

United States Court of Appeals  
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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Argued December 10, 2012

Decided January 25, 2013

No. 12-1139

AMERICAN PETROLEUM INSTITUTE,  
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,  
RESPONDENT

ADVANCED BIOFUELS ASSOCIATION, ET AL.,  
INTERVENORS

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On Petition for Review of Final Agency Action of the United  
States Environmental Protection Agency

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*Robert A. Long, Jr.* argued the cause for petitioner.  
With him on the brief were *Kristen E. Eichensehr* and *Harry  
M. Ng*.

*Daniel R. Dertke*, Attorney, U.S. Department of  
Justice, argued the cause and filed the brief for respondent.

*John C. O'Quinn*, *William H. Burgess*, *Sandra P.  
Franco*, *David B. Salmons*, and *Bryan M. Killian* were on the  
brief for intervenors.

Before: BROWN and KAVANAUGH, *Circuit Judges*, and WILLIAMS, *Senior Circuit Judge*.

Opinion for the Court filed by *Senior Circuit Judge WILLIAMS*.

WILLIAMS, *Senior Circuit Judge*: This case arises out of Congress's command that the Environmental Protection Agency make predictions about a promising technology. While the program *as a whole* is plainly intended to promote that technology, we are not convinced that Congress meant for EPA to let that intent color its work as a predictor, to let the wish be father to the thought.

In 2005 and again in 2007, Congress amended the Clean Air Act ("Act") to establish a renewable fuel standard ("RFS") program, now codified at 42 U.S.C. § 7545(o). See Energy Policy Act of 2005, Pub. L. No. 109-58; Energy Independence and Security Act of 2007, Pub. L. No. 110-140. Under the RFS program, EPA must promulgate regulations to ensure that transportation fuel sold or introduced into commerce (hereafter collectively, "sold") in the 48 contiguous U.S. states contains an increasing measure of renewable fuel through 2022. See generally 42 U.S.C. § 7545(o)(2). The Act enumerates yearly "applicable volume" requirements not only for renewable fuel but also for a subclass known as "advanced biofuels," which produce lower greenhouse gas emissions than conventional renewable fuels such as corn-based ethanol. *Id.* §§ 7545(o)(1)(B) (definition of advanced biofuel), 7545(o)(2)(B) (applicable volumes). The "applicable volume" for a particular fuel (a phrase used repeatedly in the statute and thus in this opinion) determines how much of that fuel refiners, importers and blenders must purchase each year in order to comply with the RFS program. *Id.* § 7545(o)(3)(B).

In establishing the RFS program, Congress made commercial production of cellulosic biofuel, an advanced biofuel derived from sources of lignocellulose such as switchgrass and agricultural wastes, central to the program's objective of reducing greenhouse gas emissions. Subject to the EPA adjustments that are the subject of this case, the Act requires that more than three quarters of advanced biofuel sold in the United States after January 1, 2022 be cellulosic biofuel. *Id.* § 7545(o)(2)(B)(i)(III). These standards for cellulosic biofuel assumed significant innovation in the industry. When Congress introduced the cellulosic biofuel requirement in 2007, there was no commercial-scale production at all. Yet Congress mandated cellulosic biofuel sales in the U.S. of 100 million gallons in 2010, 250 million in 2011, and half a billion in 2012 (all in ethanol-equivalent gallons). *Id.*; see also *Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards*, 77 Fed. Reg. 1,320, 1,325 (Table II.A-1), 1,330-31 (Table II-B.6-1) (Jan. 9, 2012).

Recognizing the technological challenges, Congress provided for the possibility that actual production would fall short of the stated requirements. Section 7545(o)(7)(D)(i) calls for a determination by EPA of the “projected volume of cellulosic biofuel production” for each calendar year, to be made no later than November 30 of the prior year and to be “based on” an estimate of the Energy Information Administration (“EIA”). When that projection is less than the mandated volume, the Administrator is to “reduce the applicable volume of cellulosic biofuel . . . to the projected volume.” *Id.* §§ 7545(o)(3)(B), 7545(o)(7)(D)(i). The Act also provides that in the event of such a reduction the Administrator “may also reduce the applicable volume of renewable fuel and advanced biofuels” required for that year. *Id.* § 7545(o)(7)(D)(i).

In a January 2012 Final Rule (the “2012 RFS rule”), EPA projected that 8.65 million gallons of cellulosic biofuel (10.45 million ethanol-equivalent gallons) would be produced in 2012, well short of the 500 million ethanol-equivalent gallons mandated by the Act for that year. See *Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards*, 77 Fed. Reg. at 1,324-31. In the same rule, EPA considered but rejected a reduction in the volume of total advanced biofuels required for 2012, stating that other kinds of advanced biofuels could make up for the shortfall. *Id.* at 1,331-37.

Petitioner American Petroleum Institute (“API”) objects both to EPA’s 2012 projection for cellulosic biofuel and to its refusal to reduce the applicable advanced biofuels volume for 2012. We reject API’s argument that EPA failed to justify its determination not to reduce the applicable advanced biofuels volume for 2012. But we agree with API that because EPA’s methodology for making its cellulosic biofuel projection did not take neutral aim at accuracy, it was an unreasonable exercise of agency discretion.

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*Timeliness of API’s petition.* Before turning to the merits we address a claim raised by a coalition of intervenors representing the biofuel industry. They argue that API is jurisdictionally barred from challenging the 2012 RFS rule because that rule merely perpetuates an approach that EPA first employed a year earlier in its projection of cellulosic biofuel volumes for 2011. Had API wanted to challenge the methodology employed in the 2012 RFS rule, intervenors contend, it should have filed suit within 42 U.S.C. § 7607(b)’s 60-day time limit after Federal Register publication of EPA’s cellulosic biofuel projection for 2011. In support of this claim, they point to our decision in *Medical Waste Institute v. EPA*, 645 F.3d 420, 427 (D.C. Cir. 2011), in which we

declined to consider a challenge to a rule because the petitioner had not sought judicial review when the agency had “first use[d]” the approach that rule reflected.

Intervenors’ invocation of *Medical Waste* is inapt. Here, unlike in *Medical Waste*, the petitioner attacks a methodology used for *prediction*, which can look more arbitrary the longer it is applied. The reasonableness of adopting a predictive methodology is not the same as the reasonableness of *maintaining* one in the face of experience; considering whether to maintain a methodology necessarily invites reflection on the success of earlier applications. API’s challenge to the 2012 RFS rule rests significantly on the complete failure of EPA’s prediction for 2011: 6.6 million gallons, as against zero in reality. See *Regulation of Fuels and Fuel Additives: 2011 Renewable Fuel Standards*, 75 Fed. Reg. 76,790, 76,793 (Dec. 9, 2010); EPA, *Fuels and Fuel Additives, 2011 RFS2 Data*, <http://www.epa.gov/otaq/fuels/rfsdata/2011emts.htm>. We agree with API that the 2011 failure colors the rationality of EPA’s decision to persist in 2012 and sheds light on the weight EPA gave to specific aspects of its approach. Accordingly we find API’s petition timely.

*Cellulosic biofuel projection.* Section 7545(o)(7)(D)(i) of the Act states that an annual “projected volume of cellulosic biofuel production” will be “determined by the Administrator,” which determination is to be “based on” EIA’s estimate. 42 U.S.C. §§ 7545(o)(3)(B), 7545(o)(7)(D)(i). In the 2012 RFS rule, EPA explained that its projection of 8.65 million gallons of cellulosic biofuel was “based on several sources of information”: (1) EIA’s projection of 6.9 million gallons for 2012; (2) “Progress that the cellulosic biofuel industry is making”; (3) the agency’s “own assessment of the cellulosic biofuel industry’s projected volumes” for 2012; and (4) comments on a draft version of the

rule. 77 Fed. Reg. at 1,324, 1,328. The rule further stated that EPA's projection was "very similar" to EIA's, and that the two agencies' figures were derived from the same set of cellulosic biofuel production facilities. *Id.* at 1,329. EPA attributed its higher results to "slight variations [that] are a result of different methodologies." *Id.* The most important of these variations related to timing: EIA assumed a "standard utilization factor" of 25 percent of full-capacity production (which EIA applies to all commercial-scale facilities in their first year of production), whereas EPA looked to the start-up dates of the facilities as anticipated by the facilities' owners. *Id.* EPA also disagreed with EIA's assessment of the production capacities of two facilities, and with its application of a ten percent utilization factor to a "pilot plant," which EPA judged likely to produce fuel on a commercial scale rather than (as EIA expected) an experimental one. *Id.*

This exposition suggests little more than a technocratic exercise of agency discretion. Yet elsewhere in the rule EPA expressed a decidedly non-technocratic bent. In a response to comments submitted by API and others, EPA observed that "[i]n directing EPA to project cellulosic biofuel production for purposes of setting the annual cellulosic biofuel standard, Congress did not specify what degree of certainty should be reflected in the projections." *Id.* at 1,325. It went on:

While the cellulosic biofuel standard that we set should be within the range of what can be attained based on projected domestic production and import potential, the standard that we set helps drive the production of volumes that will be made available. . . . Thus while any standard we set for cellulosic biofuel standard for 2012 will have some uncertainty in terms of actual attainment, *our intention is to balance such uncertainty with the objective of promoting growth in the industry.* Our

final projected available volume . . . for 2012 reflects these considerations.

*Id.* (emphasis added). The agency went on to state its concern that setting 2012 cellulosic biofuel production figures “at the low end of the proposed range, or some lower volume, could potentially result in a depressed market for cellulosic biofuel.” *Id.* at 1,330. The figures the agency chose, by contrast, would “provide the appropriate economic conditions for the cellulosic biofuel industry to grow.” *Id.*

In comments to EPA and before us, API offers several broad critiques of the agency’s cellulosic biofuel projection for 2012. First, API argues that EPA did not base its projection on EIA’s estimate, but rather used a “supplementary analysis” that “effectively supplanted” EIA’s prediction. Pet’r Br. 27-28 (quoting *Sierra Club v. EPA*, 356 F.3d 296, 306 (D.C. Cir. 2004)). The table below expresses the divergence:

Cellulosic biofuel production, 2010-2012 (millions of gallons)<sup>1</sup>

	2010	2011	2012
EIA Projected	5.0	3.9	6.9
EPA Projected	5.0	6.6	8.7
Actual	0	0	

Putting aside EPA’s deliberate choice of a non-neutral purpose, discussed below, and deviations from the EIA estimates that seem likely to have been a product of that choice, we aren’t persuaded that there is any illegality in EPA’s treatment of EIA’s work. The statute called first for EIA to supply an estimate of the amount of cellulosic biofuel to be sold, 42 U.S.C. § 7545(o)(3)(A), then for EPA to “determine” the obligation “based on” that estimate, *id.* § 7545(o)(3)(B). Plainly Congress didn’t contemplate slavish adherence by EPA to the EIA estimate; had it so intended, it could have skipped the EPA “determination” altogether. We think EPA was entitled under *Chevron USA, Inc. v. Natural*

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<sup>1</sup> Source: *Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards*, 77 Fed. Reg. 1,320, 1,325-30 (Jan. 9, 2012); *Regulation of Fuels and Fuel Additives: 2011 Renewable Fuel Standards*, 75 Fed. Reg. 76,790, 76,793-97 (Dec. 9, 2010); *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program*, 75 Fed. Reg. 14,670, 14,748-49, 51 (Mar. 26, 2010); EPA, *Fuels and Fuel Additives, 2011 RFS2 Data*, <http://www.epa.gov/otaq/fuels/rfsdata/2011emts.htm>; EPA, *Fuels and Fuel Additives, 2010 RFS2 Data*, <http://www.epa.gov/otaq/fuels/rfsdata/2010emts.htm>.

*Resources Defense Council, Inc.*, 467 U.S. 837 (1984), to read the phrase “based on” as requiring great respect but allowing deviation consistent with that respect.

Second, API claims that EPA’s projection derived from a methodology biased towards overstatement, inasmuch as it relied largely on statements from cellulosic biofuel facility owners, who in 2011 predicted significant production and yet generated no fuel at all. Joint Appendix 100; Pet’r Br. at 33-35. But the producers were not only an almost inevitable source of information but were also a principal source of EIA’s estimates; at least if EPA regarded that information with suitable caution, we can hardly fault it for following EIA’s lead.

Finally, API challenges the special tilt with which EPA expressly viewed the data—a tilt, in its words, toward “promoting growth” in the cellulosic biofuel industry. We agree with API that such a purpose has no basis in the relevant text of the Act.

EPA is correct that one of Congress’s stated purposes in establishing the current RFS program was to “increase the production of clean renewable fuels.” See Pub. L. No. 110-140, 121 Stat. 1492, 1492 (2007). But that general mandate does not mean that every constitutive element of the RFS program should be understood to individually advance a technology-forcing agenda, at least where the text does not support such a reading. As we observed in *American Petroleum Institute v. EPA*, 52 F.3d 1113, 1119 (D.C. Cir. 1995), “EPA cannot rely on its general authority to make rules necessary to carry out its functions when a specific statutory directive defines the relevant functions of EPA in a particular area.” Although here EPA invokes not its general rulemaking authority, but rather the general purpose of the RFS program,

we think the same principle applies: a broad programmatic objective cannot trump specific instructions.

We do not think the text of § 7545(o)(7)(D)(i) or the general structure of the RFS program supports EPA's decision to adopt a methodology in which the risk of overestimation is set deliberately to outweigh the risk of underestimation.<sup>2</sup> Section 7545(o)(7)(D)(i)'s reference to the "projected volume of cellulosic biofuel" seems plainly to call for a prediction of what will *actually* happen. EPA points to no instance in which the term "projected" is used to allow the projector to let its aspirations for a self-fulfilling prophecy divert it from a neutral methodology.

In fact, the general structure of the RFS program militates against such a conclusion. Section 7545(o)(7)(D)(i) serves as a non-discretionary safety valve when the refiners and importers of transportation fuel subject to § 7545(o)'s mandate would otherwise be put in an impossible position, or at least a highly punitive one—that is, forced to purchase volumes of cellulosic biofuel greater than total production, or pay fines for failing to do so. Only with regard to cellulosic biofuel did Congress adopt so cautious an approach—perhaps because of the industry's embryonic character. The only other fuel-specific waiver provision in the RFS Program is for biomass-based diesel; but that waiver authorizes no more than a fifteen percent reduction in applicable volumes, does not require EPA to project available fuel, and is tied to price spikes, not production volumes. See 42 U.S.C. § 7545(o)(7)(E)(ii). In other words, only with respect to

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<sup>2</sup> More precisely, a methodology that *plans* for the expected value of upside errors (the summation of each upside deviation, weighted by its likelihood) to exceed the expected value of downside errors.

cellulosic biofuel did Congress evince a clear concern for production shortfalls.

Viewed in this light, the most natural reading of the provision is to call for a projection that aims at accuracy, not at deliberately indulging a greater risk of overshooting than undershooting. Although as EPA notes the Act allows an obligated entity to carry over a deficit in renewable fuel purchases into the following year, see 42 U.S.C. § 7545(o)(5)(D); 40 C.F.R. § 80.1427(b)(1), that simply makes the controlling unit of time two years rather than one—hardly long enough to sharply reduce the risk of a penalty. As reflected in the chart, *supra* at 8, history suggests the opposite conclusion: a refiner forced to carry a deficit in 2010, when EPA projected five million gallons of cellulosic biofuel yet none was produced, would not have found relief in 2011, when the agency predicted 6.6 million and actual production was again zero.

Further, the Act’s requirement that EPA’s projection be “based on” EIA’s estimate similarly implicates an outcome-neutral methodology over an aspirational one. Though we above rejected API’s advocacy of apparently near carbon-copy reliance on EIA, EPA’s effort to kickstart cellulosic biofuel production does not look like the sort of “supplemental analysis” in pursuit of the same regulatory objective that we found permissible in *Sierra Club*, 356 F.3d at 306 n.7, but rather like the adoption of an entirely new goal.

Our prior decisions relating to technology-forcing standards are no bar to this conclusion. We recognize here, as we have recognized in the past, that an agency may base a standard or mandate on future technology when there exists a rational connection between the regulatory target and the presumed innovation. In *National Petrochemical & Refiners Ass’n v. EPA*, 287 F.3d 1130 (D.C. Cir. 2002), for example,

we upheld EPA's adoption of a technology-forcing standard for diesel engines on the reasoning that "[i]n the absence of theoretical objections to the technology, the agency need only identify the major steps necessary for development of the device, and give plausible reasons for its belief that the industry will be able to solve those problems in the time remaining." *Id.* at 1144 (quoting *Natural Resources Defense Council v. EPA*, 655 F.2d 318, 333 (D.C. Cir. 1981)). We invoked similar principles in rejecting challenges to emissions standards in *Natural Resources Defense Council v. Thomas*, 805 F.2d 410, 428-430 (D.C. Cir. 1986), and *Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981).

In all these cases, government pressure joined forces with industry specialization and competence. Here, by contrast, EPA applies the pressure to one industry (the refiners), see *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program*, 75 Fed. Reg. 14,670, 14,731 (Mar. 26, 2010); see also 42 U.S.C. § 7545(d)(1); 40 C.F.R. § 80.1463, yet it is another (the producers of cellulosic biofuel) that enjoys the requisite expertise, plant, capital and ultimate opportunity for profit. Apart from their role as captive consumers, the refiners are in no position to ensure, or even contribute to, growth in the cellulosic biofuel industry. "Do a good job, cellulosic fuel producers. If you fail, we'll fine your customers." Given this asymmetry in incentives, EPA's projection is not "technology-forcing" in the same sense as other innovation-minded regulations that we have upheld.

Although an agency may flesh out the interstices of a technical regime, *Catawba Cnty. v. EPA*, 571 F.3d 20, 36-38 (D.C. Cir. 2009), that discretion does not entitle the agency to arrogate to itself purposes outside the statutory provision it is applying. See also *Railway Labor Executives' Ass'n v. Nat'l Mediation Bd.*, 29 F.3d 655, 671 (D.C. Cir. 1994) ("Were

courts to *presume* a delegation of power absent an express *withholding* of such power, agencies would enjoy virtually limitless hegemony . . . .”). Yet that is precisely what EPA appears to have done in projecting cellulosic biofuel production for 2012.

*Advanced biofuels volume.* Section 7545(o)(7)(D)(i) states that in any year where EPA reduces the applicable volume of cellulosic biofuel, “the Administrator *may* also reduce the applicable volume of renewable fuel and advanced biofuels.” 42 U.S.C. § 7545(o)(7)(D)(i) (emphasis added). In the 2012 RFS rule, EPA concluded that other sources of advanced biofuels, in particular imported sugarcane ethanol and biomass-based diesel, could make up for the 490 million gallon shortfall in cellulosic biofuel it had projected for 2012. 77 Fed. Reg. at 1,331-37. The agency accordingly declined to reduce the applicable volume of advanced biofuels. *Id.* EPA, however, did not specify precisely how much sugarcane ethanol or biomass-based diesel it thought would be available, nor did it indicate in what combination these two sources would amount to 490 million gallons. API asserts that this failure to provide numerical projections “reveals the arbitrary nature” of EPA’s findings and “violates the agency’s duty to provide a reasoned explanation for its decisions.” Pet’r Br. at 45.

We find these arguments unpersuasive. Nothing in the text of § 7545(o)(7)(D)(i), or any other applicable provision of the Act, plainly requires EPA to support its decision not to reduce the applicable volume of advanced biofuels with specific numerical projections. This stands in contrast to the Act’s explicit instruction that EPA make a numerical projection for cellulosic biofuel. Certainly EPA must provide a reasoned explanation for its actions, but rationality does not always imply a high degree of quantitative specificity.

Turning to the explanation that EPA did provide, we think EPA has “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 v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quotations removed). The agency adequately grounded its determination in historical data on sugarcane ethanol imports and biodiesel production, as well as governmental and non-governmental projections for future production of those fuels. See 77 Fed. Reg. at 1,331-37. We find especially relevant EIA’s projection of 300 million gallons of sugarcane ethanol imports for 2012 and EPA’s estimation of 2.4 billion gallons in U.S. biodiesel production capacity. See *id.* at 1,332, 1,334. These data plausibly suggest that some combination of the two sources of advanced biofuels will be available to make up for the shortfall in cellulosic biofuel. Moreover, in sharp distinction with cellulosic biofuel, there appears to be no great obstacle to the *production* of advanced biofuel generally; to the extent that estimates in the record are relatively low, that seems to be based on want of a market, which of course continued pressure will tend to solve. *Id.* at 1,334-35.

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For the reasons set out above, we reject API’s challenge to EPA’s refusal to lower the applicable volume of advanced biofuels for 2012. However, we agree with API that EPA’s 2012 projection of cellulosic biofuel production was in excess of the agency’s statutory authority. We accordingly vacate that aspect of the 2012 RFS rule and remand for further proceedings consistent with this opinion.

*So ordered.*