economic factors" to be considered, giving EPA "substantial discretion" for purposes of implementing these exemption provisions.[79] EPA, however, must interpret

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[78] "Memorandum: Scope of Action and Notification," EPA-HQ-OAR-2021-0566-0027.

[79] *Hermes*, 787 F.3d at 575 ("The statute gives no further instruction and identifies no particular economic factors or metrics to be considered. That sort of statutory silence about the particular factors that an agency must consider conveys 'nothing more than a refusal to tie the agency's hands' (internal citation omitted). As long as EPA consults with DOE and considers the 2011 Study and

these provisions in a reasonable manner, consistent with the purpose of the statutory provisions at issue.

In the past, EPA's approach to interpreting these statutory provisions and evaluating SRE petitions was that a small refinery could receive an exemption from its RFS obligations by demonstrating it was experiencing DEH for any reason, including reasons unrelated to RFS compliance.[80] In this action, EPA is adopting the approach proposed on December 7, 2021, requiring the small refinery to demonstrate that compliance with the RFS program is the cause of the DEH experienced by the small refinery. EPA has previously performed analyses and reviewed academic studies on the RIN market that verify the passthrough of RFS compliance costs to wholesale purchasers. However, our prior approach to evaluating SRE petitions did not require a showing that DEH was caused by RFS compliance because we concluded that our consideration of "other economic factors" extended beyond economic factors addressing DEH caused by RFS compliance. The Tenth Circuit in *RFA* determined that EPA's prior approach was contrary to the language of the CAA authorizing exemptions only due to DEH *caused by* compliance with the requirements of the RFS program.[81] Under the approach we adopt here, a small refinery must demonstrate a direct causal relationship between its RFS compliance costs and the DEH it alleges; assertions regarding other real but unrelated financial difficulties a small refinery may be experiencing will not satisfy this re-

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'other economic factors,' EPA retains substantial discretion to decide how to evaluate hardship petitions.").

[80] *See supra*, Section II.D.

[81] *RFA*, 948 F.3d at 1253-54.

quirement. Additionally, a small refinery must demonstrate how its specific RFS compliance costs are disproportionate compared to other refineries' RFS compliance costs and are of sufficient magnitude to warrant the exemption. EPA has weighed several considerations in developing this new approach and this interpretation is consistent with the language of the Act, the purpose of the SRE provisions, and is the most reasonable approach for implementing the RFS program.[82]

Our change in approach is primarily informed by the *RFA* opinion, which laid out a rationale for the Tenth Circuit's conclusion that the statutory SRE provisions require DEH to be caused by RFS compliance.[83] Additionally, the court in *RFA* held that EPA had acted arbitrarily and capriciously when the Agency ignored the relevant evidence in granting three SREs without addressing EPA's long-standing position that RIN costs are passed through by refineries and ultimately borne by consumers. After review of the court's decision, EPA agrees that these holdings both reflect a better interpretation of the Act and comport with EPA's long-standing conclusions regarding RIN cost passthrough.[84]

Our change in approach is also supported by DOE's definition of DEH in the 2011 DOE Study. Under the CAA, DOE was directed to "conduct for the Administrator a study to determine whether compliance with the requirements of [the RFS] would impose a [DEH] on small refineries."[85] In the 2011 DOE Study, DOE

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[82] *See infra*, Section IV.D.1.

[83] *RFA*, 948 F.3d at 1253-54.

[84] *See infra*, Section IV.D.2.

[85] CAA section 211(*o*)(9)(A)(ii)(I).

stated that DEH "must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations."[86] In other words, for a small refinery to demonstrate DEH, it must have disproportionate RFS compliance costs and actual economic hardship due to those disproportionate RFS compliance costs. The approach adopted in this action aligns with DOE's definition: EPA's analysis shows that the costs of compliance with the RFS program through blending or buying RINs are the same; therefore, small refineries do not have disproportionate RFS compliance costs.[87] Additionally, the RIN cost pass-through analysis demonstrates that there is no economic hardship caused by RFS compliance costs; therefore, no small refinery experiences DEH as a result of compliance with the RFS program.[88] EPA now has data to demonstrate that the assumption DOE relied on in the 2011 DOE Study that RINs generated through blending renewable fuels would be free to those generating them —whereas RINs purchased through the market would represent a disproportionately high costs of compliance on obligated parties that complied that way—is false.[89]

EPA also considered "other economic factors" in evaluating whether a small refinery's RFS compliance costs cause DEH. While the CAA does not require EPA to consider any particular number or types of economic factors, it does require that DEH be caused by compliance with the RFS program. Thus, it is clear

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[86] 2011 DOE Study at 3.

[87] *See infra*, Section IV.D.2.

[88] *Id.*

[89] *See infra* Section IV.D.2.

that the "other economic factors" EPA may consider when evaluating SRE petitions must still be related to determining whether the small refinery's compliance with its RFS obligations is what caused its alleged DEH. EPA may not consider economic factors in its evaluation of SRE petitions that may show a small refinery is struggling financially when those struggles are unrelated to its RFS compliance. By performing the analyses described in Section IV.D.2, and in the responses to comments in Appendix B and in the confidential, refinery-specific appendices, EPA has evaluated and considered many "other economic factors," including, but not limited to, the dynamics and characteristics of the fuels and RIN markets, publicly available price data, confidential financial and other refinery-specific data submitted by the petitioning small refineries, and all the data other commenters submitted on the Proposed Denial. Fundamentally, EPA has reviewed all the information the small refineries and other interested parties submitted to ensure the Agency has considered all the appropriate "other economic factors" provided in determining that small refineries do not experience DEH caused by RFS compliance.

Using this new approach, we evaluated the information and data available to us, including data we received responding to our request for comment, to assess whether any of the petitioning small refineries demonstrated DEH. The data confirm that the market-based design of the RFS program with the RIN system for compliance has equalized the cost of compliance among all market participants, making it highly unlikely any one refinery would face a disproportionate cost of compliance. We have evaluated an extensive amount of data and available literature, including academic and

commissioned studies submitted by commenters, and our analysis shows that the cost of RINs is the same whether refineries acquire the RINs by blending renewable fuel or by buying RINs on the open market.[90] The data and available literature also informed our finding that RFS compliance costs are passed through in the price of refined products. Therefore, considering all of this information and analysis as more fully explained in later sections of this document, we find that no small refinery experiences DEH due to its compliance with the RFS program.

When an agency changes its position, it must "provide a reasoned explanation for its action" and "display awareness that it is changing position."[91] In doing so, EPA does not need to show "that the reasons for the new policy are *better* than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better, which the conscious change of course adequately indicates."[92] The approach explained in this final action is reasonable as it is supported by the language and construction of the CAA and data analyses performed by EPA and independent parties.[93] For the reasons described herein, EPA believes that this approach is the best interpretation of—and the most reasonable way to implement—the statutory SRE provisions. Therefore, we adopt and apply it here.

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[90] *See infra*, Section IV.D.2.

[91] *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

[92] *Id.* (emphasis in the original).

[93] *See infra*, Section IV.D.

IV. EPA Evaluation

This section explains in detail EPA's evaluation of the 36 SRE petitions on which it is taking final action, including its evaluation of eligibility for the exemption, of DEH, and of other economic factors.

A. Eligibility to Petition for Extension of a Small Refinery Exemption

EPA is denying 36 pending SRE petitions for failing to demonstrate DEH. In addition, we determine that two of the 36 refineries were ineligible to petition for an SRE for the 2018 compliance year, each for failing to meet a requirement for eligibility. These refineries are ineligible because they did not receive the initial blanket exemption under CAA section 211(*o*)(9)(A).[94]

In making this finding, we are interpreting the RFS statute to mean that only small refineries that received the initial blanket exemption are eligible to petition for an extension of that initial exemption, consistent with a prior EPA interpretation.[95] Note that this does not mean that any refinery that met the definition of "small refinery" at the start of the RFS program is qualified to seek exemption for later years; the small refinery must have actually received the blanket exemption for the

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[94] This initial exemption is sometimes called the "blanket exemption" since it could be obtained by all eligible small refineries producing transportation fuel and lasted for the years 2006-2010.

[95] At the same time, we are maintaining our approach to size-based eligibility—only small refineries with an average aggregate daily crude oil throughput that does not exceed 75,000 bpd for the calendar year they petition and the prior year are eligible to petition for an SRE. *See* CAA section 211(*o*)(1)(K), 40 CFR 80.1401, 40 CFR 80.1441(e)(2)(iii).

years before 2011 pursuant to the RFS statute and implementing regulations. This means that the small refinery must have been producing transportation fuel, such that it was obligated under the RFS program to qualify for the blanket exemption from the RFS requirements (i.e., a refinery processing fewer than 75,000 bpd of crude oil into products only other than transportation fuel could not have received an exemption from an RFS obligation it did not have). This is why, under the RFS program, a refinery that met the definition of a "small refinery" was additionally required to submit a verification letter to EPA confirming its status as a small refinery before receiving the blanket exemption.

1. Requirement to Have Received Initial Blanket Statutory Exemption

In 2016, EPA took an action finding a refinery ineligible to petition for an exemption extension because the refinery did not exist in 2006 and, thus, could not have received the initial blanket exemption.[96] In that adjudication, EPA relied on the RFS regulations that state "a refiner may petition the Administrator for an extension of *its* small refinery exemption. . . . " (emphasis added).[97] Additionally, EPA reasoned that "newer small refineries have the ability to consider whether they believe the establishment of the RFS program and its requirements will cause economic hardship before beginning operations." [98] Beginning in 2017, EPA shifted to a different approach to small refinery eligibil-

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[96] *See* Pet. for Review, *Dakota Prairie Refining, LLC v. EPA*, No. 16-2692, at 8 of 17 (8th Cir. June 13, 2016).

[97] 40 CFR 80.1441(e)(2).

[98] Pet. for Review, *Dakota Prairie*, at 8-9 of 17.

ity and granted exemptions for refineries that had not received the initial blanket exemption. With this action, we are again requiring that, to be eligible to petition for an SRE, a refinery must have actually been an obligated party under the RFS program prior to 2011 and received the initial blanket exemption, though a small refinery need not have had a continuous exemption since the original statutory exemption, consistent with the Supreme Court's holding in *HollyFrontier*.

2. Changed Approach to Eligibility

EPA is changing its approach to SRE eligibility to require that a petitioning small refinery have received the initial statutory exemption through 2010 in order to qualify for an extension of the initial exemption under CAA section 211(*o*)(9)(B) because we believe this policy aligns with the text of the CAA, which describes a small refinery's ability to "at any time petition the Administrator for an extension *of the exemption in subparagraph (A)* for the reason of [DEH]."[99] Furthermore, we believe this interpretation best supports the policy interests of implementing the RFS program in promoting greater use of renewable fuels. This is particularly true since exemptions provide a significant windfall profit to exempted small refineries, as the small refineries passthrough their RIN costs and then, when exempted, sell any RINs they had acquired or generated. Such a result would be particularly unfair if granted to new participants in the RFS program that were not producing transportation fuel during the statutory blanket exemption period of 2006-2010 because these new participants would have had the opportunity to prepare and

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[99] CAA section 211(*o*)(9)(B)(i) (emphasis added).

plan for compliance with the RFS program prior to starting operations or otherwise being subject to an RFS obligation, unlike the refineries that received the initial blanket exemption.[100] Additionally, refineries that exceeded the 75,000 bpd throughput threshold in 2006 were not the intended recipients of the initial exemption for small refineries, and new entrants to the transportation fuels industry after this blanket exemption ended have knowledge of the requirements of the RFS program, and make an informed decision whether to enter the transportation fuels business. Thus, we are acting consistently with congressional intent by continuing to exclude these parties from receiving an SRE.

While the Supreme Court has held that a small refinery need not have had a continuous exemption since receiving the initial blanket exemption, the Court's decision suggests that an exemption must have existed at some point for it to be extended.[101] The Court agreed

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[100] *See infra*, Section IV.D.2.

[101] *See HollyFrontier*, 141 S. Ct. at 2177 ("It is entirely natural—and consistent with ordinary usage—to seek an "extension" of time even after some lapse."); *id.* at 2181 ("And fairly read, the key phrase at issue before us—'A small refinery may at any time petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship'—simply does not contain the continuity requirement the court of appeals supposed."); *id.* at 2184 (Barrett, J. dissenting) ("Yet, HollyFrontier insists, the term "extension" is not *always* used that way. Instead, it might *sometimes* refer to a "non-continuous extension"—in other words, an extension of something that used to exist but no longer does. . . . [T]he Court concludes that HollyFrontier's reading must be right—which means that EPA can provide an "extension" of an exemption that is no longer in effect."); *id.* at 2177-78 (the Court's extension analogies assume something existed initially to be extended, i.e. "a term paper after the deadline

with the Tenth Circuit that, as used in CAA section 211(*o*)(9), the word "extension" has a temporal meaning (i.e., an extension of time), and not the alternative meaning of "extension" to grant or offer.[102] The Court, however, clarified that an extension may still be given after a lapse.[103] In order for something to lapse, it must have existed to begin with. The Court applied several analogies to illustrate this, including that of a student requesting an extension of a deadline to submit a paper after the deadline has already passed.[104] Applying that analogy to a small refinery that did not receive the original exemption, but requests an extension of that exemption, would be like a student that was never in the class asking the professor for an extension of a deadline for a paper that was never assigned to that student to begin with (i.e., there is no due date for the professor to extend just as there is no exemption period for EPA to extend). Thus, the language of the statute indicates that, without having received "the exemption under subparagraph (A)," there is nothing for a small refinery to petition EPA to extend temporally.[105] Thus, if a small refinery

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has passed, the tenant who does the same after overstaying his lease, or parties who negotiate an 'extension' of a contract after its expiration.").

[102] *See supra*, Section II.D.

[103] *HollyFrontier*, 141 S. Ct. at 2177 ("Ultimately, however, we agree with the renewable fuel producers and the court of appeals that subparagraph (B)(i) uses "extension" in its temporal sense—referring to the lengthening of a period of time."). The *HollyFrontier* decision is further discussed in Section II.D.

[104] *Id.* at 2177-78.

[105] *Id.* at 2181-82 ("Indeed, the dissent finds it "odd" that our reading would permit hardship relief only to small refineries in existence in 2008 and not to new ones, *post*, at 2189-2190 . . . Nor is there anything odd about the fact that Congress chose only to

did not receive the original statutory blanket exemption, it is ineligible to have EPA extend the duration of that exemption.[106]

3. Alternative Eligibility Determinations for Two Refineries

In this final action, EPA is denying two 2018 SRE petitions from two refineries not just because they have failed to demonstrate DEH, but also on alternative grounds: EPA here determines that both refineries are ineligible to petition for SREs. These two refineries submitted refinery-specific comments under claims of confidentiality specifically addressing their eligibility to submit SRE petitions. EPA addresses general eligibility comments in Appendix B and addresses refinery-specific eligibility comments in confidential, refinery-specific appendices to this action.

For the first refinery, EPA determines that it is ineligible to petition for an SRE under the approach described in Section IV.A.2. The refinery did not receive the initial blanket exemption because it did not qualify as a "small refinery" in 2004 or 2006, since its average aggregate daily crude oil throughput exceeded 75,000 bpd during those qualification years.[107] The refinery, therefore, did not submit the verification letter required

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protect existing small refineries rather than new entrants. Often Congress chooses to protect existing market participants from shifts in the law while applying new restrictions fully to future entrants.")

[106] We note that this issue was not before the courts in *RFA* or in *HollyFrontier* because the three small refineries at issue in those cases had all received the initial blanket exemption.

[107] 40 CFR 80.1141(a)(1), 72 FR 23900 (May 1, 2007); 40 CFR 80.1441(b), 75 FR 14670 (March 26, 2010).

by regulation to receive the initial blanket exemption, and, because it did not receive that exemption, it is ineligible to petition for an SRE. This eligibility determination is alternative and added to our denial of its 2018 SRE petition because the refinery did not demonstrate that it experienced DEH caused by RFS compliance as described generally for all small refineries in Section IV.D.2, based on our review of the petition, supplemental information, and comments submitted by the refinery. As such, even if this refinery was eligible to petition for an SRE for the 2018 compliance year—which EPA determines it was not—the petition is denied on DEH grounds.

For the second refinery, EPA determines that it is also ineligible to petition for an SRE under the approach described in Section IV.A.2. The refinery did not receive the initial blanket exemption because it was not an RFS obligated party at the time the initial blanket exemption was available, prior to 2011. Even though this refinery met the statutory definition of a "small refinery," it did not receive the blanket exemption because it did not produce transportation fuel during between 2006-2010; therefore, it had no RFS obligation, and thus, there was nothing to exempt. Therefore, the refinery did not submit the verification letter required by the RFS regulations to receive the initial blanket exemption, and because it did not receive that exemption, it is ineligible to petition for an SRE. This eligibility determination is alternative and added to our denial of its 2018 SRE petition because the refinery did not demonstrate that it experienced DEH caused by RFS compliance described generally for all small refineries in Section IV.D.2 for the 2018 compliance year, based on our review of the petition, supplemental information, and

comments submitted by the refinery. As such, even if this refinery was eligible to petition for an SRE for the 2018 compliance year—which EPA determines it was not—this petition is denied on DEH grounds.

B. Compliance with SRE Petition Requirements

When submitting an SRE petition to EPA, the small refinery bears the burden of demonstrating that compliance with the requirements of the RFS program causes DEH for that small refinery. The RFS regulations require that an SRE petition specify the factors that demonstrate DEH, provide a detailed discussion regarding the hardship the refinery would face in complying with the RFS requirements, and identify the date the refinery anticipates that compliance with the RFS requirements can reasonably be achieved at the small refinery.[108] Since the Tenth Circuit issued its opinion in *RFA*, many small refineries have contacted EPA to supplement their original SRE petitions and to provide additional information about their financial situations. In addition, EPA received extensive input in response to its request for comment on the Proposed Denial. EPA greatly appreciates this information. EPA has completed a thorough evaluation of the data and information provided in the SRE petitions, supplemental submissions, and comments to determine if any of the petitioners have demonstrated that the cost of compliance with the RFS is the cause of their alleged DEH and that such costs are not passed through by that small refinery to

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[108] 40 CFR 80.1441(e)(2).

the wholesale purchasers under the RIN cost pass-through principle.[109]

C. DOE Consultation and EPA Consideration of the DOE Study

CAA section 211(*o*)(9)(A)(ii) required that EPA grant exemptions for "not less than 2 additional years" (i.e., 2010 and 2011) upon DOE's determination that a small refinery "would be subject to a disproportionate economic hardship."[110] Section 211(*o*)(9)(B), in contrast, provides how EPA will evaluate petitions, "in consultation with the Secretary of Energy," but does not dictate any particular action that EPA must take following that consultation, nor does it not provide any further direction on the form EPA's consultation with DOE must take. In fact, "Congress placed no limits on how DOE should provide its consultation to EPA under [the RFS]."[111] This absence of direction provides "substantial discretion" to the agencies to determine how DOE will provide consultation for the pending SRE petitions.[112] Both agencies previously relied on DOE's findings through its application of the DOE scoring matrix to effectuate DOE's consultation on each SRE petition.[113] For this action, EPA shared all SRE petition and comment information with DOE. However, DOE did not apply the scoring matrix because it was not designed to account for RIN cost passthrough. Rather,

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[109] See *infra*, Appendix B, for a summary of the comments and EPA's responses.

[110] *See supra*, Section II.D.

[111] *Hermes*, 787 F.3d at 577.

[112] *Id.* at 575.

[113] *See supra*, Section II.D.

EPA consulted with DOE through discussions in meetings and phone conversations regarding the pending SRE petitions, the supplemental supporting information the small refineries provided, other comments submitted in response to the Proposed Denial, and the analysis and determinations that supply the basis for this final action.[114]

In evaluating petitions for SREs under CAA section 211(*o*)(9)(B), EPA is directed to "consider the findings of the [DOE] study." DOE, in fact, conducted two studies, one in 2009 and an update to the study in 2011.[115] The original 2009 DOE Study concluded that small refineries would not face DEH from compliance with the RFS program given the proportional obligations of the program as a function of their gasoline and diesel fuel production and the opportunity for refineries to comply by blending or by purchasing RINs, provided that the RIN market proved to be liquid and competitive. The RIN market has developed to be open, competitive, liquid, and functioning as intended;[116] hence, the 2009 DOE Study accurately forecasted what was likely to occur given the highly competitive fuels market with which DOE was familiar.

When DOE expanded its study in 2011, it posited that small refineries could face DEH "*if* blending renewable fuel into their transportation fuel or purchasing RINs

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[114] While not legally required, EPA has added a memorandum to the docket for this action describing the EPA-DOE consultation process. *See* "Memorandum on DOE Consultation from Byron Bunker," available in the docket for this action (hereinafter the "DOE Consultation Memo").

[115] *See supra*, Section II.D.

[116] *See infra*, Section IV.D.2.

increase[d] their cost of products relative to competitors."[117] DOE expressed a similar possibility another way noting, "*If* certain small refineries must purchase RINs that are far more expensive than those that may be generated through blending, this will lead to disproportionate economic hardship for those affected entities."[118] Looking to a potential future where RIN prices rose significantly (as they have since done), DOE projected, "there are numerous circumstances when RIN prices could rise, increasing the cost of compliance and *perhaps* increasing the cost of compliance more for refineries that rely on [purchasing] RINs for compliance compared to those that do not."[119] To make clearer the circumstances it was envisioning where such disproportionate costs *could* arise, DOE provided a detailed appendix (Appendix B) that laid out scenarios for three refiners in different circumstances relative to the RFS program.[120] The first case was a refiner that blends all its production with ethanol and does not have to purchase ethanol RINs. The second case was for a refiner that does not do any blending and must purchase all its RINs to meet its RVOs. Finally, the third case was for a refiner with excess RINs to sell into the market. DOE assumed in Appendix B that the refiner that got its RINs through blending ethanol would get the RINs at nearly no cost, while the refiners that had to buy RINs would be forced to pay the higher market cost for compliance. Based on this assumption, DOE projected that some refineries *could* face a disproportionate cost

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[117] 2011 DOE Study at vii (emphasis added).

[118] *Id.* at 2 (emphasis added).

[119] *Id.* at 3 (emphasis added).

[120] *Id.* at B-4.

of compliance. Through the matrices in its report, DOE evaluated whether those disproportionate costs rose to a level such that a refinery faced DEH due to those higher costs. DOE articulated bringing those two elements together when it stated: "[d]isproportionate economic hardship must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations." [121] However, DOE did not assess in its 2011 study whether its assumptions that refiners bear different costs for blending or purchasing RINs and that they may not be able to pass these costs on to wholesale purchasers in the marketplace would actually occur.[122]

A number of small refineries have stated to EPA that DOE's projection in the 2011 DOE Study is exactly what has come to pass, reiterating these assertions in their comments on the Proposed Denial. Ethanol (D6) RIN prices have risen significantly, and small refineries argue that they bear these higher RIN costs while integrated refiners (refiners that blend renewable fuels) and non-obligated blenders receive RINs at almost no cost. Further, they argue that these disproportionate costs are significant enough that they constitute DEH for the refineries just as DOE articulated. EPA has carefully reviewed data, contracts, and other information from small refineries to evaluate if, as DOE posited in 2011, refineries that acquire RINs through blending get them at a lower cost than do refineries that purchase RINs on the open market.[123] What we have

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[121] *Id.* at 3.

[122] *See* DOE Consultation Memo.

[123] *See infra*, Section IV.D.2.

found is that the RIN discount phenomenon applies—blenders, in fact, discount their sales price for E10 by the market price of the RIN (i.e., the sales price of E10 reflects the cost to buy ethanol minus the market price for selling the RIN). Hence, while the blender gets the RIN for "free" when it purchases a gallon of ethanol, it has to discount the price of that ethanol when sold as E10 by the full current market price of the RIN. This means the blending refinery pays the full market cost of the RIN through the discount it gives in the price of the E10 it sells. The 2011 DOE Study did *not* consider that blending refineries would have to discount blended fuel by the price of the RIN; therefore, the projections envisioned by the 2011 DOE study *have not occurred* in practice. Rather, as the 2009 DOE Study anticipated, the competitive market forces have resulted in the same cost of compliance whether that cost comes through the purchasing of RINs on the open market or through the discounting of the price for blended fuel sold by blenders. Moreover, neither the 2009 DOE Study nor the 2011 DOE Study anticipated the even more significant finding that, without regard to how refineries experience their RFS compliance costs, the RIN cost pass-through phenomenon applies—refineries pass those higher costs through to their customers in higher prices for the refined products they sell.

For the reasons described above and after considering the "other economic factors" described in Section IV.D.2, we find small refineries do not face disproportionate costs to comply with the RFS program. Further, we find there is no economic harm—much less a hardship significant enough to impair refinery operations—that qualifies as DEH caused by RFS compliance. For these reasons, we find, consistent with the broad

criteria for relief described in the 2009 and 2011 DOE Studies, that DEH is not demonstrated in the 36 SRE petitions EPA has evaluated and is denying in this action.

D. Hardship Must Be Caused by RFS Compliance

1. The CAA Requires That DEH Must Be Caused by RFS Compliance

As discussed above, the best reading of the statutory provisions at CAA section 211(*o*)(9) is that EPA's authority to grant an SRE "for the reason of (DEH)" requires that the hardship is caused by RFS compliance. This interpretation aligns with the statutory text as well as with the purpose of the RFS program and the SRE provisions. EPA has considered the comments received on this interpretation and provides specific responses to those comments in Appendix B. This section summarizes EPA's analysis supporting its conclusions.

a. The Text of the Statute Provides That DEH Must Be Caused by Compliance with the RFS Program

On January 24, 2020, the Tenth Circuit in *RFA* held that the EPA only has the authority to grant SREs when the refinery experiences DEH caused by the RFS program.[124] The court pointed to statements in the three decision documents at issue indicating that relief from the RFS obligations could relieve the refinery's hardship "in whole or in part," and concluded that granting relief on the basis of something other than DEH caused by RFS compliance was impermissible.[125] We have evaluated the court's opinion and the text of the statute,

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[124] *RFA*, 948 F.3d at 1254.

[125] *Id.*

and, in this final action and going forward, we will require that petitioning small refineries demonstrate that DEH is caused by RFS compliance as discussed further in this section.

The CAA's SRE provisions are structured in two sections. Section "(A) Temporary exemption" provides the blanket exemption to all small refineries through 2010 and then lays out the conditions in which a small refinery may receive an extension of the initial exemption following the study conducted by DOE. Section "(B) Petitions based on [DEH]" addresses ongoing case-by-case SRE petitions and the basis for EPA's evaluation of those petitions.

Section A refers to the "requirements of paragraph [211(*o*)(2)]," which provides, among other things, the applicable annual volume targets for the required categories of renewable fuel. The "requirements of paragraph [211(*o*)(2)]" are utilized in describing what an exemption means: "The requirements of paragraph [211(*o*)(2)] shall not apply to small refineries until calendar year 2011,"[126] as well as identifying the subject of the DOE's study: "[T]he Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph [211(*o*)(2)] would impose a [DEH] on small refineries."[127] It also describes the basis under which an exemption can be extended: "[i]n the case of a small refinery that the Secretary of Energy determines under subclause (I) would be subject to a [DEH] *if required to comply with paragraph [211(o)(2)]*, the Administrator shall extend

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[126] CAA section 211(*o*)(9)(A)(i).

[127] CAA section 211(*o*)(9)(A)(ii)(I).

the exemption under clause (i) for the small refinery for a period of not less than 2 additional years."[128] These repeated references to paragraph 211(*o*)(2) indicate a direct link between the RFS requirements, SREs, and DEH. Given the focus by Congress in the SRE provisions on compliance with the RFS volume requirements, the best reading of the statutory language is that compliance with the RFS program must be the reason for DEH warranting an SRE under section A. DOE reached the same conclusion in the 2011 DOE Study: "Disproportionate economic hardship must encompass two broad components: a high cost of [RFS] compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations."[129] This means that a small refinery may not simply experience a year of poor economic performance or struggle with disadvantageous operational or market constraints to merit an SRE because these impacts are not based on compliance with the RFS program. Nor can a refinery rely on unplanned and unanticipated events like a fire or a natural disaster, or on planned events unrelated to RFS compliance, such as paying out stock dividends or other capital purchases/loans to qualify for relief from its RFS obligations.[130] Rather, section A of the SRE provisions provides that DEH must be caused by the small refinery's compliance with the requirements of the RFS program.[131]

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[128] CAA section 211(*o*)(9)(A)(ii)(II) (emphasis added).

[129] 2011 DOE Study at 3.

[130] *RFA*, 948 F.3d at 1254 ("Granting extensions of exemptions based at least in part on hardships not caused by RFS compliance was outside the scope of the EPA's statutory authority.").

[131] *Id.*

Section B of the SRE provisions states that a small refinery may "at any time petition the Administrator for an extension of the exemption *under subparagraph (A)* for the reason of [DEH]."[132] By making any future SREs "extension[s] of the exemption under subparagraph (A)," Congress carried over the causal requirement in section A to section B.[133] While section B uses the language "for the reason of [DEH]" without a modifying clause tying it to compliance with the RFS program, section B cannot be read outside of the context of section A; section B is merely providing an opportunity for small refineries to request continuation of the exemption in section A. Therefore, the causal requirement in section A tying DEH to RFS compliance applies to section B as well. Additionally, it is section A that provides the basis on which DEH must be founded: compliance with the RFS program. Thus, even if the exemption under section B could be interpreted as a distinct exemption from the exemption under section A, it must be "for the reason of [DEH]" as defined in section A as being "impose[d]" by, or existing "if [a small refinery was] required to comply with" its RFS obligations. In this way, the use and meaning of "disproportionate economic hardship" is the same in both sections A and B. Therefore, we agree with the Tenth Circuit that the "language of these provisions indicates that renewable fuels compliance must be the cause of any disproportionate hardship."[134] As described above, EPA believes this is the best interpretation of the interrelated provi-

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[132] CAA section 211(*o*)(9)(B)(i) (emphasis added).

[133] *RFA*, 948 F.3d at 1253.

[134] *Id.*

sions of CAA sections 211(*o*)(9)(A) and (B) and is therefore adopting this interpretation going forward.

b. The Purpose of the RFS Program Supports a Requirement That DEH Must Be Caused by Compliance with the RFS Program

Requiring that DEH be caused by RFS compliance also furthers the goals of the RFS program, which include encouraging the use of renewable fuel and reducing greenhouse gas emissions from the transportation sector. Historically, SREs have resulted in reductions in the volume of renewable fuel required to be used in the United States.[135] Moreover, allowing relief from RFS obligations for hardship unrelated to the RFS program would be an inappropriate use of the SRE provisions, particularly where the text of the statute requires demonstration of a causal relationship between the hardship and the RFS program. Had Congress intended that EPA provide relief for hardship due to something other than the RFS program, it could have easily done so, and the statutory language would have been more explicit in providing such broad authority. Instead, Congress adopted a "temporary hardship" provision followed by the ability to petition for an "extension" of the temporary exemption based on the same type of hardship. This limited approach to providing hardship relief all but precludes an interpretation that the exemption is available to provide financial assistance to small refineries for reasons wholly unrelated to the RFS program, the program from which an exemption

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[135] We acknowledge that beginning in 2020, we have projected the amount of SREs such that when the projections accurately reflect the volume of fuel exempted, the volume of renewable fuel required under the RFS program is not reduced by the granting of SREs.

would provide relief. It would only make sense that, in implementing the RFS program, EPA would provide relief from impacts of the RFS program that result from the RFS program itself. It is hard to imagine that Congress intended the SRE provisions be used to provide relief from the financial distress some small refineries may otherwise face, especially when other legal and policy options exist to provide compliance flexibility, and, significantly, when that distress may be caused by a broad array of circumstances unrelated to the RFS program, ranging from higher transportation and production costs to adverse business decisions.[136]

Finally, in light of EPA's findings regarding RIN cost passthrough, granting SREs would mean that exempted small refineries would not only be relieved of their RFS obligations, but would also get a financial *benefit* through the sale of their petroleum fuel that includes the value of the RIN but no associated RFS compliance costs.[137] This windfall to small refineries does not further the goals of the RFS program, and only provides a disproportionate net benefit to small refineries granted exemptions in comparison to other refineries that are either ineligible to petition for an exemption or are denied an exemption on the lack of merit of their pe-

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[136] For example, a small refinery may not choose to pay discretionary dividends and simultaneously claim DEH in an SRE petition. The D.C. Circuit in *Hermes* said of this method, "Allowing small refineries to perpetuate that manner of self-inflicted hardship would conflict with the terms of the statute which contemplate a "*[t]emporary* exemption" for small refineries with an eye toward eventual compliance with the renewable fuels program for all refienries." 787 F.3d at 578.

[137] *See infra*, Section IV.D.2.

tition.[138] Furthermore, when small refineries gain this benefit through exemption, RFS compliance is incrementally shifted to other parties that, in turn, pass on that increment in their compliance costs to wholesale purchasers. In essence, the significant financial benefit of exemptions granted to small refineries is still paid for by wholesale purchasers in higher transportation fuel costs.[139]

2. DEH and RIN Cost Passthrough

An additional part of the Tenth Circuit's holdings was that EPA failed to explain how a finding of DEH comports with EPA's findings on RIN cost passthrough.[140] In this action, we are adopting an interpretation of the statute that DEH must be caused by compliance with the RFS program. It follows, then, that in making a finding of DEH we must explain how the RFS program could cause DEH for a small refinery in light of EPA's longstanding and consistent findings on RIN cost passthrough. EPA considers RIN cost passthrough as part of its consideration of "other economic factors" when evaluating SRE petitions. As such, the section that follows presents EPA's consideration of "other economic factors" in evaluating the SRE petitions and determining that compliance with the RFS program does not impose DEH on small refineries. In other words,

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[138] *See*, e.g., Comments from API on 2020 RFS Annual Rule, Docket Item No. EPA-HQ-OAR-2019-0136-0721.

[139] In the 2020 RFS Annual Rule, EPA finalized regulations that shift the projected exempted volumes for small refineries to the remaining obligated parties instead of reducing the renewable fuel volumes as had been common practice in prior years. 85 FR 7016 (February 6, 2020).

[140] *RFA*, 948 F.3d at 1256-57.

the analysis in this section, and the data that it relies on, is part of EPA's careful consideration of "other economic factors" relevant to demonstrating whether RFS compliance will cause DEH. Additional "other economic factors" EPA considered in its evaluation of SRE petitions are described in the responses to comments in Appendix B and in the confidential, refinery-specific appendices.

After reviewing the available data and analysis, including analyses conducted by EPA and outside parties,[141] as well as data and analyses submitted by petitioning small refineries, and comments, data, and analyses submitted in response to the request for comment on the Proposed Denial, we find that all obligated parties recover the cost of acquiring RINs by selling the gasoline and diesel fuel they produce at the market price, which reflects these RIN costs (RIN cost passthrough). Further, we find that blenders use the revenue from RIN sales to discount the price of the blended fuel they sell (RIN discount). Furthermore, since refining and fuel blending markets are highly competitive, we find that: (1) The RFS obligation is the same for every gallon of gasoline and diesel fuel; (2) RINs are generally widely available in an open and liquid market; and (3) The cost of acquiring RINs is the same for all parties. All types of obligated parties bear the same cost from compliance with the RFS program as these aspects of the RFS program and the RIN market facilitate the RIN cost passthrough and the RIN discount principles discussed above. While some parties dispute EPA's findings on RIN cost passthrough and the RIN

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[141] These outside parties include academics as well as consultants associated with one or more petitioning small refineries.

discount, those same parties have made business decisions over the last decade that implicitly acknowledge that RIN cost passthrough and RIN discount do occur. For example, if RIN cost passthrough did not exist, we would expect to see refiners shift production to non-obligated fuel (e.g., heating oil, jet fuel) and/or export fuel in order to avoid RFS obligations. We would also expect to see actions to expand or modify their business models to include additional blending of renewable fuel to reap the alleged rewards that they claim independent blenders and marketers enjoy. However, we see neither of those practices occurring. Therefore, for all these reasons taken together, we conclude that the RFS program does not impose DEH on small refineries.

Assessing the impact of the RFS program on refiners and blenders is complicated for several reasons. First, many parties may operate in several different roles, such as merchant refiners, integrated refiners, and blenders, in any given year.[142] Second, the impact of RIN costs on the price of fuels is not often apparent in the market pricing data.[143] Third, while market prices for renewable fuel with RINs attached are readily available in posted prices, renewable fuel is less commonly traded without RINs and hence prices of renewable fuel without the RIN are also rarely available outside of contracts between parties that are claimed as confidential.[144] Finally, terminology and accounting practices

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[142] *See infra*, Section IV.D.2.c.

[143] *See infra*, Section IV.D.2.b.

[144] *See infra*, Section IV.D.2.d.

vary between different parties, often making apples-to-apples comparisons less obvious.[145]

In this section, we again present the data and analysis that we provided in the Proposed Denial to support our findings that small refineries do not suffer DEH from their RFS obligations because RIN costs are fully passed through to wholesale purchasers. We include some brief discussion of the comments here, but primarily respond to comments submitted on this analysis in Appendix B. Here, we show that any such RFS compliance costs are not disproportionate because the cost to acquire RINs, whether via blending or through the RIN market, are the same, making the costs of RIN acquisition the same for all parties. After presenting some of the assertions made by small refineries below, we provide a brief description of prior publications on RIN cost passthrough and the RIN discount. We then reiterate the general economic theory that supports the premises of RIN cost passthrough and the RIN discount before briefly discussing the different market participants and how we expect their operations to be affected based on economic theory. Finally, we analyze the most current data available to the Agency to determine whether the finished fuel and RIN markets move in the way the economic theory predicts.

Small refineries alleging DEH generally claim that: (1) They are unable to recover the cost of the RINs they purchase in the sales prices of the gasoline and diesel fuel they produce because of their geography or market position; and/or that (2) They face higher costs for acquiring RINs than their competitors (usually integrated

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[145] *See infra*, Section IV.D.2.d.ii.

refiners or non-obligated blenders) that acquire RINs by blending qualifying renewable fuel. In the first case, petitioners argue that they are unable to recover the added cost of RIN purchases needed for RFS compliance and/or that the market price for gasoline and diesel fuel does not fully reflect these costs. In the second case, petitioners argue that their competitors (non-obligated blenders and/or integrated refiners) do not have to discount the blended fuel they sell to wholesale purchasers by the price of the RIN and, therefore, are able to acquire these RINs at a lower net cost than parties that purchase RINs. EPA has not found evidence to support either of these arguments, as shown by the data and analysis presented below. It is notable that the data we evaluated in doing this analysis and the market behavior they describe are very consistent with each other across the markets we observed. Some comments we received on the Proposed Denial included studies and market analyses that suggested different market behavior in certain geographical locations and therefore questioned EPA's conclusions about RIN cost passthrough. We respond to those studies and analyses in Appendix B and in confidential, refinery-specific appendices to this action.

a. Assessments of RIN Market Dynamics

The degree to which the cost is "passed through" to wholesale purchasers (RIN cost passthrough) and revenue from RIN sales is used to discount the price of blended fuel (RIN discount) has been a longstanding area of interest, especially since D6 RIN prices increased dramatically in 2013. EPA first published results of an assessment of obligated parties' ability to "pass through" RIN costs and the impact of RIN prices

on the price of blended fuel in a technical memorandum in 2015.[146] EPA explained the economic principles at work that enabled obligated parties to recover their RIN costs through RIN cost passthrough and the discount of renewable fuel blends by the price of the RIN. EPA then examined several sources of market data to test those principles. We concluded that both the costs in refined products and discounts in blended fuel prices due to RINs were being fully passed through to wholesale purchasers.

EPA next considered this issue in the context of petitions to reconsider the point of obligation in the RFS program in 2017.[147] While RIN cost passthrough was not the only topic at issue in our consideration of changing the point of obligation in the RFS program, the degree to which RIN costs and the RIN discount were passed through to wholesale purchasers was a central argument in the various petitions. In considering these requests, EPA again examined available market data, as well as studies by outside parties and numerous public comments.[148] Once again, EPA concluded that the RIN

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[146] *See* Burkholder memo.

[147] "Denial of Petitions for Rulemaking to Change the RFS Point of Obligation," EPA-420-R-17-008 at 21-31, November 2017 (hereinafter the "POO Denial").

[148] C.R. Knittel, B.S. Meiselman, & J.H. Stock, "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard," Journal of the Association of Environmental and Resource Economists, 2017. C.R. Knittel, B.S. Meiselman, & J.H. Stock, "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard: Analysis of Post-March 2015 Data," Working Paper. *See also* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0014; Letter from

costs and RIN discount were fully passed through to wholesale purchasers and reflected in the market prices of petroleum fuel and blended fuel, and that blenders used revenue from RIN sales to discount the price of blended fuel. This decision was reviewed and upheld by the U.S. Court of Appeals for the D.C. Circuit.[149]

In evaluating the SRE petitions currently before the Agency, EPA has again evaluated the available market data, and has evaluated data from additional markets submitted in comments to supplement that analysis. EPA has examined data through 2020 to determine whether more recent data continues to support EPA's views on the economic principles at play in the RIN market and whether these new data reconfirm our prior conclusions about both RIN cost passthrough and the RIN discount. EPA's prior analyses were generally based on publicly available data reported by the Energy Infor-

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QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028.

[149] *Alon Refining Krotz Springs, Inc v. EPA*, 936 F.3d 628 (D.C. Cir. 2019). In its decision, the D.C. Circuit found that in determining whether refiners recover the cost of the RINs they purchase for RFS compliance, EPA "grounded that conclusion in studies and data in the record." *Id.* at 649. The D.C. Circuit also supported EPA's findings that there is a cost for integrated refiners and non-obligated blenders to acquire RINs, even if they do not purchase separated RINs, through lower prices for blended fuels. "In a competitive market there's no such thing as a free lunch, and blenders and integrated refiners pay their tab just as other do; they just do so indirectly. To offer finished fuel without attached RINs at a competitive price, these entities must discount their blended fuel by roughly the value of the RINs that they detach and kept for themselves." *Id.* at 650.

mation Administration (EIA), which reports spot fuel prices for large fuels markets such as the New York Harbor and the Gulf Coast. Several small refineries claimed that, while RIN cost passthrough and the RIN discount may occur in these larger and more competitive fuels markets, RIN cost passthrough and the RIN discount were not occurring in the local markets into which these small refineries sold gasoline and diesel fuel. To assess these claims, EPA analyzed the data we received, including data sets provided by some of the small refinery petitioners located in smaller markets. The petitioners submitted the datasets to disprove EPA's conclusions on RIN cost passthrough. However, EPA found that the available data, including the more recent data through 2020 and the data received in comments, either could not be used to draw conclusions regarding RIN market dynamics, or, in contrast to the petitioner's claims, actually *supported* the conclusions that RIN costs are passed through in higher refined product prices and that blended fuel prices are discounted by the price of the RIN and passed through to wholesale purchasers.[150] In light of EPA's prior assessments of RIN cost passthrough, its recent assessment for the Proposed Denial, and its latest assessment of the comments and data provided in response to the Proposed Denial, EPA continues to conclude that no obligated party has a structural advantage or disadvantage from the RFS program. EPA found these conclusions held not only in the large fuels market previously assessed, but also in the smaller markets EPA examined using non-public market data, as well as the data submitted by the small

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[150] *See infra*, Section IV.D.2.d.

refineries. Each of these assessments is discussed in further detail in the following sections.

While EPA recognizes that much of this data may not be specific to the 2018 compliance year, it demonstrates the price dynamics in the fuels and RIN markets. Moreover, EPA's prior analyses indicate that RIN costs were passed through prior to and during the 2018 compliance year.[151] EPA's analysis provided herein confirms and supports our prior findings regarding RIN cost passthrough using more recent data.

b. Economic Principles of RIN Cost Passthrough

The market for gasoline and diesel fuel in the United States is extremely competitive at all levels from the wholesale level (terminals and refinery racks) to the retail level (gas stations and truck stops). At the wholesale level, there are currently more than 1,300 terminals across the United States.[152] At the retail level, there are currently about 145,000 retail stations across the United States.[153] The majority of these stations are owned by parties that own fewer than ten retail stations, and, in many cases, only a single retail station.[154] All of these parties are selling fungible products (gasoline and diesel fuel) to a consumer base that is very sensitive to

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[151] *See* Burkholder memo. *See also* POO Denial.

[152] Internal Revenue Service, Active Fuel Terminals, February 28, 2022, available at https://www.irs.gov/pub/irs-utl/tcn-db.pdf.

[153] National Association of Convenience Stores, *Convenience Stores Sell the Most Fuel*, March 10, 2022, https://www.convenience.org/Topics/Fuels/Who-Sells-Americas-Fuel.

[154] *Id.* According to this data, 57.1% of retail fuel stations are owned by parties that own only one station, and an additional 3.8% of all retail fuel stations are owned by parties that own 2-10 retail stations.

fuel prices, with prices posted on large signs making prices transparent. At the wholesale level, there are 129 petroleum refineries in the United States.[155] The market for renewable fuel and RINs is similarly very competitive. In 2020, more than 300 companies generated RINs for qualifying renewable fuel.[156] On average, approximately 5 billion RINs are traded between registered parties each month.[157] Prices for petroleum fuel, renewable fuel, and RINs are regularly reported by a variety of price reporting services.[158]

Refineries within the United States compete with each other, as well as with many other refineries overseas, and importers capable of sourcing gasoline and diesel fuel from a global fuels market. Low transportation costs for gasoline and diesel fuel, enabled by an extensive pipeline network, and the low cost of shipping these fuels via pipeline, barge, and petroleum tankers, mean that fuels markets across the United States are

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[155] According to data from EIA, there were 129 operable refineries in the United States as of January 1, 2021 (EIA, *When was the last refinery built in the United States?*, Frequently Asked Questions (FAQs), June 25, 2021, https://www.eia.gov/tools/faqs/faq.php?id=29&t=6). Some of these refineries are located outside of the RFS covered location or do not produce gasoline or diesel fuel, and thus are not subject to the RFS program.

[156] The number of companies that generated RINs is from data accessed from EPA's Moderated Transaction System (EMTS).

[157] RIN trade and price information reported to EMTS is available at https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information.

[158] *See*, e.g., fuel price data from EIA (https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm) and RIN price data from EPA (https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information).

linked and that refiners are not only competing with other local refineries, but with parties across the country and in many cases the world. This can be seen clearly in the structure of many fuel supply contracts across the country that establish pricing based on the price of fuel at a major market (e.g., Houston or New York Harbor) plus or minus transportation costs between the local market and the major market, depending on the direction of product flow.[159] If a small refinery is facing competition in its local market from a larger remote market, the local price will typically be higher than the price in the major market, reflecting the cost of shipping the fuel to the local market from the larger remote market.[160] Conversely, if the small refinery is shipping its fuel to the larger remote market to sell, it will need to price its fuel below the larger remote market price to cover the cost of shipping the fuel to the larger remote market. Through thousands of decisions made by all the market participants each day, the prices between the markets generally equilibrate to the same level, offset by the transportation costs between the markets. This means at the terminals where wholesale gasoline and diesel fuel are sold, competition forces all

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[159] Scott Berhang, "Pricing 101 Part 3: Wholesale Rack Fuel Pricing Essentials," September 12, 2017, available at http://blog.opisnet.com/wholesale-rack-fuel-pricing-essentials. Several small refinery petitioners included examples of contracts, some of which were based on the fuel price at a larger fuel market plus (or minus) transportation costs. This information has been claimed as confidential by the petitioners.

[160] This is because the price in the local market will be set by the marginal supplier of fuel. In a market with both a local and remote supplier, the marginal supply price will be no lower than the fuel sourced from the remote market, which will include transportation costs.

of the market participants to accept the same price for their products in the same way that gas stations across the street from each other must price their fuel at the same price.[161]

Economic theory suggests that in competitive markets like the fuels market where demand is nearly inelastic, competitive market forces would drive market participants to pass through the costs and revenue from RINs to wholesale purchasers in the prices of the products they sell.[162] This means that higher RIN prices should not advantage any one group of refineries over another, and that RIN prices should not impact refining margins. As an initial assessment of the impact of RIN prices on refineries, EPA examined the refining margins for three groups of refineries—small refineries, large refineries, and all refineries—based on available public data (e.g., financial data from publicly traded companies) and confidential data, including data provided by petitioners. We compared these refining mar-

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[161] There are very minor variations at the wholesale and retail level where branded fuels that include proprietary fuel additives command a marginally higher price than do unbranded fuels which retail consumers may perceive as being of lower quality. These differences in the prices for the products are unrelated to RFS because there are no distinguishing features or branding of the renewable components in gasoline or diesel fuel (i.e., one E10 fuel blend does not sell for more than another because it contains "higher quality" branded ethanol).

[162] RBB Economics, "The price effect of cost changes: passing through and here to stay," December 2014, available at https://www.rbbecon.com/downloads/2014/12/RBB_B48_Brief_WEB.pdf. RBB Economics, "Cost pass-through: theory, measurement, and potential policy implications," December 2014, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/320912/Cost_Pass-Through_Report.pdf.

gins (operating profit per gallon of fuel produced) to the average RIN cost per gallon (the per gallon cost to acquire the RINs necessary to meet a refinery's RVO).[163] These data are presented in Figure IV.D.2.b-1. Consistent with the economic theory, we see no correlation between refining margins and RIN prices, nor do we see any indication that higher RIN prices put small refineries at an advantage or disadvantage relative to large refineries. This result is consistent with findings of Burkhardt 2019: "full passthrough of RIN costs to nationwide output prices on average, and no statistical difference between pass-through rates for large and small refineries."[164] Figure IV.D.2.b-1 also includes an estimate of the refining margin for small refineries if they received an exemption from their RFS obligations. The estimate was calculated by adding the RFS RIN compliance cost per gallon to the refining margins for small refineries each year, since exempting small refineries from their RFS obligations means they do not have to acquire RINs. This estimate demonstrates that exempting small refineries from their RFS obligations results in small refineries, as a class, having consistently higher refining margins than large refineries or the average of all refineries. This advantage is significant and increases as RIN prices increase.

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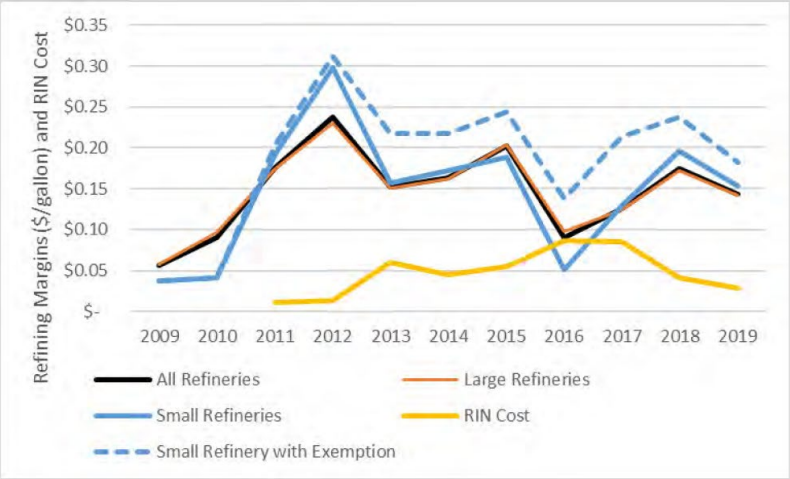
[163] We calculated the RIN cost per gallon based on the RFS obligation and the average RIN prices for each year.

[164] Jesse Burkhardt, "The impact of the Renewable Fuel Standard on US Oil refineries," 130 Energy Policy 429, 435 (2019) available at https://doi.org/10.1016/j.enpol.2019.03.058.

Figure IV.D.2.b-1: Refining Margins and RIN Costs (2009-2019)[a]



Data from SRE petitions and financial statements from publicly traded companies.

[a] The "Small Refinery with Exemption" line was calculated by adding the "RIN cost" line to the "Small Refineries" line. If a small refinery had already accounted for the financial benefit of an SRE in their reported margin for a given year, the effect would be to make the "Small Refinery with Exemption" line slightly less than shown for that year.

Understanding the impacts of the RFS program on the various parties that participate in the fuels market is complicated by the fact that different parties may participate in different activities within the fuels market. When analyzing the impact of the RFS program on the fuels market, we generally consider three different types of market participants: (1) Parties that produce and

sell petroleum fuel, including blendstocks[165] (generally referred to as merchant refiners); (2) Parties that purchase petroleum fuel and renewable fuel, and sell blended fuel (blenders); and (3) Parties that produce petroleum fuel, purchase renewable fuel, and sell blended fuel (integrated refiners). The latter two of these market participants compete directly with each other at the wholesale fuel terminals where gasoline and diesel fuel "breaks bulk" and is sold into tanker trucks for delivery to retail stations. A typical fuel terminal may have a dozen different companies that sell the gasoline and diesel fuel dispensed from the terminal.[166] A simplified version of the business activities each of these parties engage in, as well as the impact of the RFS program on their costs and revenue, is illustrated in Figure IV.D.2.b-2.

Merchant refiners produce, market, and sell petroleum fuel and buy the RINs they need for compliance with their RFS obligations; they do not purchase or blend renewable fuel. Integrated refiners also produce petroleum fuel, but unlike merchant refiners, they also purchase and blend renewable fuel to produce, and ultimately sell, blended fuel that contains some volume of renewable fuel. Integrated refiners generally do not purchase RINs, but instead purchase renewable fuel with attached RINs and acquire most of the RINs they need for compliance when they blend the renewable

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[165] A "blendstock" is defined as "any liquid compound or mixture of compounds (not including fuel or fuel additive) that is used or intended for use as a component of a fuel." 40 CFR 1090.80.

[166] Kristi Moriarty, "High Octane Fuel: Terminal Backgrounder," NREL, February 2016, available at: https://afdc.energy.gov/files/u/publication/hof_terminal_backgrounder.pdf.

fuel.[167] Non-obligated blenders do not produce petroleum fuel components, but instead purchase these products from merchant refiners. They then purchase renewable fuel with attached RINs that they use to produce, and ultimately sell, blended fuel (e.g., E10 and B5[168]). Because these parties do not have RFS obligations, they can also sell the RINs associated with the renewable fuel they blend. In practice there are few refineries that fall entirely into a single category, with most refiners having business interests that fall into at least two categories. Nevertheless, these distinctions help to clarify the context for RIN cost passthrough and the RIN discount in the price of blended fuel.

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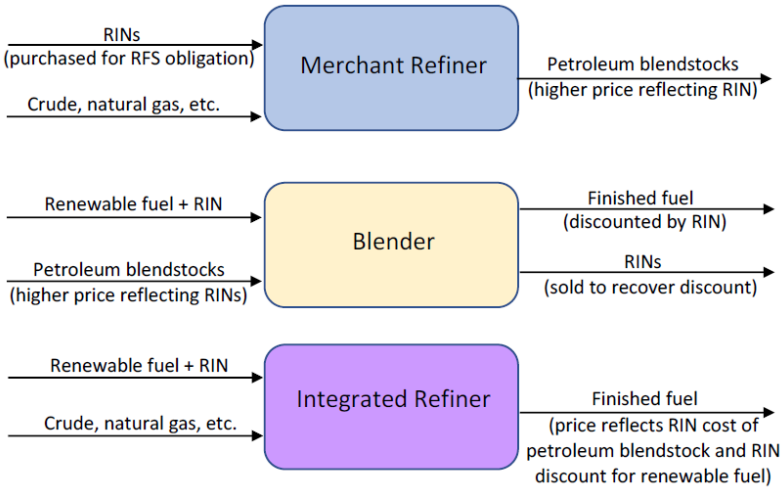
[167] Very few, if any, integrated refiners acquire all the RINs they need by blending renewable fuel. Petroleum fuel is subject to an RFS obligation for all four categories of renewable fuel, but it is generally only blended with one type of renewable fuel (i.e., ethanol in the case of gasoline and biodiesel or renewable diesel in the case of diesel fuel). Based on the 2020 RFS percentage standards, integrated refiners would generate a small amount of excess conventional biofuel (D6) RINs when blending ethanol as E10, but would need to purchase a small number of advanced biofuel (D5), biomass-based diesel (D4), and cellulosic biofuel (D3) RINs to meet the RFS obligation associated with the petroleum-based portion of the E10 blend. Similarly, integrated refiners that blend biodiesel as B5 would generate excess D4 RINs but would need to purchase D6 and D3 RINs to meet the RFS obligation associated with the petroleum-based portion of the B5 blend. In practice, nearly every gallon of blended fuel produced by an integrated refiner generates some quantity of excess RINs of one type and simultaneously incurs an obligation for other types of RINs.

[168] B5 refers to diesel fuel blended with 5% biodiesel.

Figure IV.D.2.b-2: Simplified Illustration of Fuels Market Participants



The place in the fuel supply chain where we can see the *cost* of the RIN being passed through to wholesale purchasers is in the price of the petroleum products. Since all parties have the same cost to acquire RINs (on a per gallon basis),[169] whether they blend renewable fuel or purchase separated RINs, one would expect the price for petroleum fuel subject to an RFS obligation (i.e., gasoline and diesel fuel) to increase when RIN prices increase and to decrease when RIN prices decrease. Just as the prices of gasoline and diesel fuel increase if fuel taxes increase,[170] they also increase when RIN prices increase. Merchant refiners fully recover the cost of their RFS obligations when the difference be-

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[169] *See infra*, Section IV.D.2.c.

[170] EIA, *Gasoline explained: Factors affecting gasoline prices*, March 15, 2022, https://www.eia.gov/energyexplained/gasoline/factors-affecting-gasoline-prices.php.

tween the market price of gasoline and diesel fuel and the market price for these fuels in the absence of the RFS obligation is equal to the cost of purchasing the RINs to satisfy the RFS obligation. Equations showing the expected RIN price impacts on the prices of gasoline and diesel fuel, assuming RIN costs are fully passed through, are shown below.

Equation 1: Expected Impact on Gasoline (E0) Prices Assuming Full RIN Cost Passthrough

Gasoline Price = Gasoline Price with no RFS Obligation + RIN Costs

Equation 2: Expected Impact on Diesel Fuel (B0) Prices Assuming Full RIN Cost Passthrough

Diesel Fuel Price = Diesel Fuel Price with no RFS Obligation + RIN Costs

EPA once again examined these economic principles by looking at available market data, including recent market data that was submitted by commenters.[171] The data EPA examined show that the market prices for gasoline and diesel fuel operate as shown in Equations 1 and 2, supporting EPA's findings that all obligated parties recover the cost of their RFS obligations in the sale prices for the gasoline and diesel fuel they produce.[172] The ability for an obligated party to recover its

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[171] EPA's analysis of the market data to determine the degree to which RIN costs are passed through to wholesale purchasers through higher prices for gasoline and diesel fuel is provided in Section IV.D.2.d.i.

[172] *See infra*, Figures IV.D.2.d.i.1 through 4, where EPA compared the price difference between a fuel subject to an RFS obligation to a very similar fuel not subject to an RFS obligation and the RIN cost per gallon of diesel fuel.

RIN costs is not dependent on the obligated party's ability to set the price for these fuels in the markets where they are sold. Rather, because all obligated parties face the same RIN costs per gallon of gasoline and diesel fuel produced nationwide,[173] the market prices for these fuels rise and fall with changes in RIN prices in all markets by the same amount on any given day (after accounting for other factors that impact the prices of these fuels), such that all parties that sell gasoline and diesel fuel recover their RIN costs.[174]

The place in the fuel supply chain where we see the RIN discount is the point at which renewable fuel is blended with gasoline or diesel fuel and sold for distribution to fuel retailers (i.e., at bulk terminals). Parties that blend renewable fuel with gasoline or diesel fuel to produce blended transportation fuel must discount the price of the blended fuel by the price of the associated RIN.[175] These parties can then separate any RINs that are attached to the renewable fuel and either use these RINs to demonstrate compliance with their RFS obligations (if they are an obligated party) or sell these RINs to other parties. In either case, the point at which they acquired the RIN at the market price, or, rather, incurred a market rate cost for the RIN, is what determines the cost to acquire the RIN. This distinction is

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[173] *See infra* Section IV.D.2.d.ii, *see also* the "RVO ¢/USG" value reported in the Argus Americas Biofuels Report, which reports the RVO cost per gallon of fuel produced based on current RIN prices.

[174] *See infra* Section IV.D.2.d.i.

[175] Another way to think about the RIN discount is that, to remain competitive, parties that blend renewable fuel must base the final price for the blended fuel on the net price of the renewable fuel (after accounting for the sale of the RIN) rather than on the price they paid for the renewable fuel with an attached RIN.

not necessarily intuitive as many market participants assume the cost to acquire the RIN is set when the renewable fuel is purchased at a cost that includes the RIN rather than when the renewable fuel is blended and sold as described further below.

The sale of a RIN by a party that blends renewable fuel and separates the RIN creates a separate revenue stream in addition to the revenue from the sale of the blended fuel itself. Competitive forces require that blenders price their blended fuel based on the *net* price of renewable fuel, or the price of the renewable fuel less the price of the RIN associated with the fuel (e.g., net ethanol price = ethanol price - D6 RIN price; net biodiesel price = biodiesel - 1.5*D4 RIN price[176]). Any party that attempts to retain the revenue from the RIN sales, rather than passing it on to wholesale purchasers via the RIN discount, is unable to offer blended fuel at a competitive price. If the market price for blended fuel is equal to the prices of the fuels used to create the blended fuel (e.g., 0.9 gallons of gasoline blendstock and 0.1 gallons of ethanol in the case of E10) without discounting the price for the renewable fuel by the price of the RIN, the RIN sales would result in profits for the blender. In the competitive fuels market, however, blenders are forced to reduce the price of the blended fuel to be competitive, consistent with the RIN discount phenomenon. If they do not, their competitors will give up the revenue from the sale of RINs to maximize profits by increasing fuel sales. These competitive forces require that blenders use the revenue from the RIN

[176] Each gallon of biodiesel generates 1.5 RINs.

sales to effectively subsidize the price of the blended fuel they sell.

This market phenomenon has been relatively obvious to program participants looking at the market for biodiesel blends where it was understood from the start of the RFS2 program that a higher D4 RIN price was necessary to reduce the effective market price of biodiesel to make it equivalent to petroleum diesel fuel. Integrated refiners and non-obligated blenders pay the higher cost for renewable fuel through their purchase and blending. Merchant refiners pay the nonobligated blenders the incremental cost of the renewable fuel for doing the blending of renewable fuel on their behalf when they purchase the separated RINs. As an illustrative example, if petroleum diesel fuel is selling at $3.00 per gallon, and it costs $4.50 per gallon to produce biodiesel (net of tax credits and state LCFS credits) and generate 1.5 D4 RINs, the price of a D4 RIN would need to be $1.00 for biodiesel to compete with petroleum diesel fuel so that the revenue from the sale of the 1.5 D4 RINs for $1.50 would lower the effective cost of the biodiesel to match the cost of the petroleum diesel fuel.[177] Any blender attempting to retain the revenue from the sale of the D4 RINs (rather than using it to discount the price of the blended fuel) could not offer a competitively-priced blended fuel, since any biodiesel the blender used in its product would increase the cost of the fuel blend.

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[177] In this example we are assuming that the RIN value tracks the cost of biodiesel production after accounting for the federal biodiesel tax credit and state LCFS credits (if applicable) in order to bring the net or effective price of biodiesel to parity with diesel fuel.

As described in greater detail below both in terms of economic principles and the recent data EPA received from small refineries, this market dynamic was previously not well understood when applied to the blending of ethanol to make E10. From the start of the RFS program until recently, there was no need to discount ethanol to create parity with gasoline blendstocks because ethanol had been relatively inexpensive and highly valued as an octane improver when blended to produce E10. As a result, both in the period prior to the RFS program and for the early parts of the RFS program, the market price for E10 was simply the weighted price for gasoline blendstock and ethanol. When D6 RIN prices increased, it was not obvious to many program participants how these high RIN prices impacted E10 prices, which many program participants simply assumed should continue to reflect the weighted costs of gasoline blendstock and ethanol. In fact, what has happened is that the high RIN prices have increased the production cost of gasoline blendstock (i.e., the RIN cost passthrough described in the preceding section) while simultaneously lowering the net cost of ethanol in almost equal proportion (the RIN discount), resulting in little change in the actual cost of E10 to consumers.[178] While this competitive market response has meant little change in E10 prices due to the RFS program, it has created confusion among market participants who per-

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[178] This does not mean that there is no cost to the RFS program. The RFS program requires the use of renewable fuels, which often have higher prices than the petroleum fuels they displace. This is particularly true for advanced biofuels such as biodiesel and renewable diesel. By requiring the use of higher cost fuels, the RFS program marginally increases the cost of transportation fuel in the United States.

ceive that D6 RINs are "free" to parties that blend E10, while obligated parties that must buy the D6 RINs at market prices bear a very high cost.[179] Instead, as we will show here based both on economic theory and the new small refinery data submissions, all sellers of E10 discount the price of E10 by the *price* of the D6 RIN, meaning fuel blenders pay for the RIN through this discounted E10 price at the same cost as if they purchased the RIN on the open market. As a result, parties that acquire RINs through fuel blending and parties that acquire RINs from the open market incur the same cost to acquire RINs.

Equations showing a generalized fuel blending example, and an example specific to E10, are provided below. These equations and the discussion that follows describe what one would expect if RIN prices are fully passed through to wholesale purchasers. The subsequent sections examine market data to test these equations and determine the degree to which RIN prices are passed through to wholesale purchasers.

Equation 3: Generalized Fuel Blending Example Assuming Full RIN Discount

Blended Fuel Price = PFP * PF% + (RFP - RIN Value) * RF%

Where: PFP = Petroleum Fuel Price

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[179] In fact, the RFS compliance cost estimates that small refineries submit to EPA as part of their SRE petitions reflect this misunderstanding by estimating the D6 RIN cost as the gasoline price minus the ethanol pricing meaning that, when ethanol is less expensive than gasoline, D6 RIN prices are negative.

PF% = Petroleum Fuel Percentage in the fuel blend

RFP = Renewable Fuel Price

RIN Value = RIN Price * Equivalence Value[180]

RF% = Renewable Fuel Percentage in the fuel blend

Equation 4: Fuel Blending Example for E10 Assuming Full RIN Discount

E10 Price = Gasoline Blendstock Price * 90% + (Ethanol Price - D6 RIN Price) * 10%

EPA's analysis of the market data confirms these economic principles that the RIN value is passed through to wholesale purchasers in the price of blended fuel.[181] The analysis—comparing the market prices for petroleum fuel, ethanol, RINs, and E10—shows that the market prices for blended fuel operate as shown in Equations 3 and 4, supporting EPA's findings that blenders are passing on the value of the RIN to wholesale purchasers.[182] Importantly, this means that, although blenders do not purchase RINs directly, there is still a cost for blenders to acquire RINs. This cost is

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[180] The equivalence value is an RFS regulatory term that relates the number of RINs generated per gallon of renewable fuel produced. Ethanol has an equivalence value of 1.0. Other renewable fuels have equivalence values that are determined by their energy content relative to ethanol. For example, biodiesel has an equivalence value of 1.5 RINs per gallon of biodiesel reflecting that biodiesel has approximately 150% the energy content of ethanol.

[181] *See infra*, Section IV.D.2.d.

[182] *See infra*, Section IV.D.2.d.ii.

realized when blenders discount the price for the finished blended fuel, pricing it based on the net price of the renewable fuel, after accounting for the sale of any RINs attached to the renewable fuel. The data EPA analyzed support our finding that the RIN value is fully passed through from blenders to wholesale purchasers, as described in Equations 3 and 4. Because the market is competitive, a blender cannot attempt to sell RINs at higher prices, as wholesale purchasers would merely go to a competitor selling at the market price. Thus, the cost of acquiring a RIN by blending renewable fuel and the cost of purchasing a separated RIN are equal as would be expected from the design of the RFS program and RIN system. Commenters submitted studies that they claim refute EPA's analysis; however, these studies are imperfect and, as described in Appendix B, EPA did not find it appropriate to rely on the conclusions presented in those comments and the studies they included.

c. Impacts on Different Market Participants

Before turning to the data analysis of RIN cost passthrough and the RIN discount as reflected in the prices of refined products and blended fuel, respectively, we first provide an illustrative example to examine the implications of RIN cost passthrough and the RIN discount on the three types of market participants described above: a merchant refiner, an integrated refiner, and a non-obligated blender. We present examples for producing both E10 and B5, two common fuel blends present in many fuels markets. Each of these parties produces, purchases, and sells different products within the E10 and B5 markets, but, as this example demonstrates, no party has a structural advantage or

disadvantage since both the RIN cost and the RIN discount are passed through to wholesale purchasers.

As briefly discussed previously, in reality very few parties fit entirely within only one of these three categories. Most refiners, both small and large, sell some volume of petroleum fuel (acting as merchant refiners) and blend some of their petroleum fuel with renewable fuel (acting as integrated refiners). Some also purchase gasoline or diesel fuel from other parties and blend it with ethanol to sell as E10 (acting as non-obligated blenders). Further, some refiners are also renewable fuel producers that produce the renewable fuel they blend rather than purchasing it from other parties and sell excess renewable fuel to others. Therefore, to better understand how various parties are affected by the RFS program and RIN prices, it is better to consider the role the party is playing in the fuels market (producing gasoline or diesel fuel, blending renewable fuel, etc.) than the predominant role of the company.

To illustrate the impact of the RFS program and RIN prices on parties acting in each of these roles, EPA evaluated scenarios with fuel prices, RIN prices, and RVOs as they existed on December 30, 2020. EPA also evaluated an alternative scenario where there was no RFS obligation. The fuel and RIN prices used in these scenarios, as well as the sources of these prices, are shown in Table IV.D.2.c-1 for the E10 example and Table IV.D.2.c-3 for the B5 example. The costs, revenue, and profit/loss for each party, both with and without the RFS program, are shown in Table IV.D.2.c-2 for E10 and Table IV.D.2.c-4 for B5. EPA recognizes that fuel and RIN prices have changed since the Proposed Denial. However, because the purpose of these tables is

to provide illustrative examples, we thought it would be appropriate to maintain consistent examples between the Proposed Denial and this SRE Denial, particularly because a number of the commenters included references to this example in their comments. Accordingly, we have not updated the prices used in these examples, and we do not expect that updated prices would change the outcome of our analysis.

The 2011 DOE Study included a very similar hypothetical value breakdown for various types of refiners in Appendix B of that study.[183] At the time, DOE projected that *if* integrated refiners did not have to discount the E10 that they sell, then they could acquire RINs through blending at little or no cost. In this hypothetical scenario, integrated refiners that acquired RINs at little or no cost through blending renewable fuel would have a significant advantage relative to merchant refiners that purchased RINs at a higher market price. However, as the examples below illustrate, integrated refiners must compete with non-obligated blenders in the blended fuels market. To offer competitively priced blended fuel, integrated refiners (like blenders) must discount the price of the blended fuel by the price of the RIN attached to the renewable fuel contained in the blended fuel. Market data reviewed by EPA confirm that the price of blended fuel reflects the RIN discount.[184] Thus, contrary to the hypothetical example in the 2011 DOE Study,[185] we find that all obligated parties

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[183] *See supra*, Section II.D.

[184] *See infra*, Section IV.D.2.d.ii.

[185] DOE's example in Appendix B of the 2011 DOE Study included a comparison of Company A that blends all its production with ethanol and does not need to purchase ethanol RINs, with

have the same cost to acquire RINs, whether they acquire RINs through blending renewable fuel or purchasing separated RINs. We address comments on these findings in a generalized manner in Appendix B and in confidential refinery-specific appendices to this action.

Table IV.D.2.c-1: BOB[186], Ethanol, E10, and RIN Prices on December 30, 2020[187]

Product	Price	Data Source
BOB Cost of Production	$1.34	Assumed to be equal to the BOB Market Price without RIN Cost
BOB Market Price without RIN Cost	$1.34	Calculated (BOB Market Price with RIN Cost less RIN Cost)
BOB Market Price with RIN Cost	$1.44	EIA
Ethanol Market Price	$1.50	OPIS
E10 Market Price with the RFS Program	$1.37	Calculated using BOB Market Price with RIN Cost, Ethanol Market Price, and D6 RIN Price
E10 Market Price without the RFS Program	$1.36	Calculated using BOB Market Price without RIN Cost and Ethanol Market Price
D6 RIN Price	$0.77	OPIS
RIN Cost per Gallon of BOB	$0.10	Calculated from 2020 RVO and OPIS RIN Prices
D6 RIN Cost per Gallon of E10	$0.06	Calculated from 2020 RVO and OPIS RIN Prices
D3, D4, and D5 RIN cost per gallon of E10	$0.03	Calculated from 2020 RVO and OPIS RIN Prices

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Company B that does not do any blending and must purchase RINs to meet its entire RFS obligation, and with Company C that blends in excess of its obligation and has RINs to sell into the market. In DOE's hypothetical case, Company A acquired RINs at no cost (n/a in the estimate) while Company B faced a 15 cent per RIN cost to purchase RINs. 2011 DOE Study at B-4.

[186] BOB is an intermediate petroleum product that is used in making finished gasoline and is generally blended with ethanol to make E10. BOB represents the petroleum-based portion of blended gasoline that has a RIN obligation attached to it. Therefore, BOB can be used to show the price impacts of the RIN market on the petroleum component of blended fuel.

[187] We recognize that fuel and RIN prices have changed, in some cases significantly, since December 30, 2018, and again since December 30, 2020. However, because the purpose of Tables IV.D.2.c-1

Table IV.D.2.c-2: Illustrative Costs, Revenue, and Profit for E10 Production

Line		Merchant Refiner		Integrated Refiner		Non-Obligated Blender	
		With RFS	No RFS	With RFS	No RFS	With RFS	No RFS
2-1	0.9*BOB Cost of Production	$(1.21)	$(1.21)	$(1.21)	$(1.21)	-	-
2-2	0.9*RIN Cost	$(0.09)	-	$(0.09)	-	-	-
2-3	0.9*BOB Market Price	$1.30	$1.21	-	-	$(1.30)	$(1.21)
2-4	0.1*Ethanol Market Price (with RIN)	-	-	$(0.15)	$(0.15)	$(0.15)	$(0.15)
2-5	0.1*Net Ethanol Market Price (no RIN)	-	-	$(0.07)	$(0.15)	$(0.07)	$(0.15)
2-6	E10 Market Price (per Gallon)	-	-	$1.37	$1.36	$1.37	$1.36
2-7	D6 RIN Purchases	$(0.06)	-	-	-	-	-
2-8	D3, D4, and D5 RIN Purchases	$(0.03)	-	$(0.03)	-	-	-
2-9	D6 RIN Sales	-	-	$0.02	-	$0.08	-
2-10	Profit/Loss per Gallon E10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

through 4 is to provide an illustrative example of how various parties are impacted by fuel and RIN prices, and because several commenters reference these tables as provided in the Proposed Denial, we believe they are useful in demonstrating that RIN cost pass-through occurred in 2018 and have not updated them with more current data. Accordingly, we do not expect that updated prices would change the outcome of our analysis.

Table IV.D.2.c-3: Diesel Fuel, Biodiesel, B5 and RIN Prices on December 30, 2020

Product	Price	Data Source
ULSD[188] Cost of Production	$1.38	Assumed to be equal to the ULSD Market Price without RIN Cost
ULSD Market Price without RIN Cost	$1.38	Calculated (ULSD Market Price with RIN Cost less RIN Cost)
ULSD Market Price with RIN Cost	$1.48	EIA
Biodiesel Market Price	$3.66	OPIS
Biodiesel Tax Credit	$1.00	N/A
B5 Market Price with the RFS Program	$1.46	Calculated using ULSD Market Price with RIN Cost, Biodiesel Market Price, and D4 RIN Price, and Tax Credit Price
B5 Market Price without the RFS Program	$1.44	Calculated using ULSD Market Price without RIN Cost, Biodiesel Market Price, and Tax Credit Price
D4 RIN Price	$1.00	OPIS
RIN Cost per Gallon of ULSD	$0.10	Calculated from 2020 RVO and OPIS RIN Prices
D4 RIN Cost per Gallon of B5	$0.02	Calculated from 2020 RVO and OPIS RIN Prices
D3, D5, and D6 RIN cost per gallon of B5	$0.07	Calculated from 2020 RVO and OPIS RIN Prices

Table IV.D.2.c-4: Illustrative Costs, Revenue, and Profit for B5 Production

Line		Merchant Refiner		Integrated Refiner		Non-Obligated Blender	
		With RFS	No RFS	With RFS	No RFS	With RFS	No RFS
4-1	0.95*ULSD Cost of Production	$(1.31)	$(1.31)	$(1.31)	$(1.31)	-	-
4-2	0.95*RIN Cost	$(0.09)	-	$(0.09)	-	-	-
4-3	0.95*ULSD Market Price	$1.41	$1.31	-	-	$(1.41)	$(1.31)
4-4	0.05*Biodiesel Market Price (with RIN)	-	-	$(0.18)	$(0.18)	$(0.18)	$(0.18)
4-5	0.05*Tax Credit	-	-	$0.05	$0.05	$0.05	$0.05
4-6	0.95*Net Biodiesel Price			$(0.06)	$(0.13)	$(0.06)	$(0.13)
4-7	B5 Market Price (per Gallon)	-	-	$1.46	$1.44	$1.46	$1.44
4-8	D4 RIN Purchases	$(0.02)	-	-	-	-	-
4-9	D3, D5, and D6 RIN Purchases	$(0.07)	-	$(0.07)	-	-	-
4-10	D4 RIN Sales	-	-	$0.05	-	$0.07	-
4-11	Profit/Loss per Gallon E10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

[188] ULSD stands for "ultra-low-sulfur diesel" fuel.

The illustrative examples presented in Tables IV.D.2.c-2 and 4 demonstrate several important points about the impact of the RFS program and RIN prices on merchant refiners, integrated refiners, and non-obligated blenders. First, since the RIN cost (lines 2-2 and 4-2) and the RIN discount (blended fuel prices based on net renewable fuel prices; lines 2-6 and 4-7) are fully passed through to wholesale purchasers, no party benefits or is harmed by the RFS program, either in absolute terms or relative to their competitors.[189] This can be seen in lines 2-10 and 4-11. In each of the examples, the revenues and costs of various products change as a result of the RFS program, but the profit/loss and, thus, the potential harm for each of these three parties is identical with and without the RFS program.

Second, a merchant refiner's ability to recover its RIN costs in the price of the fuel it produces does not depend on its ability to be a "price setter" or to receive a price for its fuel that is above the market price. Instead, the market price for fuel increases to account for the RIN cost associated with producing the fuel (RIN cost passthrough). Whether and the degree to which a refiner is a "price setter" or "price taker" is not influenced by the RFS program. Rather, the RFS program merely shifts upward the price at which this competitive dynamic is at play. This price impact can be seen by comparing the market prices for gasoline and diesel fuel with and without the RFS program (lines 2-3 and 4-3 respectively). Merchant refiners automatically receive a price for their fuel that reflects the cost increase due to

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[189] Throughout Section IV.D.2.c, references to "lines" are to Table IV.D.2.c-2 (lines beginning with 2-) and Table IV.D.2.c-4 (lines beginning with 4-).

the RFS program (i.e., the cost of the RIN) when they sell the fuel at the market price.

Third, if a refiner (merchant or integrated) has a higher cost of production than the market price without the RFS program, it will lose money for each gallon of fuel it produces. This is true both with and without the RFS program. Any party that has a higher cost of production than the market price for the goods it produces will lose money when selling those goods. However, the higher market prices for fuels can obscure these underlying fundamentals. In the example presented in Table IV.D.2.c-1, if a merchant refiner's cost to produce 0.9 gallons of gasoline is $1.30, it may appear that the refiner would break even by selling gasoline at the market price (line 2-3) but for the RIN purchases (lines 2-7 and 2-8). Several petitioners have made this very claim, that their refineries would be profitable if they did not have to purchase RINs but are not profitable after accounting for their RIN costs. However, such claims ignore the fact that in the absence of the RFS program, the market price for 0.9 gallons of gasoline (line 2-3) would fall to $1.21, resulting in a $0.09 loss. If a refiner's cost of production exceeds the marginal supply price for its market, the refiner will lose money for every gallon of fuel it produces due to its high cost of production, regardless of the presence or absence of the RFS program. As demonstrated by the identical results for all parties in Tables IV.D.2.c-2 and 4, the RIN compliance costs associated with the RFS program do not have a differential impact on the refiner's situation.

Fourth, while integrated refiners that do their own blending have the same cost to acquire RINs as merchant refiners, they spend less on separated RIN pur-

chases when they produce E10 or B5 (lines 2-7 and 4-8, respectively). Integrated refiners are acting both as merchant refiners (producing fuel that carries an RFS obligation) and as blenders (blending renewable fuel and separating the attached RINs) at the same time. However, rather than purchasing all the RINs they need from other parties or selling all the RINs they acquire through blending renewable fuel, integrated refiners keep the RINs they need for compliance from blending renewable fuel rather than purchasing these RINs. The transfer of RINs from the blending operation of an integrated refiner to the refining operation is an internal transfer, rather than an external purchase or sale that is easier to see in financial reports. While it may appear that integrated refiners are at an advantage relative to merchant refiners under the RFS program because they purchase fewer RINs per gallon of fuel produced (lines 2-7 and 4-8) than merchant refiners, they also sell fewer RINs than non-obligated blenders (lines 2-9 and 4-10). These two impacts—the higher RIN purchases relative to merchant refiners and the lower RIN sales relative to non-obligated blenders—offset each other such that integrated refiners neither benefit from the RFS program, nor are at a disadvantage relative to merchant refiners or non-obligated blenders under the RFS program.

Another way to understand the impact of the RFS program on integrated refiners is to consider the opportunity cost to these parties of selling blended fuel rather than petroleum fuel. Integrated refiners are competing with non-obligated blenders when they sell blended fuel (lines 2-6 and 4-7). These blenders must discount the price of the blended fuel they sell because of the revenue they realize when they sell the RINs associated

with the renewable fuel (lines 2-9 and 4-10). Integrated refiners generally keep the RINs they acquire when they blend renewable fuel, so they do not have this revenue source to reduce the price of their blended fuel to compete with blenders. Instead of revenue from RIN sales, integrated refiners can use their own production of petroleum fuel, which has a lower cost of production than the market price for the fuel (lines 2-1 and 2-3 and lines 4-1 and 4-3), to produce blended fuel. Access to these lower-cost fuels allows integrated refiners the ability to offer blended fuel at the same price as non-obligated blenders—which use the revenue from RIN sales to discount the price of their blended fuel—despite the fact that they use the RINs they acquire through blending for RFS compliance, rather than selling them to other parties. In doing so they give up the opportunity to sell their petroleum fuel at the higher market rate, which reflects the RIN cost (lines 2-2 and 4-2).

Fifth, the fact that refiners are able to recover the cost of the RINs they need for compliance and that blenders pass through the RIN discount to wholesale purchasers does not mean that the RFS program has no impact on fuel prices.[190] The RFS program functions as a cross-subsidy, where RINs increase the market price of petroleum fuel (lines 2-3 and 4-3) and decrease the net price of renewable fuel (lines 2-5 and 4-6). This means that the RFS program reduces the market price for fuel

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[190] The RFS program requires the use of renewable fuels, which often have higher prices than the petroleum fuels they displace. This is particularly true for advanced biofuels such as biodiesel and renewable diesel. By requiring the use of higher cost fuels, the RFS program marginally increases the cost of transportation fuel in the United States.

with higher renewable fuel content (e.g., E85 or B20) and increases the market price for fuel with little or no renewable content (e.g., E0 or B0). Notably, the RIN cost and the RIN discount are not the same for all blended fuels. RIN costs (lines 2-2 and 4-2) are proportional to the quantity of petroleum fuel in the blended fuel while the RIN value used to discount the price of the renewable fuel is proportional to the quantity and type (D6 ethanol, D4 biodiesel, etc.) of renewable fuel in the blended fuel. In the two examples in Tables IV.D.2.c-2 and 4, the RIN cost and the RIN discount for E10 and B5 are very similar and as a result the prices for E10 and B5 with and without the RFS program (lines 2-6 and 4-7, respectively) are very similar. This is not the case for fuels with significantly higher or lower proportions of renewable fuel.

Finally, while non-obligated blenders realize revenue from RIN sales (lines 2-9 and 4-10), this revenue is not a windfall profit. Instead, RIN revenues result in lower net prices for renewable fuels (lines 2-5 and 4-6). The prices of the blended fuel (lines 2-6 and 4-7) then reflect the lower net cost for the renewable fuel under the RFS program. For fuels such as E10 and B5, when the RIN value of the renewable fuel in the blend is approximately equal to the RIN cost associated with the petroleum fuel in the blend, it can be difficult to see the impact of the RFS program in the blended fuel price. For fuels with significantly higher or lower renewable fuel content, the impact is more pronounced. RINs decrease the price for fuel with a high renewable content (e.g., B20 or E85), while RINs increase the price for fuel with little or no renewable content (e.g., E0 or B0). This is the mechanism by which the RFS program was

intended to increase the production and use of renewable fuel in the United States.

In the calculations in Tables IV.D.2.c-2 and 4, we have made several simplifying assumptions. First, we have assumed that the fuel cost of production for both the merchant refiner and the integrated refiner (lines 2-1 and 4-1) is equal to the market price for the fuel without the RFS program. In practice, the marginal cost to supply fuel to any given market sets the market price. Each refiner's refining margin would, therefore, be determined by its actual fuel cost of production relative to the market price for the fuel. RIN costs increase the market price for the fuel by an amount equal to the RIN cost, since all parties have the same RIN costs. However, since the market price for fuel reflects the RIN cost, the merchant refiner's profit/loss is determined by its cost of production relative to the marginal cost of production for its market, with or without the RFS program. Said another way, different refineries in a market will have differing profit margins for the fuel they produce and ultimately distribute to terminals. But since RFS compliance costs (i.e., RINs) apply equally to every gallon of fuel produced, these costs directly impact all gasoline and diesel fuel volumes equally, raising the marginal supply price for these products. Thus, RIN prices increase a refinery's costs and the market price for their production, but the difference between the refining margins for the different refineries will remain the same with and without the RFS program.

Similarly, in this example we have assumed no blending margin or cost for blending beyond the purchase of petroleum fuel and renewable fuel. This is a simplification that does not reflect the fact that, in addition to the

cost of purchasing fuel, blenders—whether operating at a gasoline terminal or their own truck rack—also have operating costs and fixed costs. These costs include, among others, labor costs, maintenance costs, and capital recovery costs. Blenders must earn a margin when they sell blended fuel to cover these fixed and operating costs, and the market price for blended fuel reflects the fixed and operating costs of the marginal fuel blender.[191] However, not all blenders will have the same fixed and operating costs. Much like the previous example, we would expect a blender's (or integrated refiner's) profit/loss for blending renewable fuel to be equal to its fixed and operating costs relative to the fixed and operating costs of the marginal blender. Blenders and integrated refiners with relatively low blending costs are expected to earn greater profits through blending, while blenders and integrated refiners with relatively high blending costs are expected to earn relatively lower profits (or losses) through blending. This is true independent of the RFS program, as RIN costs/revenues are neutral. Notably, the design of the RFS program enables the market to function efficiently by allowing those refiners that have relatively high fixed and operating costs of blending renewable fuel to purchase RINs from blend-

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[191] We note that, in some of the contracts that have been submitted to EPA, this blending margin is represented by a fixed price, while in other cases the fuel purchaser appears to be accepting slightly less than full passthrough of the RIN value, possibly to pay for part or all of the blending margin or blending cost. In either case, these blending margins are negotiated between fuel buyers and fuel blenders and are generally not made public. EPA has provided a more detailed assessment of the individual refinery contracts provided to the Agency in the confidential refinery-specific CBI appendices.

ers that have lower fixed and operating costs of blending renewable fuel. We acknowledge this simplification and note that our decision to exclude a blending margin from the examples presented in Tables IV.D.2.c-2 and 4 does not affect the conclusions highlighted above.

d. EPA Evaluation of Available Market Data

EPA analyzed the available market data to verify the economic principles at work and to verify that the RIN cost and the RIN discount are being reflected in the retail price of blended fuel.[192] These analyses, including analyses conducted for previous assessments of the passthrough of both the RIN cost and the RIN discount, as well as new analyses using more recent data, are presented in this section. These analyses confirm that both the *cost* of the RINs—which is reflected in the prices for fuel and blendstocks—and the *discount* of the RINs are passed through to wholesale purchasers in the marketplace in the price they pay for blended fuel. In Appendix B, we address the RIN market studies included in the comments we received on the Proposed Denial. Some small refineries also submitted analyses specific to their operations under claims of confidentiality, and we have responded to those in confidential, refinery-specific appendices to this action.

i. Assessment of Data on RIN Cost Passthrough

EPA first assessed available data to determine whether refiners are able to recover the *cost* of the RINs they need to demonstrate compliance with their RFS obligations through higher prices for the petroleum fuel they produce, as described in Equations 1 and 2. This

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[192] *See supra*, Section IV.D.2.b.

analysis is complicated by the fact that the terms in Equations 1 and 2 for the gasoline price with no RFS obligation and the diesel fuel price with no RFS obligation cannot be found in market data from the United States, as the reported data will always reflect the cost of the RFS obligation. As described below, however, there are market data on the prices of fuels that are very similar (and in some cases identical) where one fuel has an RFS obligation and the other does not.

In 2015, EPA identified prices for near-identical fuels (in terms of technical fuel specifications, and, therefore, presumably cost of production) except for the fact that one fuel was subject to an RFS obligation while the other was not.[193] We then used the price of the nonobligated fuel to approximate what the cost of the obligated fuel would be in the absence of the RFS obligation. We then compared the price difference between these two fuels, which represents the increase in the market price of the obligated fuel as a result of its RFS obligation, to the RIN cost for producing or importing a gallon of fuel subject to an RFS obligation. The strong correlations between the price differences for similar fuels with and without an RFS obligation and the RIN cost per gallon of obligated fuel led to the conclusion that the market prices for gasoline and diesel fuel are higher than they would otherwise be in the absence of the RFS program. Further, the observed price difference was equal to the cost of purchasing the RINs needed to meet the compliance obligations for a gallon of gasoline or diesel fuel. We therefore concluded that all refiners re-

[193] *See* Burkholder memo.

covered the full cost of the RINs they purchase through the prices of the fuel they sell.

EPA subsequently repeated the analytical techniques first developed in 2015 using more recent data from 2017-2020. Figure IV.D.2.d.i-1 shows the price difference in New York Harbor between ULSD, which is subject to an RFS obligation, and heating oil, which is essentially an identical product except that it is not subject to an RFS obligation. As expected, there is a very strong correlation between these data sets, as shown in Figure IV.D.2.d.i-2. The market price premium for ULSD over that for heating oil consistently matches the RIN cost (i.e., the cost of purchasing the RINs needed to meet the RFS obligation). EPA received both public and confidential comments on its analysis, and has responded to those comments in Appendix B and in confidential, refinery-specific appendices to this action.

Similarly, Figure IV.D.2.d.i-3 shows the price difference in the Gulf Coast between ULSD, which is subject to an RFS obligation, and jet fuel, which is not. However, as shown in Figure IV.D.2.d.i-4, the correlation between the price difference of ULSD and jet fuel and the RIN cost is not as strong as the correlation between the price difference of ULSD and heating oil and the RIN cost. This is to be expected, as there are more significant product quality differences between ULSD and jet fuel such that they are not one-for-one replacements of each other. Furthermore, they are used primarily in different markets with distinct supply/demand dynamics that would also contribute to differences in their

market prices.[194] Thus, there is more noise in these data, but a general relationship between the price difference among these fuels and the RIN cost can be seen. Also apparent in Figure IV.D.2.d.i-3 is the impact of the COVID-19 pandemic. In late March 2020, air travel and demand for jet fuel decreased dramatically, resulting in an over-supply of jet fuel and a spike in the price premium for ULSD over jet fuel.[195] Over time, as demand for jet fuel gradually increased and refiners adjusted their production to better match fuel demand, the price difference between jet fuel and ULSD returned to match the RIN cost. Taken together, these more recent data confirm EPA's original conclusion that the market prices for gasoline and diesel fuel reflect the RIN cost, and, therefore, all refiners are able to recover their RIN costs through the sales prices of these fuels.

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[194] Jet fuel generally contains more sulfur than ULSD. While the properties of jet fuel are closer to #1 diesel than to #2 diesel, EPA's public data does not contain prices for #1 diesel.

[195] EIA, *COVID-19's impact on commercial jet fuel demand has been significant and uneven*, Today in Energy (August 7, 2020), https://www.eia.gov/todayinenergy/detail.php?id=44676.

Figure IV.D.2.d.i-1: Price Difference Between ULSD and Heating Oil in New York Harbor and RIN Cost (2017-2020)[196]

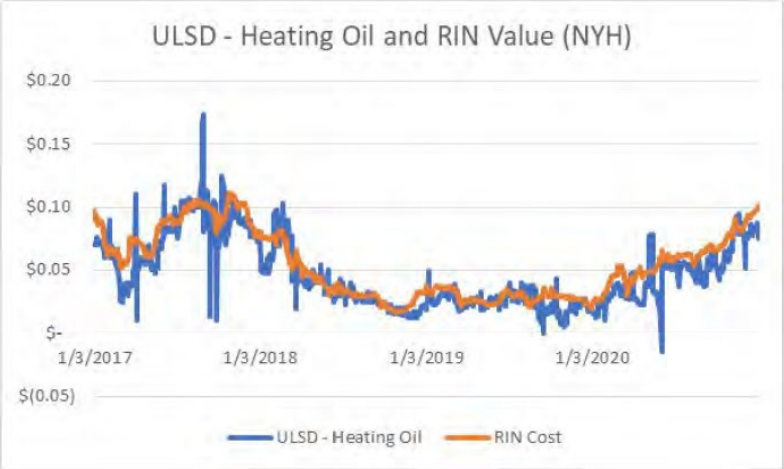
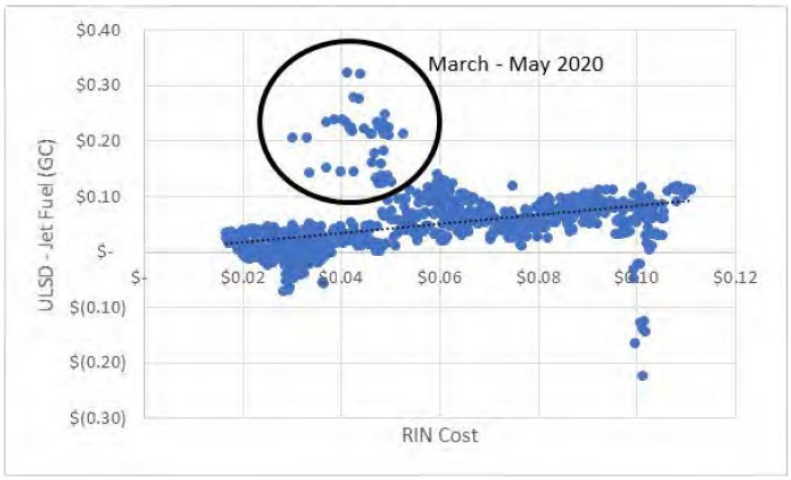


Figure IV.D.2.d.i-2: Correlation Between Price Difference of ULSD and Heating Oil and RIN Cost (2017-2020)

[196] Prices for ULSD and heating oil are reported by EIA and are available at https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm.

Figure IV.D.2.d.i-3: Price Difference Between ULSD and Jet Fuel in the Gulf Coast and RIN Cost (2017-2020)[197]

Figure IV.D.2.d.i-4: Correlation Between Price Difference of ULSD and Jet Fuel and RIN Cost (2017-2020)



[197] Prices for ULSD and jet fuel are reported by EIA and are available at https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm.

In their SRE petitions and in their subsequent comments on the Proposed Denial, several small refineries submitted examples of fuel pricing contracts in their local markets under claims of confidentiality. EPA has responded to the general comments in Appendix B and to the confidential information in confidential refinery-specific appendices to this action. Notably, many of these contracts indexed the sales price for fuel in the typically smaller markets into which the small refineries sell fuel to larger fuels markets, usually with the addition of transportation costs. The structure of these contracts supports EPA's finding that the inclusion of the RIN cost in the price of obligated fuel is not unique to larger, coastal fuels markets, but is true across the United States. If the RIN cost is reflected in the sales price of fuel in New York Harbor and the Gulf Coast, it is certainly reflected in markets (including smaller markets) that *index* their pricing to these larger markets.

One piece of evidence that the pricing of fuel in smaller markets is commonly indexed to the price in larger spot markets is the reporting of the Spot Replacement Index (SRI) by a major industry source of fuel pricing information. A contractor to EPA described the SRI as follows:

> "The starting point for both the gasoline and ULSD SRI is the average of the prior-day's closing spot range in each of the seven U.S. spot markets. Each day the price reporting service surveys traders and brokers and publishes a full day range (high, low, mean, settlement) that represents their assessment of the value of spot transactions for gasoline and diesel fuel that day. The price service provider has mapped over 250 rack markets from their theoretical

> spot origin points. From the full day spot price assessment, the service provider then adds current pipeline tariffs based on the distance that product flows in the line from the spot origin point to the destination rack terminal location. The price provider then adds in line loss (due to evaporation in the line), terminaling and storage (transfer) fees if product moves from line to line, an estimated fee for proprietary additives (when required), a cost of money factor (based upon transit time from origin to destination), pipeline security charges and trucking fees for applicable markets where product requires transportation using vehicles in addition to pipelines. For distillates, the service provider also approximates the cost of various additives (lubricity, red dye, etc.). For each date in the analysis the day's SRI shows yesterday's closing spot price delivered into a specific market. The service provider developed this methodology after more than a year of discussion with major oil suppliers, marketers, and resellers."[198]

EPA considers the existence and common use by the refining industry of the SRI as strong evidence that the prices in local markets are indexed to the seven major U.S. spot markets; otherwise this tool would be of little use to the industry participants that helped to create and use it.

Furthermore, because of the highly connected and competitive nature of fuels markets across the United States, one would expect every fuels market to reflect these same pricing dynamics. To date, no petitioning

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[198] Economic Analysis of Fuel Blending, prepared for the Environmental Protection Agency by Stillwater Associates LLC, February 9, 2022, p. 3.

small refinery has provided EPA with data that contradict this position, either in their SRE petitions or in their comments on the Proposed Denial, nor have we found other data that is in conflict with this expectation. In fact, small refineries that participate in both larger markets and smaller markets have consistently highlighted to EPA that they are in direct competition with larger and better resourced refineries regardless of their location. Even in cases where the small refineries themselves may not distribute fuel beyond a relatively small geographic area, the large integrated refiners with which they compete in those local markets do sell fuels into the larger distributed markets. It would not make economic sense for these large integrated refiners, which have access to larger fuels markets where market prices reflect the cost of RINs, to choose to sell into the smaller markets occupied by small refineries unless the market prices in those smaller markets also reflected the RIN cost. Some small refineries asserted that large refineries engage in predatory pricing (i.e., the illegal act of setting prices low to attempt to eliminate the competition) in the local markets where the small refineries compete. The U.S. Federal Trade Commission (FTC) has looked into such claims in the past and has generally found that in "markets with a large number of sellers, such as gasoline retailing, it is unlikely that one company could price below cost long enough to drive out a significant number of rivals and attain a dominant position."[199] Even if such claims were true, such predatory pricing would presumably be for

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[199] United States Federal Trade Commission (FTC), "Predatory or Below-Cost Pricing," available at https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/single-firm-conduct/predatory-orbelow-cost-pricing.

the purpose of increasing the predatory refinery's share of the refined products market (the thing they produce) and not the renewable fuels market (the thing they also buy). In other words, such predatory pricing for refined products would not be a basis for EPA to find DEH due to the cost of compliance with the RFS program. Consistent with the historic findings of the FTC, EPA in its review of the materials submitted by small refineries in their SRE petitions and comments has not found a basis to conclude that the wholesale fuel markets are anything but highly competitive.

Another important observation from these data is that neither the RIN cost nor the additional revenue a refiner receives for an obligated fuel compared to a non-obligated fuel (the premium for obligated fuel versus a similar non-obligated fuel) are static. There has been significant variation in these prices from 2017-2021, from approximately $0.10 per gallon in late 2017 and late 2020, to a low of approximately $0.03-0.04 per gallon throughout 2019. RIN prices have generally held stable in the first quarter of 2021, though they continued to increase in 2021, with prices at the end of 2021 for most RIN categories 50-100% greater than RIN prices at the end of 2020 (see Figure IV.D.2.d.i-5).[200]

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[200] EPA, RIN Trades and Price Information, available at https://www.epa.gov/fuels-registration-reporting-andcompliance-help/rin-trades-and-price-information.

Figure IV.D.2.d.i-5: RIN Cost Per Gallon by RFS Category (2011-2020)

Obligated parties that choose to purchase the RINs they need for compliance on a ratable basis (i.e., purchase on a systematic, regular basis the number of RINs needed to satisfy their obligation for all the fuel sold each day) will recover the cost of the RINs they purchase in the sales price of the petroleum fuel they sell. Conversely, obligated parties that choose to delay RIN purchases, or to purchase excess RINs in advance of producing or importing petroleum fuel, may recover more or less than the price they paid for RINs in the sales price of the petroleum fuel they sell, depending on whether the RIN price on the purchase date is higher or lower than the RIN price on the date the petroleum fuel is sold. For example, based on the data presented in Figures IV.D.2.d.i-1 and 3, an obligated party that sold fuel in July 2020 received approximately $0.06 per gallon more than it would have in the absence of the RFS program. If that obligated party delayed purchasing RINs until the end of 2020, the RIN cost would have

been approximately $0.10 per gallon. Conversely, if the obligated party had purchased excess RINs in January 2020, the RIN cost would have been approximately $0.03 per gallon. Thus, the decision to delay RIN purchases until December 2020 would have cost an obligated party an additional $0.04 per gallon of fuel produced in July 2020; whereas purchasing excess RINs in January 2020 would have resulted in an additional $0.03 per gallon profit for every gallon of fuel produced in July 2020. By purchasing RINs ratably, all obligated parties have the ability to match their RIN costs with the price they receive when they sell their fuel (i.e., to pass through their RIN costs).

Alternatively, refineries can try to time their purchases in the RIN market, which may result in greater or lesser RIN costs. EPA strongly disputes any notion that costs resulting from individual refinery's business decisions, including the choice to delay RIN procurement in hopes of receiving an SRE, or an attempt to time the transaction to profit from the fluctuation in the RIN market prices over time, represent DEH *caused by* the RFS program.

A number of small refineries have argued that, because the RFS program does not require RINs to be purchased ratably, EPA is obligated to provide hardship relief if purchasing RINs in any manner allowed under the RFS program would lead to a small refinery having a higher cost of compliance than other program participants. EPA does not agree that RFS program flexibilities, including those that allow refineries to choose when they acquire RINs, can be a basis for hardship relief. The purpose of the RFS program and the regulations EPA promulgated to implement it are to "ensure

that gasoline sold or introduced into commerce in the United States, [] on an annual basis, contains the applicable volume of renewable fuel."[201] Currently, these regulations require refineries to ensure that renewable fuel volumes equivalent to approximately 11-12 percent of their annual gasoline and diesel fuel production are entered into commerce. In accomplishing that program requirement, the industry as a whole accomplishes that product mix each day and month of the year with some small variation due to seasonal sales patterns for some fuels. In the absence of the RIN credit program, refineries would have to directly ensure renewable fuel blending. In such a program design, a small refinery could, under the annual compliance provisions, choose to delay any renewable fuel blending until the last month of the year and then attempt to sell exclusively renewable fuel in the last month of the year at a volume to meet the obligation it accrued through the preceding 11 months. Such an approach would almost certainly lead to a much higher cost of compliance than would have occurred had the small refinery worked to demonstrate compliance on an ongoing basis each month through the year. As alleged by small refinery commenters, EPA would then be compelled to provide hardship relief due to the higher cost of RFS compliance for the small refineries that chose such a compliance mechanism. Such an approach, where the business decisions of the individual companies are made within the regulations but contrary to the purpose of the program, does not constitute DEH *caused* by the cost of compliance with the RFS program, and therefore cannot be a basis for hardship relief. Otherwise, all small refineries could simply choose such

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[201] CAA section 211(*o*)(2)(A)(i).

an impossible compliance approach, and then, having made this choice, be assured of relief from the RFS obligations. Similarly, individual business decisions made by an obligated party not to ratably accrue RINs as their obligation accrues, but instead to either purchase RINs in advance or delay RIN purchases until a later date, are business choices that companies may lawfully make. However, as discussed in detail in Section III, EPA may not consider these individual business choices in determining if a small refinery faces DEH due to compliance with the RFS program. EPA addresses these and other similar comments on the Proposed Denial in Appendix B.

ii. Assessment of Data on the RIN Discount

To verify that fuel blenders are passing through the RIN discount to wholesale purchasers through the price of blended fuel as described by Equations 3 and 4, EPA considered information from a variety of sources, including the information received from commenters. We evaluated the issue by analyzing market pricing data for petroleum fuel, renewable fuel, RINs, and blended fuel (including data submitted by petitioners), statements from blenders in publicly-available earnings reports, and fuel pricing contracts submitted by petitioners. Each of these data sources support EPA's finding that revenue from RIN sales does not represent a windfall profit for fuel blenders. Rather, they demonstrate that blenders pass through the full value of the RIN to wholesale purchasers in discounts on the price of the blended fuel they sell and, therefore, do not retain any revenue from the sale of RINs. We address the information received from commenters on the Proposed De-

nial in Appendix B and in confidential, refinery-specific appendices to this action.

There are a limited number of markets where prices for each of these fuels are reported, but all of those we have evaluated confirm our conclusions that fuel blenders are passing through the RIN discount to wholesale purchasers through the price of blended fuel.[202] In 2015, EPA analyzed market data from Des Moines, Iowa and demonstrated that there was a very strong correlation between the difference in the posted price for E10 in Des Moines and the calculated E10 price based on the component fuels (gasoline blendstock and ethanol), and the RIN price per gallon of E10.[203] These data indicated that fuel blenders are selling blended fuel based on the net price of the renewable fuel (after accounting for the sale of any associated RINs). This means that the price of the blended fuel was lower than the cost to purchase the components of the fuel blend (gasoline blendstock and ethanol with a RIN) and that revenue from RIN sales offset these costs. The result of this pricing behavior is that 100% of the revenue from RIN sales was passed on to wholesale purchasers.

Prior to the issuance of the Proposed Denial, two petitioning small refineries submitted data to EPA on fuel prices in their markets that enabled EPA to analyze current data in additional markets using a methodology

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[202] This same point was raised in one small refinery's petition, along with data to illustrate it. The small refinery claimed its petition and all supporting information as CBI.

[203] *See* Burkholder memo.

similar to the analysis we conducted for Des Moines in 2015.[204]

Both parties claimed this data presented supported their claims of DEH. One petitioner used monthly gasoline and ethanol pricing data from a local terminal, along with RIN pricing data, to determine a monthly calculated E10 price from 2010 to the present using an equation nearly identical to Equation 2.[205] The petitioner then plotted these calculated E10 prices, which assume that 100% of the RIN value is passed through to wholesale purchasers through lower prices for blended fuel, against the posted prices for E10 at that same terminal. The petitioner found an extremely strong correlation (R2 = 0.9976) between the calculated E10 price (assuming 100% RIN passthrough) and the posted E10 price, demonstrating for this terminal that the RIN value has been fully passed through to wholesale purchasers since 2010.[206]

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[204] We do not present the data here because the petitioners have claimed it contains CBI.

[205] The only difference between Equation 2 and the equation used by the petitioner to determine the calculated E10 price was that the petitioner included an additional terminaling and throughput charge that applies regardless of the RFS program and is not relevant to this discussion.

[206] This petitioner acknowledged that the RIN was used to discount the price of blended fuel at their terminal. However, the petitioner further argued that the RIN cost could not be recovered in the cost of the gasoline and used to discount the price of the blended fuel. As discussed further in Section IV.D.2.c, both the economic principles and the market data demonstrate that this is incorrect. Refiners recover the cost of the RIN through the sales of their petroleum fuel and the RIN is used to discount the price of blended fuel.

Another petitioning small refinery's fuel pricing data allowed EPA to conduct a similar analysis for yet another market.[207] This petitioner provided daily pricing information for E10 from a local terminal, as well as daily pricing information for gasoline blendstock and ethanol from a nearby market along with the cost to transport these fuels to the petitioner's local market. Daily prices were provided from January 1, 2019, through June 21, 2021. EPA used the data to calculate an E10 price using Equation 2 and compared these calculated E10 prices (assuming the E10 price was based on the net price of the ethanol, passing through 100% of the RIN in the discounted price of E10) to the posted E10 prices at the local terminal. As with the data provided by the other petitioner, we again find an extremely strong correlation ($R2 = 0.9991$) between these two prices, further confirming our previous findings that the RIN price is fully passed through to wholesale purchasers as a discount on the price of the renewable fuel when petroleum fuel and renewable fuel are blended and then sold.

Support for EPA's finding that the RIN discount is fully reflected in the price of blended fuels and is accordingly passed through to wholesale purchasers by fuel blenders can also be found in public statements by the blenders themselves. Several parties directly involved in fuel blending supported EPA's findings in com-

[207] We do not present the data here because the petitioner has claimed it contains CBI.

ments[208] on EPA's Point of Obligation denial.[209] More recently, R. Andrew Clyde, President, CEO & Director of Murphy USA, a large fuel blender and retailer, was asked if the recent high RIN prices positively affected Murphy USA's margins in a Q1 2021 earnings report. He responded:

> The reality is RINs and RIN prices are immaterial to our business. Historically, and you can look back over the last 3 years annual results, we've made $0.02 to $0.03 per gallon on product supply and wholesale net of RINs. And so during the quarter on the average, we generated about the equivalent of $0.07 a gallon per RIN, but net of the negative spot to rack margins of $0.04, we netted a little bit over $0.03 . . . If RINs are high, the refiner gate price is high and like it was in this quarter, our refinery gate spot to rack margin is negative . . . So RIN prices don't matter. The product supply margin plus the RINs is going to be about $0.02 to $0.03.[210]

Mr. Clyde describes a market dynamic wherein blenders experience negative blending margins (due to competitive market forces requiring that the RIN price be reflected in the market price of blended fuel) that are

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[208] *See* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0014; Letter from QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028.

[209] 81 FR 83776 (November 22, 2016) and 82 FR 56779 (November 30, 2017).

[210] Murphy USA Inc. FQ1 2021 Earnings Call Transcripts (April 29, 2021).

offset by revenue from selling RINs, with total margins (including fuel blending and RIN sales) relatively stable and independent of RIN prices.[211] These dynamics are exactly what one would expect to see if blenders are passing through 100% of the RIN price as a discount to wholesale purchasers in the price of blended fuel.[212]

Several petitioning small refineries also provided EPA with examples of contracts for fuel sales.[213] While there were some differences among these contracts, they generally showed that the sales price for blended E10 was discounted by the value of the RIN associated with the ethanol blended into the fuel blend. Many of the pricing formulas shown in these contracts looked very similar to Equation 4, with some referencing petroleum fuel and/or ethanol prices in nearby markets and including transportation costs. In some cases, the contracts stipulated that the purchase price would be the lower of the calculated price based on the prices of the petroleum fuel and the net price of ethanol (thus passing through 100% of the RIN price to wholesale purchasers) or the posted price of E10 at the local terminal, whichever was lower. These contracts provide yet more evidence that the price of the RIN is reflected in the sales price for blended fuel, and further that the passthrough of the RIN price to wholesale purchasers is not limited to any particular market in the United States.

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[211] Petitioners' claims of "RIN theft" and windfall profits from RIN sales by Murphy USA and other blenders are further addressed in Section IV.D.2.a.

[212] *See supra*, Section IV.D.2.b.

[213] We do not present the contract data here because the petitioners have claimed it contains CBI.

3. EPA Responses to Small Refinery Arguments for Exemption

The petitioning small refineries raise many similar arguments in their petitions and in supplemental information they submitted to support receiving an exemption from their RFS obligations. Because these arguments are repeated by most, if not all, SRE petitioners, EPA is addressing them in this section at a level of generality needed to maintain the claims of CBI asserted by the small refineries in their respective petitions. The refineries generally argue eight overarching themes in their petitions and supplemental information. However, EPA recognizes that this list is not comprehensive. After reviewing the comments submitted in response to the Proposed Denial, EPA found that the small refineries repeated many of the same arguments that they had raised in the SRE petitions that were addressed in the Proposed Denial. To the extent that EPA addressed or responded to these assertions in the Proposed Denial, EPA has not responded to them again in Appendix B. EPA addresses the unique arguments raised by the small refineries in their comments on the Proposed Denial in Appendix B and in confidential, refinery-specific appendices to this action.

The general themes small refineries have articulated are: (a) They face unique challenges that prevent them from achieving RIN cost passthrough and that EPA must consider their specific circumstances; (b) EPA's Point of Obligation denial did not address their situations and does not apply to them; (c) The Point of Obligation denial is out of date and inapplicable; (d) The revenue from RIN sales allows large retailers to undercut small refineries; (e) Large integrated refiners set prices

in fuels markets, undercutting small refineries on price because of their market position and because large integrated refiners have lower or no RIN costs; (f) EPA is incorrect about parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market; (g) Single site refineries are disadvantaged relative to large integrated refiners because they only have access to a limited market; and (h) Small refineries that produce primarily diesel fuel are at a disadvantage since they cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

EPA evaluates and responds to each of these general themes below.

a. Small refineries face unique challenges that prevent them from passing through their RIN costs. EPA must consider each small refinery's specific situation.

Small refineries assert that "EPA must do more than cite to the Burkholder Report's conclusion 'that the refining industry *as a whole* is not burdened by rising RIN prices because refineries may pass that cost to purchasers of the blended fuel.' *Ergon-W. Va., Inc. v. EPA*, 896 F.3d 600, 613 (4th Cir. 2018) (emphasis added)."[214] The small refineries further assert that EPA has, in the past, ignored information specific to individual refineries that demonstrates that they cannot pass through the prices they pay for RINs due to unique operational or local market circumstances.

The small refineries misstate the holding from *EWV-I* and completely ignore the subsequent decision in

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[214] Confidential submissions by several small refineries made this assertion.

EWV-II. The court in *EWV-I* held that EPA had acted arbitrarily and capriciously when it "failed to squarely address Ergon's petition with regards to RIN costs"[215] and instead relied on the Burkholder memo "as the *sole basis* for its conclusion."[216] (emphasis added). The court found that EPA was not arbitrary and capricious in relying on the Burkholder memo as one of many factors considered in the decision, but rather, that it failed to adequately illustrate how the analysis in that study applied to the circumstances at a particular small refinery (Ergon-West Virginia). On remand, EPA reached the same conclusion as in its first decision and this action was also challenged by Ergon before the Fourth Circuit. The court, in *EWV-II*, reviewed EPA's post-remand denial, which again relied heavily on the Burkholder memo, and found that "EPA's post-remand discussion of Ergon's evidence connected the dots left unaddressed in its original decision[,]" because "EPA thoroughly discussed Ergon's purported evidence of hardship, explained why it rejected Ergon's arguments, and set out other factors that led it to reach an opposite conclusion."[217] Accordingly, in this final action, EPA has evaluated the question of RIN costs in depth for the petitions at issue, starting with an evaluation of the underlying structure of the RFS program and RIN system to ascertain whether and how it might be possible for compliance with the RFS program to cause DEH. EPA then conducted a careful analysis of how the cost and value of RINs would be expected to flow through to wholesale purchasers, and analyzed a substantial

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[215] *EWV-I*, 896 F3d at 613.

[216] *EWV-II*, 980 F.3d at 417, *rev'd on other grounds*.

[217] *Id.*

amount of data, including available local market-specific data, that show how the findings in the Burkholder memo regarding the refining industry as a whole are true for all obligated parties, including small refineries in general and individual small refineries whose SRE petitions are before the Agency in particular.[218] However, due to the confidential nature of much of the information included in SRE petitions, we are presenting overall findings here and are presenting our responses to any refinery-specific data in confidential, refinery-specific appendices to this action. We have reviewed the information in the SRE petitions and the suppmental information provided by small refineries in their comments, and nothing presented in them leads us to conclude that the small refineries are affected by RFS compliance differently than other obligated parties or that they are not able to pass along RFS compliance costs to wholesale purchasers.

The small refineries also state in their SRE petitions and in comments submitted on the Proposed Denial that there are many diverse factors that affect each refinery's profitability and ability to recover the full cost of fuel production, including their RFS compliance costs. The small refineries cite to the 2011 DOE Study to support their assertion, quoting the following language:

The degree to which the costs burdening small refineries will be passed through to the market depends on many factors, including the market power and the relative cost level of a small refiner relative to other market participants. . . . The cost for small refiners to comply with the RFS2 requirements can be substantial.

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[218] *See supra,* Section IV.D.2.

. . . Their limited product slates coupled with an inability to blend renewable fuels means that many of the small refiners must enter the market to buy RINs. The cost to meet their individual RVO makes this aspect the most significant cost of compliance.[219]

As explained in Section IV.D.2 and acknowledged by DOE, the 2011 DOE Study did not evaluate empirical evidence pertaining to RIN cost passthrough. Furthermore, DOE has concluded that, if EPA's assertion that the cost of compliance is the same whether refineries buy RINs or blend biofuels to acquire RINs is correct, and EPA's assertion that RFS compliance costs are passed through in the price of refined products is also correct, small refineries would not face a "high[er] cost of compliance relative to the industry average.[220]

The small refineries fail to acknowledge the fact that they may not be profitable or able to pass through the full cost of their fuel production *despite* their RIN costs being passed through. It is important to reiterate that independent market analyses, as well as EPA's own, support the premise that RIN costs are incorporated into the price of finished fuels.[221] This is to say that even *without* RFS compliance costs, these small refineries may not be profitable. This kind of economic hardship is not *caused* by the RFS program, but rather, by the refinery's business model, geographic location, business decisions, and/or other factors independent of the RFS program. The CAA only speaks in terms of DEH caused by compliance with the RFS program.

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[219] 2011 DOE Study at 22-23.

[220] *See* DOE Consultation Memo.

[221] *See supra*, Section IV.D.

Congress tied SREs to compliance with the RFS program by using the language "compliance with the requirements of paragraph (2) would impose a [DEH]"[222] and "would be subject to a [DEH] if required to comply with paragraph (2)."[223] The CAA does not authorize or require EPA to subsidize through compliance exemptions any refinery whose economic hardship is not caused by compliance with the RFS program no matter the seriousness of the economic conditions the refinery may face, particularly since the magnitude of the RIN cost per gallon in comparison to typical refinery margins could turn the least profitable refineries into the most profitable ones.[224]

Additionally, the DOE language the small refineries quote comes from the "[o]ther observations from the interview process,"[225] which DOE "compiled through interviews with several industry participants, including two refineries, three importers, a fuel marketer, and a corn ethanol marketer."[226] This section does not state DOE's own conclusions, but rather summarizes what DOE heard from the stakeholders it reached out to in 2011. This language cannot be treated as DOE's findings, but rather, DOE's statement of the input it solicited and considered. Moreover, even is this were a conclusion DOE made, it was based on an analysis that did not account for RIN cost passthrough.

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[222] CAA section 211(*o*)(9)(A)(ii)(I), paragraph (2) refers to the section where Congress provided the annual applicable renewable volume mandates.

[223] CAA section 211(*o*)(9)(A)(ii)(II).

[224] *See supra*, Section IV.D.2.b. *See also infra*, Section IV.D.3.e.

[225] 2011 DOE Study at 22.

[226] *Id.* at 21.

EPA believes the conclusions in the Burkholder memo are applicable to all gasoline and diesel fuel markets nationwide, and, therefore, also applicable to all refineries, including small refineries.[227] Nevertheless, some petitioning small refineries have provided refinery-specific information in comments submitted under claims of confidentiality, attempting to explain why the conclusions in the Burkholder memo do not apply to them. EPA has analyzed the supplemental information and found no evidence supporting the assertions from the petitioning small refineries that their RFS compliance costs are disproportionately greater than for other refineries or that they are not able to pass along their RFS compliance costs to wholesale purchasers.[228] In fact, the data petitioners provided to EPA reflected the price behavior for both RINs and finished fuels that EPA would have expected based on economic principles.[229] EPA responds to these comments in Appendix B and in confidential, refinery-specific appendices to this action. Additionally, other stakeholders with interest and expertise in RIN market behavior and RFS compliance have provided support for and approved of EPA's analysis and conclusions regarding RIN cost passthrough.[230]

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[227] *See supra*, Section IV.D.2.

[228] *See supra*, Section IV.D.2.

[229] *See supra*, Section IV.D.2.

[230] *See supra*, Section IV.D.2. *See also* Letter from RaceTrac to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0014; Letter from QuikTrip to Administrator McCarthy, August 17, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0013; Presentation from Murphy USA to EPA, August 16, 2016, Docket Item No. EPA-HQ-OAR-2016-0544-0028. *See also* comments from API on 2020 RFS Annual Rule, Docket Item No.

b. The small refineries' situations are distinguishable from the findings provided in the Point of Obligation denial, and the Point of Obligation denial did not address small refineries.

Petitioners claim that EPA's assessment of RIN cost passthrough in the Point of Obligation denial covered three categories of parties: integrated refiners, non-obligated fuel blenders, and merchant refiners. The petitioners note that small refineries as a group do not fit neatly within any of these categories. They further claim that EPA's conclusions about merchant refiners' ability to recover their RIN costs were based on representations from Valero, which they note is a large, international refiner with efficiency, geographic range, and pricing power. The petitioners state that while these types of merchant refiners may be able to recover the cost of purchased RINs, small refineries without these characteristics cannot.

EPA recognizes that few, if any, small refineries (or any refineries) fit neatly into a single category of integrated refiner, non-obligated blender, and merchant refiner.[231] Rather, we explain that refiners, whether large or small, may operate as an integrated refiner, non-obligated blender, and/or a merchant refiner in various fuels markets and in different aspects of their business operations. EPA demonstrates that because both the

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EPA-HQ-OAR-2019-0136-0721. *See also* comments from Chevron, API, BP, Shell, and Citgo on EPA's Proposed Denial, available in the docket for this action (EPA-HQ-OAR-2021-0566-0029 (Chevron), EPA-HQOAR-2021-0566-0031 (API), EPA-HQ-OAR-2021-0566-0033 (BP), EPA-HQ-OAR-2021-0566-0036 (Shell), EPAHQ-OAR-2021-0566-0042 (Citgo)).

[231] *See supra*, Section IV.D.2.c.

RIN cost and the RIN discount are ultimately passed through to wholesale purchasers for all three categories, the RFS program does not advantage or disadvantage any of these parties over the others, regardless of how much of their operations fall into one or more of these categories. Importantly, a small refinery's ability to recover its RIN costs in the price of the fuel it produces does not depend on factors such as geographic range or pricing power.[232] Instead, the data and analysis EPA presents demonstrate that the market prices for both refined products and blended fuel reflect the cost of acquiring the RINs necessary to satisfy the RFS obligation associated with the fuel. Merchant refiners do not need to exercise market power and demand a price that is higher than the market price to recover their RIN costs; all parties selling into these competitive markets are recovering the cost of acquiring RINs when they sell their fuel at the market price. Thus, although size and market power can be an advantage for reasons other than RFS compliance, they provide no advantage to non-small refineries in recovering their RFS compliance costs.

c. EPA's assessment in the 2017 Point of Obligation Denial is out of date and not applicable.

Many petitioners state that EPA could not rely on the conclusions of the assessment conducted in 2017 in the context of the Point of Obligation denial to evaluate their recent petitions. The petitioners state that the information considered in 2017 is now out of date and does not reflect the present realities of the fuels market.

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[232] *See infra*, Section IV.D.3.e.

We believe that the analyses conducted in 2017 continue to inform our understanding of the ways in which the RFS program affects small refineries and other fuels market participants. The fact that the data reviewed in 2017 were consistent with what would be expected based on the design of the RFS program with its RIN system and economic principles is strong evidence that it is highly unlikely that the RFS program will cause DEH, and is strong evidence that the conclusions in that action remain true today. Our finding in that decision that the fuels market operates as we would expect in a competitive market remains relevant. As long as the fuels and RIN markets remain competitive, we do not anticipate that the RFS program will cause DEH on small refineries.

Nevertheless, in this decision, we have considered more recent data since 2017—including the additional data the small refinery petitioners themselves submitted in their SRE petitions and in comments on the Proposed Denial—and we find that the more recent data are consistent with the data EPA reviewed in 2017.[233] These data continue to support our finding that both the RIN cost and the RIN discount are passed through to wholesale purchasers and continue to show that the RIN market works in the same way for all market participants, including individual small refineries.

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[233] The data, and the conclusions we have drawn from the more recent data, are presented in Section IV.D.2.d. and our responses to the public comments are provided in Appendix B. Responses to refinery-specific information are provided in confidential, refinery-specific appendices to this action.

d. Revenue from RIN sales allows large retailers to undercut small refineries.

Petitioners claim that EPA had not considered clear evidence that revenue from RIN sales enabled large retailers such as Murphy USA to undercut the small refineries they compete with that are unable to sell RINs for a profit. The petitioners argue that large retailers (which are generally not obligated parties) can sell blended fuel at a lower cost than the cost of the petroleum fuel and renewable fuel they are composed of because of the revenue they receive by selling RINs. Small refineries must price their blended fuel at the same price as large retailers to be competitive, but they do not receive the benefit of revenue from RIN sales.

Contrary to the petitioners' claims, EPA has considered the ability for non-obligated blenders to sell RINs and to use the RIN sales revenue to discount the price of blended fuel while remaining profitable.[234] We present an illustrative example of how RIN prices affect integrated refiners (which is the role small refineries are taking in the fuels market when they are blending the petroleum fuel they produce with renewable fuel) and non-obligated blenders in Section IV.D.2.c. As shown in Tables IV.D.2.c-2 and 4, neither integrated refiners nor non-obligated blenders benefit from, or are harmed by, higher RIN prices.

The petitioners' description of blenders using revenue from RIN sales to enable them to offer lower prices for the blended fuel they sell is consistent with EPA's findings (i.e., the RIN discount).[235] We also recognize

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[234] *See supra*, Section IV.D.2.

[235] *See supra*, Section IV.D.2.

that competitive forces require small refineries selling blended fuel to sell at the market price (which reflects the passthrough of the RIN price as a discount to wholesale purchasers). In their claims about the advantages that the RFS program provides to non-obligated blenders, however, the petitioners have not considered the impact of RIN prices on the market price for fuels.

When small refineries produce and sell blended fuel from the petroleum fuel they produce, they are acting as integrated refiners for that volume of fuel. Generally speaking, integrated refiners are not able to sell the RINs associated with the renewable fuel they blend, as they need these RINs to meet their RFS obligations. But unlike non-obligated blenders, integrated refiners do not typically purchase petroleum fuel to produce blended fuel; instead, they are producing the petroleum fuel themselves. This means that for an integrated refiner, the cost of the petroleum fuel is not the market price for these products (which reflects the marginal cost of production of the fuels plus the cost of purchasing the RINs needed to satisfy the RFS obligation associated with the fuel), but rather simply the cost of production for the petroleum diesel fuel. The lower cost of the petroleum fuel relative to the market price for these products allows the integrated refiner to price its blended fuel competitively with non-obligated blenders and still maintain a positive margin for producing blended fuel even though they do not realize revenue from RIN sales.[236]

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[236] A further description of the impact of the RFS program on merchant refiners, integrated refiners, and nonobligated blenders is provided in Section IV.D.2.c.

Both the economic principles and the data EPA reviewed support our finding that the RFS program does not advantage non-obligated blenders over integrated refiners. While RIN sales provide an additional source of revenue for non-obligated blenders, this is offset by the higher price (which reflects the RIN cost) for the petroleum fuel that the blenders pay to merchant refiners to produce blended fuel. Integrated refiners, which are producing petroleum fuel rather than purchasing them at the market price, have access to lower cost petroleum fuel but do not realize revenue from RIN sales. Thus, while the RFS program impacts these parties in different ways, neither enjoys an advantage or disadvantage over the other.

e. Large integrated refiners set the prices in fuels markets, undercutting small refineries on price because of their market position and because the large, integrated operations have no or lower RIN costs.

Petitioners claim that they compete in markets with large integrated refiners, and that they have no market pricing power relative to these parties. Petitioners also state that, because these large integrated refiners have no or lower RIN costs, they are able to undercut small refineries when they price their product. They further note several other advantages that large integrated refiners have relative to small refineries, such as a broader range of assets, economies of scale, and access to more fuels markets (including exports). We address each of these points in turn.

The market for gasoline and diesel fuel in the United States is extremely competitive.[237] EPA's finding that

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[237] *See supra*, Section IV.D.2.

merchant refiners are able to pass through their RIN costs through higher market prices for the fuel they produce does not depend on merchant refiners having market pricing power in the markets where they sell fuel. Rather, we find that the market price for fuel reflects the RIN value, and therefore all parties in all markets that sell fuel recover their RIN costs when they sell their fuel (RIN cost passthrough).

In Section IV.D.2.c, EPA presented an example of the impact of higher RIN prices on merchant refiners, integrated refiners, and non-obligated blenders, and discussed the impact on each of these parties. In short, integrated refiners spend less money to purchase RINs than merchant refiners; unlike the non-obligated blenders they are competing with in the blended fuels market (i.e., large fuel retailers without refining or import businesses), they do not benefit from revenue from RIN sales. Merchant refiners do benefit from the higher market prices for gasoline and diesel fuel that are the result of higher RIN prices, but they must use this additional revenue to purchase RINs. Said another way, there is an opportunity cost when these integrated refiners blend renewable fuel with the petroleum fuel they produce instead of selling it unblended, as these parties sell blended fuel for a lower price than they could sell the petroleum fuel. This opportunity cost is equal to the savings these parties experience from acquiring RINs by blending renewable fuel rather than purchasing separated RINs.

The many factors mentioned by the petitioners, such as a broader range of assets (upstream, downstream, etc.), economy of scale, and access to more fuels markets, may in fact provide a competitive advantage to

large integrated refiners. However, the fact that small refineries have continued to remain in the marketplace and compete with large integrated refiners is evidence of the fact that small refineries typically have other market advantages, such as access to local crude supplies and local markets lowering their distribution costs, specialty products, and niche markets with fewer competitors. None of these market advantages and disadvantages are the result of the RFS program. Each of these factors offered potential advantages (and potential liabilities) before the RFS program existed and continue to do so today. The petitioners have not presented any evidence, nor is EPA aware of any evidence, that would suggest that the RFS program has exacerbated any of the advantages large integrated refiners may have over small refineries.[238] In other words, the competitiveness of small refineries in the fuels market, be it favorable or unfavorable, does not change as a result of RFS compliance obligations.

On the other hand, granting SREs has provided small refineries a unique and significant competitive advantage. When small refineries are exempted from their RFS obligations, they continue to sell their petroleum fuel at the market price, which reflects the RIN cost via RIN cost passthrough. Thus, exempted small refineries recover the cost of the RINs (receive RIN revenue) through their product sales, but do not have

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[238] EPA acknowledges that the Tenth Circuit in *Sinclair* found that Congress may have understood large integrated refiners to have certain advantages, and EPA has cited that decision itself in support of its prior approach to SRE decisions. *Sinclair* at 989. However, as noted, EPA does not believe that the available evidence supports the conclusion that small refineries are structurally disadvantaged by the RFS program itself.

any RIN costs when they are granted an exemption. The number of small refineries receiving exemptions, the total volume of gasoline and diesel fuel exempted, the total value of the exemptions, and the value of the exemptions on a per gallon basis are shown in Table IV.D.3.e-1. This table also shows the average net refining margins (an indicator of profitability) for the exempted small refineries, for comparison with the value of the exemptions. The value of the exemptions is typically significant relative to the average net refining margin. For all exemptions granted from 2013 through 2018, the average value of the exemptions (6.76 cents per gallon) was approximately 64% of the average net refining margin of the exempted refineries (10.61 cents per gallon).[239] Any exemptions granted in 2022 would likely be of even greater value since current RIN prices, and therefore the current RIN cost per gallon of fuel produced, are higher than RIN prices when the exemptions for 2013-2018 were granted.

[239] The 31 remanded 2018 SRE petitions that were initially granted, but are now being denied in this action, are included in these calculations.

Table IV.D.3.e-1: Value of SREs (2013-2018)

Year	Number of Grants Issued	Volume of Gasoline and Diesel Fuel Exempted (billion gallons)	Total Value of the Exemptions ($ Million)[240]	Value of Exemptions (¢ per gallon)	Average Net Refining Margin for Exempted Refineries (¢ per gallon)[241]
2013	8	1.98	118	5.98	-0.65
2014	8	2.30	105	4.57	4.98
2015	7	3.07	171	5.57	12.05
2016	19	7.84	676	8.63	2.11
2017	35	17.05	1,459	8.56	11.76
2018	31	13.42	558	4.16	17.00
Total	108	45.66	3,088	6.76	10.61

f. EPA's conclusion that there is parity between the cost of obtaining a RIN through blending and the cost of buying a RIN on the market is incorrect. It costs much more to buy RINs, which many small refineries must do.

Several petitioners note that EPA's analyses are based on the assertion that the cost of obtaining a RIN through blending and the cost of purchasing a RIN is the same, and that this assertion is unfounded. To support this claim, the petitioners note that the cost to purchase RINs increased significantly in recent years, and that the cost to purchase RINs was much greater than the cost to blend renewable fuel. The petitioners further state that if there was no cost advantage to blend-

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[240] Based on annual average RIN prices calculated by EPA from OPIS data for D3, D4, D5 and D6 RINs.

[241] EPA often grants exemptions in the year(s) following the year for which an exemption is requested. Because of this time lag, refineries sometimes financially account for the value of their exemption in the following year(s). Thus, the value of the exemptions for some refineries may be included in the net refining margin for the following year(s). For example, EPA granted some 2013 exemption in 2014 or later years, so the value of some 2013 exemptions may be included in financial statements for 2014 or later.

ing then there would be no reason for non-obligated parties to continue blending. Rather, these parties would stop blending if they could not recoup the loss by selling the RINs on the market.

We are aware that RIN prices increased significantly recently and we extended our analysis of the impact of RIN prices on the fuels market through the end of 2020 to determine whether our previous findings on RIN cost passthrough were supported by more recent data.[242] We concluded that all the data available to EPA, including data submitted by the petitioners and data received in comments on the Proposed Denial, continue to support EPA's findings on RIN cost passthrough. EPA responds to the information received in comments in Appendix B and in confidential, refinery-specific appendices to this action.

EPA's finding that there is parity between the cost to obtain a RIN through blending and the price to purchase a RIN is not an unsubstantiated assertion. Rather, it is strongly supported by both economic principles and fuels market data. As stated previously, the market for blended fuel is highly competitive. If the cost of obtaining a RIN by blending renewable fuel was lower than the market price for a RIN, we would expect to see new blenders enter the market and/or existing blenders increasing their blending to capitalize on this profit opportunity. This activity would result in an increase in the supply of RINs for sale until the demand price for a RIN was equal to the cost of obtaining a RIN through blending. Competitive market situations where the sales price of a good is appreciably higher

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[242] *See supra*, Section IV.D.2.

than the cost to produce a good are short-lived, as market participants will increase production to take advantage of this opportunity until the supply price and demand price are equal.

The market data EPA reviewed support this finding as well.[243] The cost to obtain a RIN by blending renewable fuel is not simply the fixed and operating costs for fuel blending (which are relatively minor), nor is it simply the price difference between renewable fuel and the petroleum fuel into which they are blended (e.g., the price difference between ethanol and gasoline or between biodiesel and diesel fuel). Instead, the cost to a blender to obtain a RIN is the price difference between the cost of the petroleum fuel (e.g., gasoline or diesel fuel) and the renewable fuel used to produce blended fuel and the sales price of the blended fuel (e.g., E10 or B5). The data presented in Section IV.D.2.d demonstrate that the difference between the cost of the petroleum fuel and the renewable fuel used to produce blended fuel and the sales price of the blended fuel is equal to the market price for the RINs associated with the blended fuel.[244]

The finding that there is parity between the cost of obtaining RINs by blending renewable fuel and purchasing RINs does not mean that RINs do not provide an incentive for the blending of renewable fuel. While blending renewable fuel does not result in windfall profits for blenders (since the revenue from RIN sales is passed through to wholesale purchasers in a discount on the price for blended fuel), RIN revenue lowers the ef-

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[243] *See supra*, Section IV.D.2.d.

[244] *See supra*, Figures IV.D.2.c-2 and 4.

fective cost of renewable fuel, allowing blenders to offer blended fuel containing renewable fuel at lower prices. The examples presented in Section IV.D.2.c illustrate this point. In the E10 blending example (Table IV.D.2.c-1), the price of the gasoline is $1.44 per gallon and the price of ethanol is $1.50 per gallon, which is higher than the price of the gasoline. However, the RIN discount allows E10 to sell for $1.37 per gallon, which is lower than the price of the gasoline (line 2-6 from Table IV.D.2.c-2). Similarly, in the B5 blending example (Table IV.D.2.c-3), the price for ULSD is $1.48 and the price for biodiesel is $3.66. Here again the RIN revenue, when combined with the federal tax credit, allows B5 to sell for a lower price ($1.46 from line 4-7 in Table IV.D.2.c-4) than the price of diesel fuel. Fuel buyers are extremely sensitive to prices. The incentive for blenders to continue to blend renewable fuel when there is parity between the cost of obtaining a RIN through blending and the cost to purchase a RIN is not that the revenue from the sale of the RIN represents a windfall profit, but rather that the RIN discount allows blended fuel to sell at a lower (competitive) price relative to unblended fuel after passing through the revenue of the RIN sales to the wholesale purchaser. A fuel blender that declined to offer the cheaper E10, instead selling only more expensive E0, would quickly find itself at a substantial disadvantage in the highly competitive gasoline market. The blenders are themselves likely indifferent to offering E10 or E0, only seeking to offer the mix of fuel products their customers demand based on the price and value of the fuel blends.

g. Single-site refineries only have access to a limited market and are therefore at a disadvantage relative to large integrated refiners.

Several petitioners claim that because they own a single refinery and have access to limited markets for their fuels, they are at a disadvantage compared to large integrated refiners. The petitioners claim that because of their size, they cannot set the market price in such a way as to recover their RIN costs, nor can they sell their fuel into other markets if their local market prices are unfavorable.

As previously discussed, a refiner's ability to recover its RIN costs does not depend on the refiner's ability to set the market price for the fuel it produces.[245] Rather, because all parties have the same cost to acquire RINs, whether they acquire RINs through blending renewable fuel or by purchasing RINs, the market price for all gasoline and diesel fuel reflects the cost of the RINs.

We are aware that the economics of refining crude oil to produce transportation fuel changes over time, and that some fuels markets vary in their profitability relative to other markets. At times it can be an advantage to be in limited markets, and at other times not. Refiners with better access to pipelines and other low-cost ways to transport the fuel they produce are better positioned to react to changes in market dynamics, whether these changes are positive, negative, short-term, or long-term in nature. These varying circumstances, and any hardship they might cause to small refineries, are

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[245] *See supra*, Sections IV.D.2 and IV.D.3.e.

independent of and not caused by compliance with the RFS program.

We received claims of disadvantage from small refineries in isolated markets where they were the main supplier of fuel, from small refineries in markets readily accessible to many other refineries, and from small refineries in every situation in-between. The identical claims from such a broad diversity of refinery situations demonstrates that a small refinery's market has nothing to do with potential impacts from the RFS program. As a result of the nationwide RIN trading program, all refineries have equal access to the RINs they need for compliance with the RFS program and at the same nationwide price.

h. Refineries that produce primarily diesel fuel are at a disadvantage since they generally cannot blend as much renewable fuel into their product as can refineries that produce gasoline.

The claim that small refineries producing a disproportionately high amount of diesel fuel, relative to the amount of gasoline produced, suffer DEH from the RFS program presumes that parties that acquire RINs by blending renewable fuel do so at a lower cost than parties that purchase RINs. These small refineries generally assert that their ability to acquire RINs by blending biodiesel or renewable diesel is limited relative to their competitors that have the ability to blend greater quantities of ethanol into the gasoline they produce.

As previously discussed, all parties have the same cost to acquire RINs, whether they do so by blending

renewable fuel or by purchasing RINs.[246] A party's cost of acquiring RINs, therefore, is unrelated to its ability to blend renewable fuel. Further, it is not necessarily the case that greater quantities of renewable fuel can be blended into gasoline relative to diesel fuel. With the exception of very small quantities of higher-level ethanol blends such as E15 and E85, blending of ethanol into gasoline is limited to 10% by volume. Conversely, many parties regularly sell diesel fuel blended with up to 20% biodiesel or renewable diesel.[247] Parties blending 20% biodiesel or renewable diesel into diesel fuel would acquire more RINs than parties blending 10% ethanol into gasoline, especially after accounting for the higher equivalence values of biodiesel and renewable diesel.

V. Alternative Compliance Demonstration Approach

In a separate, concurrent action,[248] EPA is providing an alternative approach to demonstrating compliance for the 31 small refineries whose 2018 SRE petitions were originally granted and are now being denied after remand. As explained in the Compliance Action, there is a unique confluence of events driving EPA's conclusion that an alternative compliance demonstaration approach is necessary in order to address RIN market constraints and ensure RFS program integrity. The Compliance Action is separate and addresses only the

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[246] *See supra*, Sections IV.D.2 and IV.D.3.f.

[247] *See*, e.g., diesel fuel offerings by Pilot Flying J—the largest diesel fuel retailer in the United States—available at https://pilotflyingj.com/fuel-prices.

[248] "April 2022 Alternative RFS Compliance Demonstration Approach for Certain Small Refineries," EPA-420-R-22-006, April 2022 (hereinafter the "Compliance Action").

compliance demonstration required subsequent to this final decision to adjudicate the 31 aforementioned 2018 SRE petitions. The Compliance Action does not address any findings of DEH, as those determinations are made only within this final decision.

VI. Denial of Petitions and Judicial Review

Section 211(*o*)(9)(B) of the CAA and 40 CFR 80.1441(e)(2) give EPA the authority to grant an SRE petition only when a small refinery demonstrates it is experiencing DEH caused by compliance with the RFS program. Based on our detailed evaluation, careful consideration of all the available information, review of all the additional data and information submitted in comments on the Proposed Denial, consultation with DOE, and consideration of the DOE study and other economic factors, EPA finds that none of the 36 pending 2018 SRE petitions have demonstrated DEH caused by the cost of compliance with the requirements of the RFS program.

The market-based design of the RFS program and the RIN-based compliance system have equalized the cost of compliance among all market participants, such that no refinery would face DEH from its RFS obligations.[249] We have evaluated an extensive amount of data and available information and have concluded that the cost of RINs is the same for all obligated parties, whether the RINs are acquired by blending renewable fuel or by buying them on the market.[250] Hence, small refineries do not face a disproportionate cost of compliance when compared to other refineries, or to each

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[249] *See supra*, Section II.B.

[250] *See supra*, Section IV.D.2.

other. Our analysis further shows that the costs of RFS compliance (i.e., RINs) are passed through in the prices of refined products. Hence, in recovering their RIN costs, refineries do not face economic hardship due to compliance with the RFS program. Finding no disproportionate cost of compliance and no economic hardship due to the RFS program, we conclude that small refineries do not face DEH. As such, EPA finds that compliance with the RFS program does not impose DEH on small refineries and, accordingly, is denying 36 pending SRE petitions in this final action.

Section 307(b)(1) of the CAA governs judicial review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the United States Court of Appeals for the District of Columbia Circuit: (i) when the agency action consists of "nationally applicable . . . final actions taken by the Administrator," or (ii) when such action is locally or regionally applicable, but "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination." For locally or regionally applicable final actions, the CAA reserves to the EPA complete discretion whether to invoke the exception in (ii) described in the preceding sentence.

This final action is "nationally applicable" within the meaning of CAA section 307(b)(1). In the alternative, to the extent a court finds this final action to be locally or regionally applicable, the Administrator is exercising the complete discretion afforded to him under the CAA to make and publish a finding that this action is based on a determination of "nationwide scope or effect" with-

in the meaning of CAA section 307(b)(1).[251] This final action denies 36 SRE petitions for exemptions from the RFS program for over 30 small refineries across the country and applies to small refineries located within 18 states in 7 of the 10 EPA regions and in 8 different federal judicial circuits.[252] This final action is based on EPA's revised interpretation of the relevant CAA provisions and the RIN discount and RIN cost passthrough principles that are applicable to all small refineries no matter the location or market in which they operate. For these reasons, this final action is nationally applicable or, alternatively, the Administrator is exercising the complete discretion afforded to him by the CAA and hereby finds that this final action is based on a determination of nationwide scope or effect for purposes of CAA section 307(b)(1) and is hereby publishing that finding in the Federal Register.

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Cir-

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[251] In deciding whether to invoke the exception by making and publishing a finding that this final action is based on a determination of nationwide scope or effect, the Administrator has also taken into account a number of policy considerations, including his judgment balancing the benefit of obtaining the D.C. Circuit's authoritative centralized review versus allowing development of the issue in other contexts and the best use of Agency resources.

[252] In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. See H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03.

cuit within 60 days from the date notice of this final action is published in the *Federal Register*.

This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking. This action is immediately effective upon issuance.

APPENDIX D

UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

No. 23-60266

CALUMET SHREVEPORT REFINING, L.L.C.;
PLACID REFINING COMPANY, L.L.C.;
ERGON REFINING, INCORPORATED;
WYNNEWOOD REFINING COMPANY, L.L.C.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

CONSOLIDATED WITH

No. 22-60425

WYNNEWOOD REFINING COMPANY, L.L.C.;
CALUMET SHREVEPORT REFINING, L.L.C.;
SAN ANTONIO REFINERY, L.L.C.; PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

CONSOLIDATED WITH

No. 22-60433

ERGON REFINING, INCORPORATED;
ERGON-WEST VIRGINIA, INCORPORATED, PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, RESPONDENT

CONSOLIDATED WITH

No. 22-60434

PLACID REFINING COMPANY, L.L.C., PETITIONER

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, RESPONDENT

Filed: Jan. 22, 2024

Petition for Review of an Order of the Environmental Protection Agency
Agency No. 87 Fed. Reg. 24300
Agency No. EPA-420-R-22-011
Agency No. 87 Fed. Reg. 34873
Agency No. 87 Fed. Reg. 34873
Agency No. 87 Fed. Reg. 34873

ON PETITIONS FOR REHEARING AND REHEARING EN BANC

Before HIGGINBOTHAM, SMITH, and ELROD, *Circuit Judges*.

PER CURIAM:

The petitions for panel rehearing are DENIED. Because no member of the panel or judge in regular active service requested that the court be polled on re-

hearing en banc (FED. R. APP. P. 35 and 5th Cir. R. 35), the petitions for rehearing en banc are DENIED.

APPENDIX E

1. 42 U.S.C. 7545(*o*) provides:

Regulation of fuels

(*o*) Renewable fuel program

(1) Definitions

In this section:

(A) Additional renewable fuel

The term "additional renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in home heating oil or jet fuel.

(B) Advanced biofuel

(i) In general

The term "advanced biofuel" means renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.

(ii) Inclusions

The types of fuels eligible for consideration as "advanced biofuel" may include any of the following:

(I) Ethanol derived from cellulose, hemicellulose, or lignin.

(II) Ethanol derived from sugar or starch (other than corn starch).

(III) Ethanol derived from waste material, including crop residue, other vegetative waste material, animal waste, and food waste and yard waste.

(IV) Biomass-based diesel.

(V) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass.

(VI) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass.

(VII) Other fuel derived from cellulosic biomass.

(C) Baseline lifecycle greenhouse gas emissions

The term "baseline lifecycle greenhouse gas emissions" means the average lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

(D) Biomass-based diesel

The term "biomass-based diesel" means renewable fuel that is biodiesel as defined in section 13220(f) of this title and that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for com-

ment, that are at least 50 percent less than the baseline lifecycle greenhouse gas emissions. Notwithstanding the preceding sentence, renewable fuel derived from co-processing biomass with a petroleum feedstock shall be advanced biofuel if it meets the requirements of subparagraph (B), but is not biomass-based diesel.

(E) Cellulosic biofuel

The term "cellulosic biofuel" means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emissions, as determined by the Administrator, that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

(F) Conventional biofuel

The term "conventional biofuel" means renewable fuel that is ethanol derived from corn starch.

(G) Greenhouse gas

The term "greenhouse gas" means carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons,[9] sulfur hexafluoride. The Administrator may include any other anthropogenically-emitted gas that is determined by the Administrator, after notice and comment, to contribute to global warming.

(H) Lifecycle greenhouse gas emissions

The term "lifecycle greenhouse gas emissions" means the aggregate quantity of greenhouse gas

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[9] So in original. The word "and" probably should appear.

emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.

(I) Renewable biomass

The term "renewable biomass" means each of the following:

(i) Planted 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.

(ii) Planted trees and tree residue from actively managed tree plantations on non-federal[10] land cleared at any time prior to December 19, 2007, including land belonging to an Indian tribe or an Indian individual, that is held in trust by the United States or subject to a restriction against alienation imposed by the United States.

(iii) Animal waste material and animal byproducts.

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[10] So in original. Probably should be "non-Federal".

(iv) Slash and pre-commercial thinnings that are from non-federal[10] forestlands, including forestlands belonging to an Indian tribe or an Indian individual, that are held in trust by the United States or subject to a restriction against alienation imposed by the United States, but not forests or forestlands that are ecological communities with a global or State ranking of critically imperiled, imperiled, or rare pursuant to a State Natural Heritage Program, old growth forest, or late successional forest.

(v) Biomass obtained from the immediate vicinity of buildings and other areas regularly occupied by people, or of public infrastructure, at risk from wildfire.

(vi) Algae.

(vii) Separated yard waste or food waste, including recycled cooking and trap grease.

(J) Renewable fuel

The term "renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel.

(K) Small refinery

The term "small refinery" means a refinery for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

(L) Transportation fuel

The term "transportation fuel" means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels).

(2) Renewable fuel program

(A) Regulations

(i) In general

Not later than 1 year after August 8, 2005, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains the applicable volume of renewable fuel determined in accordance with subparagraph (B). Not later than 1 year after December 19, 2007, the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, determined in accordance with subparagraph (B) and, in the case of any such renewable fuel produced from new facilities that commence construction after December 19, 2007, achieves at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

(ii) Noncontiguous State opt-in

(I) In general

On the petition of a noncontiguous State or territory, the Administrator may allow the renewable fuel program established under this subsection to apply in the noncontiguous State or territory at the same time or any time after the Administrator promulgates regulations under this subparagraph.

(II) Other actions

In carrying out this clause, the Administrator may—

(aa) issue or revise regulations under this paragraph;

(bb) establish applicable percentages under paragraph (3);

(cc) provide for the generation of credits under paragraph (5); and

(dd) take such other actions as are necessary to allow for the application of the renewable fuels program in a noncontiguous State or territory.

(iii) Provisions of regulations

Regardless of the date of promulgation, the regulations promulgated under clause (i)—

(I) shall contain compliance provisions applicable to refineries, blenders, distributors, and importers, as appropriate, to en-

sure that the requirements of this paragraph are met; but

(II) shall not—

(aa) restrict geographic areas in which renewable fuel may be used; or

(bb) impose any per-gallon obligation for the use of renewable fuel.

(iv) Requirement in case of failure to promulgate regulations

If the Administrator does not promulgate regulations under clause (i), the percentage of renewable fuel in gasoline sold or dispensed to consumers in the United States, on a volume basis, shall be 2.78 percent for calendar year 2006.

(B) Applicable volumes

(i) Calendar years after 2005

(I) Renewable fuel

For the purpose of subparagraph (A), the applicable volume of renewable fuel for the calendar years 2006 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2006	4.0
2007	4.7

2008	9.0
2009	11.1
2010	12.95
2011	13.95
2012	15.2
2013	16.55
2014	18.15
2015	20.5
2016	22.25
2017	24.0
2018	26.0
2019	28.0
2020	30.0
2021	33.0
2022	36.0

(II) Advanced biofuel

For the purpose of subparagraph (A), of the volume of renewable fuel required under subclause (I), the applicable volume of advanced biofuel for the calendar years 2009 through 2022 shall be determined in accordance with the following table:

Calendar year:	**Applicable volume of advanced biofuel (in billions of gallons):**
2009	0.6
2010	0.95

2011	1.35
2012	2.0
2013	2.75
2014	3.75
2015	5.5
2016	7.25
2017	9.0
2018	11.0
2019	13.0
2020	15.0
2021	18.0
2022	21.0

(III) Cellulosic biofuel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of cellulosic biofuel for the calendar years 2010 through 2022 shall be determined in accordance with the following table:

Calendar year:	**Applicable volume of cellulosic biofuel (in billions of gallons):**
2010	0.1
2011	0.25
2012	0.5
2013	1.0
2014	1.75

2015	3.0
2016	4.25
2017	5.5
2018	7.0
2019	8.5
2020	10.5
2021	13.5
2022	16.0

(IV) Biomass-based diesel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of biomass-based diesel for the calendar years 2009 through 2012 shall be determined in accordance with the following table:

Calendar year:	**Applicable volume of biomass-based diesel (in billions of gallons):**
2009	0.5
2010	0.65
2011	0.80
2012	1.0

(ii) Other calendar years

For the purposes of subparagraph (A), the applicable volumes of each fuel specified in the tables in clause (i) for calendar years after the calendar years specified in the tables shall be determined by the Administrator, in coordina-

tion with the Secretary of Energy and the Secretary of Agriculture, based on a review of the implementation of the program during calendar years specified in the tables, and an analysis of—

(I) the impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;

(II) the impact of renewable fuels on the energy security of the United States;

(III) the expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category (cellulosic biofuel and biomass-based diesel);

(IV) the impact of renewable fuels on the infrastructure of the United States, including deliverability of materials, goods, and products other than renewable fuel, and the sufficiency of infrastructure to deliver and use renewable fuel;

(V) the impact of the use of renewable fuels on the cost to consumers of transportation fuel and on the cost to transport goods; and

(VI) the impact of the use of renewable fuels on other factors, including job creation, the price and supply of agricultural commodities, rural economic development, and food prices.

The Administrator shall promulgate rules establishing the applicable volumes under this clause no later than 14 months before the first year for which such applicable volume will apply.

(iii) Applicable volume of advanced biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of advanced biofuel shall be at least the same percentage of the applicable volume of renewable fuel as in calendar year 2022.

(iv) Applicable volume of cellulosic biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of cellulosic biofuel established by the Administrator shall be based on the assumption that the Administrator will not need to issue a waiver for such years under paragraph (7)(D).

(v) Minimum applicable volume of biomass-based diesel

For the purpose of making the determinations in clause (ii), the applicable volume of biomass-based diesel shall not be less than the applicable volume listed in clause (i)(IV) for calendar year 2012.

(3) Applicable percentages

(A) Provision of estimate of volumes of gasoline sales

Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.

(B) Determination of applicable percentages

(i) In general

Not later than November 30 of each of calendar years 2005 through 2021, based on the estimate provided under subparagraph (A), the Administrator of the Environmental Protection Agency shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met.

(ii) Required elements

The renewable fuel obligation determined for a calendar year under clause (i) shall—

(I) be applicable to refineries, blenders, and importers, as appropriate;

(II) be expressed in terms of a volume percentage of transportation fuel sold or in-

troduced into commerce in the United States; and

(III) subject to subparagraph (C)(i), consist of a single applicable percentage that applies to all categories of persons specified in subclause (I).

(C) Adjustments

In determining the applicable percentage for a calendar year, the Administrator shall make adjustments—

(i) to prevent the imposition of redundant obligations on any person specified in subparagraph (B)(ii)(I); and

(ii) to account for the use of renewable fuel during the previous calendar year by small refineries that are exempt under paragraph (9).

(4) Modification of greenhouse gas reduction percentages

(A) In general

The Administrator may, in the regulations under the last sentence of paragraph (2)(A)(i), adjust the 20 percent, 50 percent, and 60 percent reductions in lifecycle greenhouse gas emissions specified in paragraphs (2)(A)(i) (relating to renewable fuel), (1)(D) (relating to biomass-based diesel), (1)(B)(i) (relating to advanced biofuel), and (1)(E) (relating to cellulosic biofuel) to a lower percentage. For the 50 and 60 percent reductions, the Administrator may make such an adjustment only if he determines that generally such reduction is not commercially feasible for fuels made using a

variety of feedstocks, technologies, and processes to meet the applicable reduction.

(B) Amount of adjustment

In promulgating regulations under this paragraph, the specified 50 percent reduction in greenhouse gas emissions from advanced biofuel and in biomass-based diesel may not be reduced below 40 percent. The specified 20 percent reduction in greenhouse gas emissions from renewable fuel may not be reduced below 10 percent, and the specified 60 percent reduction in greenhouse gas emissions from cellulosic biofuel may not be reduced below 50 percent.

(C) Adjusted reduction levels

An adjustment under this paragraph to a percent less than the specified 20 percent greenhouse gas reduction for renewable fuel shall be the minimum possible adjustment, and the adjusted greenhouse gas reduction shall be established by the Administrator at the maximum achievable level, taking cost in consideration, for natural gas fired corn-based ethanol plants, allowing for the use of a variety of technologies and processes. An adjustment in the 50 or 60 percent greenhouse gas levels shall be the minimum possible adjustment for the fuel or fuels concerned, and the adjusted greenhouse gas reduction shall be established at the maximum achievable level, taking cost in consideration, allowing for the use of a variety of feedstocks, technologies, and processes.

(D) 5-year review

Whenever the Administrator makes any adjustment under this paragraph, not later than 5 years thereafter he shall review and revise (based upon the same criteria and standards as required for the initial adjustment) the regulations establishing the adjusted level.

(E) Subsequent adjustments

After the Administrator has promulgated a final rule under the last sentence of paragraph (2)(A)(i) with respect to the method of determining lifecycle greenhouse gas emissions, except as provided in subparagraph (D), the Administrator may not adjust the percent greenhouse gas reduction levels unless he determines that there has been a significant change in the analytical methodology used for determining the lifecycle greenhouse gas emissions. If he makes such determination, he may adjust the 20, 50, or 60 percent reduction levels through rulemaking using the criteria and standards set forth in this paragraph.

(F) Limit on upward adjustments

If, under subparagraph (D) or (E), the Administrator revises a percent level adjusted as provided in subparagraphs (A), (B), and (C) to a higher percent, such higher percent may not exceed the applicable percent specified in paragraph (2)(A)(i), (1)(D), (1)(B)(i), or (1)(E).

(G) Applicability of adjustments

If the Administrator adjusts, or revises, a percent level referred to in this paragraph or makes

a change in the analytical methodology used for determining the lifecycle greenhouse gas emissions, such adjustment, revision, or change (or any combination thereof) shall only apply to renewable fuel from new facilities that commence construction after the effective date of such adjustment, revision, or change.

(5) Credit program

(A) In general

The regulations promulgated under paragraph (2)(A) shall provide—

(i) for the generation of an appropriate amount of credits by any person that refines, blends, or imports gasoline that contains a quantity of renewable fuel that is greater than the quantity required under paragraph (2);

(ii) for the generation of an appropriate amount of credits for biodiesel; and

(iii) for the generation of credits by small refineries in accordance with paragraph (9)(C).

(B) Use of credits

A person that generates credits under subparagraph (A) may use the credits, or transfer all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(C) Duration of credits

A credit generated under this paragraph shall be valid to show compliance for the 12 months as of the date of generation.

(D) Inability to generate or purchase sufficient credits

The regulations promulgated under paragraph (2)(A) shall include provisions allowing any person that is unable to generate or purchase sufficient credits to meet the requirements of paragraph (2) to carry forward a renewable fuel deficit on condition that the person, in the calendar year following the year in which the renewable fuel deficit is created—

(i) achieves compliance with the renewable fuel requirement under paragraph (2); and

(ii) generates or purchases additional renewable fuel credits to offset the renewable fuel deficit of the previous year.

(E) Credits for additional renewable fuel

The Administrator may issue regulations providing: (i) for the generation of an appropriate amount of credits by any person that refines, blends, or imports additional renewable fuels specified by the Administrator; and (ii) for the use of such credits by the generator, or the transfer of all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(6) Seasonal variations in renewable fuel use

(A) Study

For each of calendar years 2006 through 2012, the Administrator of the Energy Information Administration shall conduct a study of renewable fuel blending to determine whether there are ex-

cessive seasonal variations in the use of renewable fuel.

(B) Regulation of excessive seasonal variations

If, for any calendar year, the Administrator of the Energy Information Administration, based on the study under subparagraph (A), makes the determinations specified in subparagraph (C), the Administrator of the Environmental Protection Agency shall promulgate regulations to ensure that 25 percent or more of the quantity of renewable fuel necessary to meet the requirements of paragraph (2) is used during each of the 2 periods specified in subparagraph (D) of each subsequent calendar year.

(C) Determinations

The determinations referred to in subparagraph (B) are that—

(i) less than 25 percent of the quantity of renewable fuel necessary to meet the requirements of paragraph (2) has been used during 1 of the 2 periods specified in subparagraph (D) of the calendar year;

(ii) a pattern of excessive seasonal variation described in clause (i) will continue in subsequent calendar years; and

(iii) promulgating regulations or other requirements to impose a 25 percent or more seasonal use of renewable fuels will not prevent or interfere with the attainment of national ambient air quality standards or significantly increase the price of motor fuels to the consumer.

(D) Periods

The 2 periods referred to in this paragraph are—

(i) April through September; and

(ii) January through March and October through December.

(E) Exclusion

Renewable fuel blended or consumed in calendar year 2006 in a State that has received a waiver under section 7543(b) of this title shall not be included in the study under subparagraph (A).

(F) State exemption from seasonality requirements

Notwithstanding any other provision of law, the seasonality requirement relating to renewable fuel use established by this paragraph shall not apply to any State that has received a waiver under section 7543(b) of this title or any State dependent on refineries in such State for gasoline supplies.

(7) Waivers

(A) In general

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, may waive the requirements of paragraph (2) in whole or in part on petition by one or more States, by any person subject to the requirements of this subsection, or by the Administrator on his own motion by reducing the national quantity of renewable fuel required under paragraph (2)—

(i) based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States; or

(ii) based on a determination by the Administrator, after public notice and opportunity for comment, that there is an inadequate domestic supply.

(B) Petitions for waivers

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, shall approve or disapprove a petition for a waiver of the requirements of paragraph (2) within 90 days after the date on which the petition is received by the Administrator.

(C) Termination of waivers

A waiver granted under subparagraph (A) shall terminate after 1 year, but may be renewed by the Administrator after consultation with the Secretary of Agriculture and the Secretary of Energy.

(D) Cellulosic biofuel

(i) For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume established under paragraph (2)(B), as determined by the Administrator based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator shall reduce the applicable volume of cellulosic

biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. For any calendar year in which the Administrator makes such a reduction, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(ii) Whenever the Administrator reduces the minimum cellulosic biofuel volume under this subparagraph, the Administrator shall make available for sale cellulosic biofuel credits at the higher of $0.25 per gallon or the amount by which $3.00 per gallon exceeds the average wholesale price of a gallon of gasoline in the United States. Such amounts shall be adjusted for inflation by the Administrator for years after 2008.

(iii) Eighteen months after December 19, 2007, the Administrator shall promulgate regulations to govern the issuance of credits under this subparagraph. The regulations shall set forth the method for determining the exact price of credits in the event of a waiver. The price of such credits shall not be changed more frequently than once each quarter. These regulations shall include such provisions, including limiting the credits' uses and useful life, as the Administrator deems appropriate to assist market liquidity and transparency, to provide appropriate certainty for regulated entities and renewable fuel producers, and to limit any potential misuse of cellulosic biofuel credits to reduce the use of other renewable fuels, and for such other purposes as the Administrator

determines will help achieve the goals of this subsection. The regulations shall limit the number of cellulosic biofuel credits for any calendar year to the minimum applicable volume (as reduced under this subparagraph) of cellulosic biofuel for that year.

(E) Biomass-based diesel

(i) Market evaluation

The Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall periodically evaluate the impact of the biomass-based diesel requirements established under this paragraph on the price of diesel fuel.

(ii) Waiver

If the Administrator determines that there is a significant renewable feedstock disruption or other market circumstances that would make the price of biomass-based diesel fuel increase significantly, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall issue an order to reduce, for up to a 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed 15 percent of the applicable annual requirement for biomass-based diesel. For any calendar year in which the Administrator makes a reduction under this subparagraph, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under

paragraph (2)(B) by the same or a lesser volume.

(iii) Extensions

If the Administrator determines that the feedstock disruption or circumstances described in clause (ii) is continuing beyond the 60-day period described in clause (ii) or this clause, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, may issue an order to reduce, for up to an additional 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed an additional 15 percent of the applicable annual requirement for biomass-based diesel.

(F) Modification of applicable volumes

For any of the tables in paragraph (2)(B), if the Administrator waives—

(i) at least 20 percent of the applicable volume requirement set forth in any such table for 2 consecutive years; or

(ii) at least 50 percent of such volume requirement for a single year,

the Administrator shall promulgate a rule (within 1 year after issuing such waiver) that modifies the applicable volumes set forth in the table concerned for all years following the final year to which the waiver applies, except that no such modification in applicable volumes shall be made for any year before 2016. In promulgating such a

rule, the Administrator shall comply with the processes, criteria, and standards set forth in paragraph (2)(B)(ii).

(8) Study and waiver for initial year of program

(A) In general

Not later than 180 days after August 8, 2005, the Secretary of Energy shall conduct for the Administrator a study assessing whether the renewable fuel requirement under paragraph (2) will likely result in significant adverse impacts on consumers in 2006, on a national, regional, or State basis.

(B) Required evaluations

The study shall evaluate renewable fuel—

(i) supplies and prices;

(ii) blendstock supplies; and

(iii) supply and distribution system capabilities.

(C) Recommendations by the Secretary

Based on the results of the study, the Secretary of Energy shall make specific recommendations to the Administrator concerning waiver of the requirements of paragraph (2), in whole or in part, to prevent any adverse impacts described in subparagraph (A).

(D) Waiver

(i) In general

Not later than 270 days after August 8, 2005, the Administrator shall, if and to the extent

recommended by the Secretary of Energy under subparagraph (C), waive, in whole or in part, the renewable fuel requirement under paragraph (2) by reducing the national quantity of renewable fuel required under paragraph (2) in calendar year 2006.

(ii) No effect on waiver authority

Clause (i) does not limit the authority of the Administrator to waive the requirements of paragraph (2) in whole, or in part, under paragraph (7).

(9) Small refineries

(A) Temporary exemption

(i) In general

The requirements of paragraph (2) shall not apply to small refineries until calendar year 2011.

(ii) Extension of exemption

(I) Study by Secretary of Energy

Not later than December 31, 2008, the Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph (2) would impose a disproportionate economic hardship on small refineries.

(II) Extension of exemption

In the case of a small refinery that the Secretary of Energy determines under subclause (I) would be subject to a dispropor-

tionate economic hardship if required to comply with paragraph (2), the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years.

(B) Petitions based on disproportionate economic hardship

(i) Extension of exemption

A small refinery may at any time petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship.

(ii) Evaluation of petitions

In evaluating a petition under clause (i), the Administrator, in consultation with the Secretary of Energy, shall consider the findings of the study under subparagraph (A)(ii) and other economic factors.

(iii) Deadline for action on petitions

The Administrator shall act on any petition submitted by a small refinery for a hardship exemption not later than 90 days after the date of receipt of the petition.

(C) Credit program

If a small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A), the regulations promulgated under paragraph (2)(A) shall provide for the generation of credits by the small refinery under

paragraph (5) beginning in the calendar year following the date of notification.

(D) Opt-in for small refineries

A small refinery shall be subject to the requirements of paragraph (2) if the small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A).

(10) Ethanol market concentration analysis

(A) Analysis

(i) In general

Not later than 180 days after August 8, 2005, and annually thereafter, the Federal Trade Commission shall perform a market concentration analysis of the ethanol production industry using the Herfindahl-Hirschman Index to determine whether there is sufficient competition among industry participants to avoid price-setting and other anticompetitive behavior.

(ii) Scoring

For the purpose of scoring under clause (i) using the Herfindahl-Hirschman Index, all marketing arrangements among industry participants shall be considered.

(B) Report

Not later than December 1, 2005, and annually thereafter, the Federal Trade Commission shall submit to Congress and the Administrator a report on the results of the market concentration analysis performed under subparagraph (A)(i).

(11) Periodic reviews

To allow for the appropriate adjustment of the requirements described in subparagraph (B) of paragraph (2), the Administrator shall conduct periodic reviews of—

(A) existing technologies;

(B) the feasibility of achieving compliance with the requirements; and

(C) the impacts of the requirements described in subsection (a)(2)[11] on each individual and entity described in paragraph (2).

(12) Effect on other provisions

Nothing in this subsection, or regulations issued pursuant to this subsection, shall affect or be construed to affect the regulatory status of carbon dioxide or any other greenhouse gas, or to expand or limit regulatory authority regarding carbon dioxide or any other greenhouse gas, for purposes of other provisions (including section 7475) of this chapter. The previous sentence shall not affect implementation and enforcement of this subsection.

2. 42 U.S.C. 7607(b) provides:

Administrative proceedings and judicial review

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or

[11] So in original. Subsection (a) does not contain a par. (2).

requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title,,[3] any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5)[1] of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title, under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals

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[1] See References in Text note below.

[3] So in original.

for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).