

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Consolidated Case Nos. 15-1328, 15-1329

MEXICHEM FLUOR, INC.,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

CHEMOURS COMPANY FC, LLC, ET AL.,

Intervenors.

ON PETITION FOR REVIEW OF FINAL ACTION BY
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RESPONDENT'S INITIAL BRIEF

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Dated: May 27, 2016

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), the undersigned counsel certifies as follows:

A. Parties and Amici.

The parties in these consolidated cases are:

Petitioners: No. 15-1328: Mexichem Fluor, Inc.; No. 15-1329: Arkema, Inc.;

Respondent: The United States Environmental Protection Agency;

Intervenors for Respondent: Chemours Company FC, LLC, Honeywell International Inc., Natural Resources Defense Council.

B. Rulings Under Review.

This final agency action under review is: “Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program, 80 Fed. Reg. 42,870 (July 20, 2015).

C. Related Cases.

Respondent is aware of one related case, *Compsys, Inc. v. U.S. Environmental Protection Agency*, No. 15-1334 (D.C. Cir.). That case challenges the same agency action, and was initially consolidated with the two cases here, but was subsequently severed and held in abeyance pending the outcome of Compsys’s administrative petition for reconsideration.

/s/ Elizabeth B. Dawson
ELIZABETH B. DAWSON

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GLOSSARY

1994 RTC	Response to Comments on the Significant New Alternatives Policy Rule (March 15, 1994) (EPA-HQ-OAR-2014-0198-0007)
CAA	Clean Air Act
EPA	U.S. Environmental Protection Agency
HFC	Hydrofluorocarbon
Initial Rule	Protection of Stratospheric Ozone, 59 Fed. Reg. 13,044 (Mar. 18, 1994)
Final Rule	Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program, 80 Fed. Reg. 42,870, (July 20, 2015)
Proposed Rule	Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program, 79 Fed. Reg. 46,126, (Aug. 6, 2014) (EPA-HQ-OAR-2014-0198-0001)
RTC	Response to Comments for the Notice of Proposed Rulemaking: Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program (July 2015) (EPA-HQ-OAR-2014-0198-0248)

STATEMENT OF JURISDICTION

The consolidated petitions for review were timely filed in this Court. 42 U.S.C. § 7607(b). However, as explained *infra* Argument I.A.1., I.B.1., II.A, and III., several of Petitioners' specific arguments are effectively challenges to an earlier rule and are therefore untimely under section 7607(b).

STATEMENT OF THE ISSUES

Section 7671k of the Clean Air Act directs EPA to restrict the use of alternatives to ozone-depleting substances that may harm human health and the environment where safer alternatives are available. EPA promulgated regulations establishing a process to evaluate these alternatives over twenty years ago. Against this background, this case presents the following issues:

1. May EPA change the listing status of a previously-approved non-ozone-depleting alternative to ozone-depleting substances where other available alternatives pose a lower overall risk to human health and the environment?
2. Did EPA reasonably restrict the use of certain hydrofluorocarbons, on an end-use by end-use basis, where EPA has found that those hydrofluorocarbons pose a risk to human health and the environment due to their effects on climate change and where, using EPA's previously-promulgated criteria, the Agency determined that other available alternatives pose a lower overall risk?
3. Must EPA now identify a bright-line standard to determine whether an alternative to ozone-depleting substances poses a greater overall risk than other

available alternatives regardless of how they are used, even though EPA followed its established practice of conducting a comparative, multi-factor analysis on an end-use by end-use basis?

PERTINENT STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the addendum.

STATEMENT OF THE CASE

I. Statutory and Regulatory Background

A. Title VI of the Clean Air Act

Title VI of the CAA, 42 U.S.C. §§ 7671-7671q, implements the United States' obligations as a party to the Montreal Protocol on Substances that Deplete the Ozone Layer and contains numerous complementary measures. Of particular relevance here, Title VI directs EPA to promulgate regulations governing alternatives to ozone-depleting substances. *Id.* § 7671k(c).

Section 7671k(c) provides that “it shall be unlawful to replace any [ozone-depleting] substance with any substitute substance which the Administrator determines may present adverse effects to human health or the environment” where other substitutes that “reduce[] the overall risk to human health and the environment” are “currently or potentially available.” EPA must publish lists of substitutes prohibited for specific uses and substitutes that are safe alternatives for specific uses. 42 U.S.C. § 7671k(c). Any person may petition EPA to amend the lists, and

manufacturers must notify EPA before introducing potential alternatives into interstate commerce. *Id.* § 7671k(d), (e).

B. EPA's Significant New Alternatives Policy Program

1. Regulatory Framework

In 1994, EPA promulgated regulations establishing the “Significant New Alternatives Policy” program (“Alternatives Program”),¹ a framework for carrying out EPA’s obligation to identify safe alternatives under section 7671k. 40 C.F.R. pt. 82, subpt. G; Protection of Stratospheric Ozone (“Initial Rule”), 59 Fed. Reg. 13,044 (Mar. 18, 1994). A primary objective of the Alternatives Program has always been to promote the use of alternatives² that not only present lower overall risks to human health and the environment relative to the ozone-depleting substances being phased out, but also lower risks relative to other potential substitutes for the same end-use. *See* 40 C.F.R. § 82.170(a).

EPA’s implementation of the Alternatives Program is based on a “comparative risk framework” that evaluates alternatives by end-use and, for each end-use, restricts the use of alternatives that present relatively higher risks to human health or the environment. Initial Rule, 59 Fed. Reg. at 13,046. EPA’s comparative risk framework

¹ Referred to as “SNAP” by EPA (and Petitioners), this brief uses “Alternatives Program” in an effort to minimize the use of acronyms in accordance with this Court’s guidance.

² “Substitute” and “alternative” mean the same thing in the Alternatives Program, and are used interchangeably. *See* 40 C.F.R. § 82.172.

includes seven specific criteria for assessing potential alternatives: “(i) Atmospheric effects and related health and environmental impacts; (ii) General population risks from ambient exposure to compounds with direct toxicity and to increased ground-level ozone; (iii) Ecosystem risks; (iv) Occupational risks; (v) Consumer risks; (vi) Flammability; and (vii) Cost and availability of the substitute.” 40 C.F.R. § 82.180(a)(7). Consistent with section 7671k(c)’s requirement to publish lists of acceptable and unacceptable alternatives, EPA uses these criteria to classify alternatives as (i) acceptable, (ii) acceptable subject to use conditions, (iii) acceptable subject to narrowed use limits, (iv) unacceptable, or (v) pending. 40 C.F.R. § 82.180(b).

2. The Initial Rule

EPA explained in the Initial Rule that it viewed its authority under section 7671k as including the ability to change the acceptability status of alternatives without receiving a petition or notification from an individual or manufacturer, based on new data regarding other alternatives or alternatives already reviewed. 59 Fed. Reg. at 13,047. This interpretation struck a balance between the concern that continued revisions could “jeopardize the very certainty about government action which is so crucial to encouraging industrial investment in alternatives,” and the contrasting risk that “long periods of certainty about all substitutes, no matter their risk profiles, would [] destroy any marketplace incentive for continuing research and investment into new, potentially environmentally superior substitutes.” Response to Comments

on the Significant New Alternatives Policy Rule (“1994 RTC”) 10 (Mar. 15, 1994), EPA-HQ-OAR-2014-0198-0007, JAXX. In short, EPA considered responding to changing circumstances an integral part of its authority.

At the time, EPA also addressed questions about the use of economic information, global warming potential, energy efficiency, and EPA’s comparative risk framework. *See* 1994 RTC 20, 32, JAXX, XX; Initial Rule, 59 Fed. Reg. at 13,049, 13,068. EPA explained that it used economic information to assess whether a substitute was “available” as Congress requires. 59 Fed. Reg. at 13,046. Responding to comments about global warming potential, which EPA included as a consideration within the category of “[a]tmospheric effects and related health and environmental impacts,” 40 C.F.R. § 82.180(a)(7)(i); 59 Fed. Reg. at 13,068, EPA noted that the 1993 Climate Change Action Plan directed EPA to limit the use of alternatives with high global warming potential, and responded to other concerns, *id.* at 13,049. EPA also clarified that while EPA could assess actual physical properties of the alternatives being considered, it would not be appropriate to comment on performance from an energy efficiency perspective because such an analysis would require more information than EPA had available, given the potential for differing formulations and applications by end-users. *Id.* at 13,068.

EPA also addressed the concept of so-called “second-generation” alternatives, i.e., non-ozone-depleting alternatives that might be developed to “replace” non-ozone-depleting substances that were the original, “first-generation” replacements for

ozone-depleting substances. EPA explained that such substances need not be submitted to EPA for approval under the Alternatives Program if they were, in fact, only being used in lieu of non-ozone-depleting substances. *Id.* at 13,052. Despite EPA's response, manufacturers of what some consider "second-generation" substances have indeed submitted them to EPA for approval. *See infra* Argument I.B.2.

II. Factual Background

A. Hydrofluorocarbons

Hydrofluorocarbons contain hydrogen, fluorine, and carbon. They have a variety of applications, including aerosols, refrigeration, automotive air conditioners, and foams. They do not deplete the ozone layer. As such, some hydrofluorocarbons were approved as alternatives to ozone-depleting substances under the Alternatives Program. *See* Initial Rule, 59 Fed. Reg. at 13,072. However, many of them are potent greenhouse gases. United Nations Environment Programme, "HFCs: A Critical Link in Protecting Climate and the Ozone Layer," at 5, 9 (November 2011), EPA-HQ-OAR-2014-0003.22, JAXX, XX. As early as 1994, commenters suggested reevaluating the acceptability status of hydrofluorocarbons as "newer and safer refrigerants" become available, due to hydrofluorocarbons' effects on climate change. *See* 1994 RTC 9, JAXX. EPA, too, expressed the concern that "rapid expansion of the use of some [hydrofluorocarbons] could contribute to global warming." 59 Fed. Reg. at 13,071. However, at the time, available information suggested that

hydrofluorocarbons posed a lower overall risk than the ozone-depleting substances they would replace, and EPA had not identified other substitutes that posed lower overall risk; EPA thus determined that they could serve as “near-term” alternatives. *Id.* at 13,072.

Over time, the demand for hydrofluorocarbons has increased dramatically. This growth is expected to accelerate due to the increased demand for refrigeration and air-conditioning in developing countries. EPA, “Benefits of Addressing HFCs Under the Montreal Protocol,” at 3 (June 2013), EPA-OAR-2014-0198-0003.10, JAXX.

B. The Endangerment Finding and the Climate Action Plan

Since the enactment of CAA Title VI, knowledge about the harmful effects of greenhouse gases, including hydrofluorocarbons, has increased. In 2009, EPA concluded that the “air pollution” consisting of six globally well-mixed greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) may reasonably be anticipated to endanger public health and welfare for purposes of section 7521(a) of the CAA. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (“Endangerment Finding”), 74 Fed. Reg. 66,496 (Dec. 15, 2009). Additions of greenhouse gases to the atmosphere intensify the natural greenhouse effect and warm the planet. *Id.* at 66,499, 66,524. Evidence shows that atmospheric greenhouse gas concentrations “are now at elevated and essentially unprecedented levels” as the result of human activities. *Id.* at 66,517. Adverse effects observed and projected to occur due

to climate change include risks of sickness or mortality from reduced air quality, intensified heat waves, and more frequent and intense storms. *Id.* at 66,497-99, 66,516-36. This Court upheld EPA's finding. *See Coal. for Responsible Regulation v. EPA*, 684 F.3d 102, 116-30 (D.C. Cir. 2012), *reversed in part on other issues sub nom.*, *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014).

Subsequently, the Administration set forth goals for “steady, responsible national and international action to slow the effects of climate change.” The President’s Climate Action Plan at 5 (June 2013), EPA-HQ-OAR-2014-0198-0244.5, JAXX. Noting that emissions of hydrofluorocarbons in the United States alone were anticipated to nearly triple by 2030 and double as a percentage of total greenhouse gases by 2020, the Climate Action Plan provided for EPA to use its authority under the Alternatives Program to “encourage private sector investment in low-emissions technology by identifying and approving climate-friendly chemicals while prohibiting certain uses of the most harmful chemical alternatives.” *Id.*

C. The Rule Under Review

Responding to the identification of hydrofluorocarbons as a policy priority, and in light of an increased understanding of the environmental risks they pose, EPA began reviewing the Alternatives Program lists. *See Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program* (“Final Rule” or “the Rule”), 80 Fed. Reg. 42,870 (July

20, 2015).³ EPA was not alone in recognizing the need to take action: EPA received three section 7671k(d) requests to change the acceptability status of HFC-134a and blends thereof.⁴ Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program (“Proposed Rule”), 79 Fed. Reg. 46,126, 46,134 (Aug. 6, 2014).

On August 6, 2014, EPA published its Proposed Rule to limit the use of certain hydrofluorocarbons and blends thereof in specific end-uses. 79 Fed. Reg. at 46,128. EPA recognized that “the menu of available alternatives has expanded greatly and now includes many substitutes with diverse characteristics and effects on human health and the environment.” *Id.* at 46,132. Reiterating EPA’s longstanding position that “a listing under the [Alternatives Program] did not convey permanence,” and responding to the “evolving understanding of climate change,” EPA conducted new comparative assessments with the benefit of an expanded “amount and quality of information.” *Id.*

³ See also 80 Fed. Reg. 19,454 (April 10, 2015) (adding low-global warming potential alternative refrigerants to the list of acceptable substitutes).

⁴ Although EPA did not find the petitions complete in all respects, EPA considers its action responsive to certain aspects of the petitions. *Id.*

EPA carefully evaluated the risks of certain hydrofluorocarbons as compared with other alternatives to ozone-depleting substances for multiple sectors⁵ using EPA's regulatory criteria (including atmospheric effects, toxicity, occupational risks, consumer risks, and flammability), and within those sectors, specific end-uses.⁶ EPA found that the relatively high global warming potential of these hydrofluorocarbons causes them to pose a greater overall risk to human health and the environment than other available alternatives.⁷ Final Rule, 80 Fed. Reg. at 42,872-73. EPA tailored the Rule to specific end-uses, for some end-uses restricting the use of certain hydrofluorocarbons completely (like refrigerant blend R-404A, *e.g., id.* at 42,903-04), and for others allowing their use until alternatives that pose a sufficiently lower risk are available (like HFC-134a as an aerosol propellant where flammability of other alternatives is a concern, *see id.* at 42,882).

EPA received 227 unique comments, including comments sent as mass-mail campaigns from over 7,000 private citizens generally supporting EPA's Proposed Rule. Response to Comments for the Notice of Proposed Rulemaking ("RTC") (July

⁵ The sectors include aerosols, refrigeration and air conditioning, and foam-blowing.

⁶ "End-uses" are subcategories of sectors such as retail food refrigeration, vending machines, motor vehicle air conditioning systems, and rigid polyurethane appliance foam.

⁷ Note that EPA has restricted the use of certain hydrofluorocarbons in certain end-uses but has not placed a moratorium on their use; hydrofluorocarbons have not been "banned," as Petitioners imprecisely suggest. *E.g., Pet'rs' Br.* 4, 19, 45.

2015), EPA-HQ-OAR-2014-0198-0248, JAXX. The comments covered many topics, such as legal authority, feasibility of other alternatives, and the dates by which the status of the hydrofluorocarbons would change. Responding to these comments, in the Final Rule EPA adjusted the change-of-status dates for certain end-uses, and allowed a longer time for use of some hydrofluorocarbons through narrowed use limits, among other alterations. *See, e.g.*, 80 Fed. Reg. at 42,884.

SUMMARY OF ARGUMENT

This case is not complicated. EPA restricted the use of certain previously-approved alternatives to ozone-depleting substances after determining that they pose a comparatively greater risk to human health and the environment than other available alternatives. EPA has the authority to do so under Title VI of the CAA and the regulations EPA promulgated pursuant to congressional directive over twenty years ago. Further, the Agency articulated compelling and appropriate reasons to exercise this authority now. In the twenty years since EPA first identified acceptable alternatives to ozone-depleting substances under Title VI, EPA has approved many new alternatives, and the Agency's (indeed, the world's) understanding of the urgent public health and welfare threats of climate change have increased dramatically.

Hydrofluorocarbons, the focus of this Rule, are potent contributors to climate change. It was entirely reasonable under EPA's longstanding comparative risk framework, and consistent with the statute, for EPA to reconsider the acceptability

status of certain hydrofluorocarbons and determine that other available alternatives pose a lower overall risk to human health and the environment.

As a threshold matter, petitioners raise their arguments too late, because over twenty years ago, as required by Congress, EPA promulgated regulations governing the action here, and explained how EPA interprets its authority and applies its regulations. But to the extent the challenge is timely, Petitioners' contrived attempt to reframe EPA's action so as to locate it outside of EPA's statutory and regulatory authority does not withstand scrutiny.

First, contrary to Petitioners' suggestion, the Rule does not constitute the "replacement of a replacement." *See* Pet'rs' Br. 29-31. Instead, it is simply what it expressly purports to be—an update to the lists of acceptable alternatives to ozone-depleting substances that takes into account a wider suite of alternatives and new data on health and environmental effects. Congress unambiguously instructed EPA to prohibit the use of alternatives to ozone-depleting substances that may pose a risk to human health and the environment. To the extent the statute is ambiguous, EPA has reasonably interpreted the statute and its own regulations to allow this action. EPA did not need to explain a change in policy, because EPA did not change its policy.

Second, Petitioners err in suggesting that EPA's restrictions on certain hydrofluorocarbons are arbitrary and capricious. *See* Pet'rs' Br. 41-68. EPA thoroughly and reasonably explained its decision-making here, which adhered to the Agency's long-established regulatory process. EPA first found that hydrofluorocarbons pose a

risk to human health and the environment, and then assessed a range of alternatives for ozone-depleting substances using its comparative risk framework to determine whether other alternatives pose a lesser overall risk. EPA's analysis was thorough and reasonable in light of the breadth of the rulemaking and the information available, and was consistent with the Agency's analytical framework.

Third, Petitioners' argument that EPA must set a bright-line rule or threshold to determine that one alternative has a greater "overall risk" than another is baseless. *See* Pet'rs' Br. 69-74. Petitioners locate such a requirement nowhere in the statute or regulations. By contrast, EPA's multi-factor framework was not only reasonably applied here and amply supported by the record, but also has its foundation in longstanding EPA regulations that are not (and cannot be) at issue here.

STANDARD OF REVIEW

The Rule can be overturned only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," or in excess of EPA's "statutory jurisdiction, authority, or limitations." 42 U.S.C. § 7607(d)(9). This scope of review is narrow; "a court is not to substitute its judgment for that of the agency." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). The Court must "give an extreme degree of deference to the EPA's evaluation of scientific data within its technical expertise," especially where it reviews "EPA's administration of the complicated provisions of the [CAA]." *Miss. Comm'n on Env'tl. Quality v. EPA* ("*Miss. Comm'n*"), 790 F.3d 138, 150 (D.C. Cir. 2015) (quotations omitted).

In interpreting statutory terms, the Court applies the familiar analysis of *Chevron, U.S.A. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984). The language of the statute controls where it reflects “the unambiguously expressed intent of Congress,” but where the statute is “silent or ambiguous with respect to the specific issue,” the Court must defer to an agency’s interpretation so long as it is “based on a permissible construction of the statute.” *Id.* at 842-43. An agency’s power to administer a congressionally created program “necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.” *Id.* at 843. Furthermore, the Court “presume[s] that when an agency-administered statute is ambiguous . . ., Congress has empowered the agency to resolve the ambiguity.” *Natural Res. Def. Council v. EPA*, 777 F.3d 456, 463 (D.C. Cir. 2014) (internal quotation and citation omitted). And EPA’s interpretation of its own regulations is “controlling unless plainly erroneous or inconsistent with the regulation.” *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (internal quotations and citations omitted); *see also Decker v. Nw. Env’tl. Def. Ctr.*, 133 S. Ct. 1326, 1337 (2013).

With regard to the substance of a rule, the court must affirm as long as EPA considered all relevant factors and articulated a “rational connection between the facts found and the choice made.” *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962); *see also Milk Indus. Found. v. Glickman*, 132 F.3d 1467, 1476 (D.C. Cir. 1998). Agency actions, though subject to careful scrutiny, are presumed to be valid and are upheld if they “conform to certain minimal standards of rationality.” *Small*

Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 521 (D.C. Cir. 1983) (internal quotation marks and citation omitted). “Even when an agency explains its decision with less than ideal clarity,” a court “will not upset the decision on that account if [EPA’s] path may reasonably be discerned.” *Alaska Dep’t of Env’tl. Conservation v. EPA*, 540 U.S. 461, 497 (2004) (internal quotation marks and citation omitted); *Wis. Pub. Power, Inc. v. FERC*, 493 F.3d 239, 273 (D.C. Cir. 2007).

ARGUMENT

I. EPA has the authority to change the listing status of a non-ozone-depleting alternative to ozone-depleting substances upon a determination that other available alternatives pose a lower overall risk to human health and the environment.

Congress enacted Title VI of the CAA to comprehensively address stratospheric ozone depletion and the transition to non-ozone-depleting substances. Section 7671k, in particular, requires EPA to promulgate a regulatory scheme ensuring that the use of alternatives to ozone-depleting substances does not lead to other environmental or human health problems where safer alternatives are available. According to Petitioners, once EPA identifies a non-ozone-depleting substance as acceptable, the statute precludes EPA from changing its status, regardless of the import of new information that may later come to light or the proliferation of safer alternatives. That position lacks any statutory or regulatory support.

First, nothing in the statute supports Petitioners’ claim that non-ozone-depleting substances, no matter how much risk they pose, must remain acceptable

forever. In fact, such a proposition directly conflicts with Congress's overall purpose in section 7671k. Congress did not limit EPA's authority to revise the lists of alternatives beyond requiring an assessment of comparative "overall risk."

Second, revising the list of acceptable substitutes based on new information and alternatives is fully consistent with EPA's established regulatory intent. From the outset of the Alternatives Program, EPA signaled its concern about hydrofluorocarbons and indicated that they should only be used as a short-term alternative to ozone-depleting substances. EPA made clear that it had the authority to revise acceptability determinations both generally and specifically with regard to hydrofluorocarbons. In this Rule, EPA simply changed the listing status of an alternative based on the application of the Agency's comparative risk framework, which it has used numerous times over the past two decades.

A. Congress directed EPA to ensure that approved alternatives to ozone-depleting substances pose lower overall risks to human health and the environment.

Section 7671k(c) of the CAA requires EPA to "promulgate rules . . . providing that it shall be unlawful to replace any [ozone-depleting] substance with any substitute substance which . . . may present adverse effects to human health or the environment" where less-risky alternatives are available. The interpretive question here is whether EPA, having added a non-ozone-depleting alternative to an Alternatives Program list, may subsequently change that alternative's listing status based on a determination that it may pose greater risk to human health or the

environment than other available alternatives. The answer to that question is unequivocally “yes.” To hold otherwise, as Petitioners advocate, would disregard Congress’s mandate that EPA consider risks to human health and the environment when regulating alternatives to ozone-depleting substances, and would stand in tension with settled principles of administrative law regarding an agency’s authority to reconsider prior decisions.

Petitioners’ arguments rest entirely upon their faulty mischaracterizations and reframing of EPA’s action here. More specifically, Petitioners labor to characterize the Rule as replacing one (hydrofluorocarbon-based) alternative to an ozone-depleting substance with a different (non-hydrofluorocarbon-based) alternative, characterizing the former as “first-generation” and the latter as “second-generation.” Pet’rs’ Br. 29-31, 35-40. In Petitioners’ construct, this is impermissible, as the statute only gives EPA the authority to “replace” ozone-depleting substances, not to “replace” a “replacement.”

Ultimately, Petitioners’ argument is little more than an exercise in sophistry. As explained more fully below, EPA is neither “replacing” anything, Pet’rs’ Br. 29-31, nor impermissibly substituting a “second-generation” substance for a “first-generation” substance, Pet’rs’ Br. 35-40. EPA’s action here was to revise Alternatives Program lists in light of new information and an expanded array of alternatives in compliance with Congress’s directive to restrict the use of alternatives that pose a greater overall risk to human health and the environment.

With that clarification in mind, EPA's action is unmistakably in step with the text of section 7671k specifically, and with Title VI more broadly. Petitioners' *Chevron* step one argument fails because nowhere does the text of section 7671k prohibit EPA's action here. To the contrary, the statute unambiguously provides EPA with broad regulatory discretion to restrict the use of potentially harmful alternatives. Similarly, even if the statute is viewed as ambiguous in this respect, Petitioners' alternative argument that the Rule is unreasonable under *Chevron* step two also fails because, if section 7671k is ambiguous, EPA's interpretation of the statute comports with Congress's intent to identify alternatives to ozone-depleting substances that pose lower adverse health and welfare effects.

1. Petitioners' challenge to EPA's statutory authority is untimely.

The CAA imposes a jurisdictional time limitation on challenges to EPA rulemakings. 42 U.S.C. § 7607(b); *Med. Waste Inst. and Energy Recovery Council v. EPA*, 645 F.3d 420, 427 (D.C. Cir. 2011). EPA established in the Initial Rule its authority to "initiate changes to [Alternatives Program] determinations independent of any petitions or notifications received," based on "new data on either additional substitutes or on characteristics of substitutes previously reviewed," and considering risks to human health and the environment other than ozone depletion. 59 Fed. Reg. at 13,047, 13,049. EPA specifically envisioned a scenario in which it might "revoke[]" an "acceptable listing . . . based on the availability of a new, lower-risk alternative" in

the context of an alternative with high global warming potential. *Id.* at 13,063. EPA also explained that it considered some alternatives to be acceptable in the “near-term”—including the hydrofluorocarbons at issue here—presaging a future change to their listing status. *E.g., id.* at 13,071-72, 13,083. Consistent with EPA’s view of its authority, the Agency has changed the status of a number of alternatives based on specific factors within the comparative risk framework, such as toxicity, exposure concerns, and ozone-depleting potential. RTC 167, JAXX. Any challenge now is untimely. *Med. Waste*, 645 F.3d at 427. Petitioners’ attempt to recast EPA’s action as described below, *infra* Argument I.A.2.a., does not rescue their case.

2. Congress unambiguously directed EPA to regulate alternatives to ozone-depleting substances.

Even if timely, Petitioners’ arguments still fail because EPA’s action is consistent with the text of section 7671k, as well as its context, its legislative history, and the policy behind the section and Title VI as a whole.

a. Section 7671k sets forth Congress’s “[s]afe alternatives policy.” Congress demonstrated in this section an intent to regulate the *alternatives* to ozone-depleting substances, not the ozone-depleting substances themselves. Congress directed EPA to promulgate regulations to regulate and publish lists of alternatives, and allowed individuals to petition EPA to add alternatives or change the listing status of alternatives. 42 U.S.C. § 7671k(c), (d). Different sections within Title VI speak to restrictions on ozone-depleting substances. *See, e.g.*, 42 U.S.C. § 7671c (“Phase-out of

production and consumption of [ozone-depleting] substances”); *id.* § 7671j (“Labeling”).

Petitioners seize upon one word in section 7671k(c)—“replace”—and strive to use it to invalidate EPA’s action. Pet’rs’ Br. 30-31. In essence, Petitioners’ argument is that the statute only gives EPA one bite of the apple, and that bite is to “replace” an ozone-depleting substance. In Petitioners’ view, once EPA initially selects a replacement, there no longer is an ozone-depleting substance to “replace,” and the statute does not provide EPA with authority to replace a replacement.

Petitioners’ arguments reflect a fundamental misunderstanding of both the use of the word “replace” in section 7671k, and the action EPA took here. The word “replace” in section 7671k is directed at end-users. EPA is to make it “unlawful to replace” an ozone-depleting substance with a prohibited substance. 42 U.S.C. § 7671k(c). What is “unlawful,” therefore, is an end-user’s replacement of an ozone-depleting substance with a prohibited substance, for example, by manufacturing a home air conditioner with a prohibited coolant in lieu of an ozone-depleting substance. EPA did not replace anything. Rather, EPA’s action here was simply to “publish a list of . . . the substitutes prohibited under this subsection for specific uses,” an action explicitly described in the statutory text. *Id.* § 7671k(c). Far from being “divorced from any connection to stratospheric ozone,” Pet’rs’ Br. 31-32, EPA’s action respects congressional intent to ensure that approved alternatives to

ozone-depleting substances reduce the overall risk to human health and the environment. *See* 42 U.S.C. § 7671k(a).⁸

EPA agrees with Petitioners that “Congress knows to speak in plain terms when it wishes to circumscribe, and in capacious terms when it wishes to enlarge, agency discretion.” *City of Arlington v. FCC*, 133 S. Ct. 1863, 1868 (2013); Pet’rs’ Br. 33. But section 7671k(c) contains no relevant circumscribing language. Indeed, Congress’s language could hardly be more “capacious,” directing EPA to restrict the use of substitutes for ozone-depleting substances that “may present adverse effects to human health or the environment.” 42 U.S.C. § 7671k(c).

Further, any contention that EPA’s authority to regulate alternatives submitted for review under the Alternatives Program is time-limited finds no support in the statutory text. *See* Pet’rs’ Br. 34-35. Section 7671k does not set an end date for the applicability of EPA’s regulations. Nor does it limit individuals seeking to add or remove a substitute from Alternatives Program lists. 42 U.S.C. § 7671k(d). Congress knows how to specify such limitations when it intends to. *See Jama v. Immigration and Customs Enforcement*, 543 U.S. 335, 341 (2005).⁹ Indeed, Title VI itself is replete with

⁸ Indeed, as noted *infra* Argument I.B.2., ozone-depleting substances are still being directly “replaced” by approved alternatives, regardless of when they were approved.

⁹ “We do not lightly assume that Congress has omitted from its adopted text requirements that it nonetheless intends to apply, and our reluctance is even greater

Cont.

deadlines. *E.g.*, 42 U.S.C. § 7671a(d) (limiting the length of extensions EPA may grant for the production of certain ozone-depleting substances). The absence of time limits in section 7671k is thus notable and important.

Additional indications of Congress's delegation of authority appear in the text. First, Congress could simply have directed EPA to promulgate a list of approved substitutes once, and left it at that. But Congress instead chose to require EPA to promulgate a system of regulation based upon risk comparisons. 42 U.S.C. § 7671k(c)(1). Second, Congress's use of the present tense is instructive. *United States v. Wilson*, 503 U.S. 329, 333 (1992). Had Congress not intended EPA to keep the Alternatives Program current with evolving knowledge of risk and availability, it could have used the past tense "determined" for EPA's identification of substitutes that pose a risk, instead of the present tense "determines." 42 U.S.C. § 7671k(c) (directing EPA to make unlawful the use of a substance it "determines may present adverse effects . . ."). In sum, the text of section 7671k supports EPA's action here.

b. The larger context of section 7671k also supports EPA's exercise of authority. Of course, Congress enacted Title VI in part to effectuate the Montreal Protocol, which prescribes the phase-out of ozone-depleting substances. But Petitioners are wrong to argue that Title VI merely implements that phase-out. Pet'rs' Br. 31-33. In fact, Title VI contains numerous provisions that have no counterpart in

when Congress has shown elsewhere in the same statute that it knows how to make such a requirement manifest." *Id.*

the Montreal Protocol, for example, sections 7671g (recycling and emissions reduction), 7671h (motor vehicle air conditioning servicing), 7671i (nonessential products), and 7671j (labeling), in addition to section 7671k.

c. Furthermore, Petitioners misread the legislative history they cite. *See* Pet'rs' Br. 33-34. The Engrossed Senate version of S. 1630 has a section entitled "Safe Alternatives Policy." S. 1630 ES, 101st Cong. § 514 (1990). Section 514(a) did not direct the replacement of all substances under the title, as Petitioners suggest, Pet'rs' Br. 33, but rather set forth the policy that such substances be replaced "to the maximum extent practicable" by alternatives that reduce risk. Although that version of the bill mirrors the requirement that producers of chemical substitutes provide EPA with health and safety studies, *id.* § 514(c)(1), the bill would not have authorized EPA to prohibit the use of such a substitute on the basis of those studies or anything else. Instead it would have required EPA to "maintain a public clearinghouse" of available alternatives, without regard to risk to human health or the environment, *see id.* § 514(b)(4), and it would have required all agencies to "seek to maximize the use" of safer alternatives, *see id.* § 514(d)(4)(A). If anything, then, the statute as enacted provides EPA with broader authority than the Senate's bill would have, not narrower.

d. EPA's action also comports with the policy of section 7671k. Congress empowered EPA to regulate alternatives to ozone-depleting substances, declaring that "[t]o the maximum extent practicable, [ozone-depleting] substances shall be replaced by chemicals, product substitutes, or alternative manufacturing processes that reduce

overall risks to human health and the environment.” 42 U.S.C. § 7671k(a). Section 7671k is the only section of Title VI that contains such a statement of policy. That section 7671k would then proceed to prohibit EPA from reducing overall risks to human health and the environment is untenable.

Petitioners’ hypothetical parade of horrors, Pet’rs’ Br. 34-35, aside from its erroneous reliance on Petitioners’ flawed “replacement of a replacement” theory, has a flip side: their interpretation of the statute would force EPA to leave a toxic chemical on the approved list where that toxic effect was not discovered until years later, simply because it does not deplete ozone. Not only that, but it would also prohibit the alteration of the list of approved alternatives if one day after an alternative was added, a far-less-risky alternative was discovered. That other regulatory programs could also potentially restrict the use of these chemicals is not dispositive. *See Philadelphia Television Broad. Co. v. FCC*, 359 F.2d 282, 284 (D.C. Cir. 1966) (noting that where “Congress has given an agency . . . various tools with which to protect the public interest, the agency is entitled to some leeway in choosing which jurisdictional base and which regulatory tools will be most effective”). EPA should not be forced to keep an alternative on the approved list where the Agency has unambiguously determined that a less-risky substitute is available, and nothing in section 7671k indicates that Congress intended to hamstring EPA in that way. *See EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1601 (2014) (noting that when Congress intends to impose requirements upon EPA it does so “expressly”).

But to the extent that the Parties' disagreements reveal an ambiguity in the text, that is an ambiguity that Congress intended EPA to resolve.

3. To the extent section 7671k is ambiguous, EPA's reading is entirely reasonable under step two of *Chevron*.

If section 7671k does not speak to the precise question at issue—whether EPA may, having added a non-ozone-depleting alternative to a list, change its listing status—the question is left for EPA to resolve. *EME Homer City*, 134 S. Ct. at 1604 (“Under *Chevron*, we read Congress’ silence as a delegation of authority to EPA to select from among reasonable options.” (citations omitted)); *see also Barnhart v. Walton*, 535 U.S. 212, 218 (2002) (“[S]ilence, after all, normally creates ambiguity. It does not resolve it.”). If Congress left a statutory gap for EPA to fill, EPA properly discharged its obligation.

a. Section 7671k does not in any way limit EPA’s authority to revise the list of acceptable alternatives to ozone-depleting substances in the absence of a request under section 7671k(d). EPA therefore reasonably interpreted section 7671k in the Initial Rule as allowing the Agency to determine that an alternative that was once an acceptable substitute for ozone-depleting substances no longer meets the statutory and regulatory criteria. Petitioners recognize that EPA can alter the Alternatives Program lists, Pet’rs’ Br. 14-15, but apparently believe that Congress somehow carved out from EPA’s authority one particular action: changing the status of a non-ozone-depleting substance from acceptable to unacceptable, Pet’rs’ Br. 35-38. Nothing in the

statute supports this. When Congress uses “broad language,” it “reflects an intentional effort to confer [regulatory] flexibility,” “without [which], changing circumstances and scientific developments would soon render the [CAA] obsolete.” *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007).

That Congress allowed individuals to petition EPA to add or remove an alternative from the Alternatives Program lists at any time, 42 U.S.C. § 7671k(d), reflects a presumption that the Agency has the inherent authority to do so, *see id.* § 7601(a)(1) (providing the Administrator the authority to “prescribe such regulations as are necessary to carry out his functions under this chapter”). It would be strange for Congress to allow an individual to petition EPA to add or remove an alternative with no time limit, while preventing the Agency from doing so on its own.

Further, “once an agency’s statutory construction has been fully brought to the attention of the public and the Congress, and the latter has not sought to alter that interpretation although it has amended the statute in other respects, then presumably the legislative intent has been correctly discerned.” *United States v. Rutherford*, 442 U.S. 544, 554 n.10 (1979) (internal quotation marks and citation omitted). EPA published its regulations pursuant to section 7671k in 1994. Initial Rule, 59 Fed. Reg. at 13,147. Congress has changed the requirements of Title VI on several occasions since then. *See* Pub. L. No. 104-66, § 3003 (Dec. 21, 1995) (terminating certain reporting requirements); Pub. L. No. 105-277, § 764 (Oct. 21, 1998) (amending requirements related to methyl bromide); Pub. L. No. 112-81, § 320 (Dec. 31, 2011) (adding a

provision regarding certain acceptable fire suppression agents listed in accordance with section 7671k(c)). That Congress did not seek to reverse EPA's interpretation or override EPA's regulations is instructive. And EPA need not codify this interpretation explicitly in its rules for the interpretation to warrant deference. *City of Los Angeles v. Shalala*, 192 F.3d 1005, 1016 (D.C. Cir. 1999).

b. More broadly, an agency's inherent authority to revise an earlier administrative determination where "faced with new developments or in light of reconsideration of the relevant facts" "is an essential part of the office of a regulatory agency." *Am. Trucking Assocs. v. Atchison, Topeka & Santa Fe Ry.* 387 U.S. 397, 416 (1967). Here, EPA is not even going so far as to "overturn past administrative rulings and practice," *id.*; rather, EPA is simply changing the listing status of certain hydrofluorocarbons in accordance with what the statute and EPA's regulations already allow.¹⁰ Agencies also have the authority to "prevent frustration of a statutory mandate." *Int'l Union, United Mine Workers of Am. v. Mine Safety & Health Admin.*, 823 F.2d 608, 616 (D.C. Cir. 1987). Congress has instructed EPA to reduce the overall risks posed by alternatives to ozone-depleting substances; leaving harmful alternatives on the approved list would certainly frustrate Congress's direction. It is entirely reasonable, as well as consistent with the above-described background principles of

¹⁰ This is not a case where the statute already contains a specific provision prescribing standards for changing prior agency action. *Cf. New Jersey v. EPA*, 517 F.3d 574, 583 (D.C. Cir. 2008).

administrative law, for EPA to construe the statute to avoid such a counterproductive and unnecessary result.

c. EPA has found climate change to be a threat to human health and the environment, and that hydrofluorocarbons exacerbate that threat. *See* 79 Fed. Reg. at 46,133. As such, EPA is well-within its authority to restrict the use of hydrofluorocarbons under the Alternatives Program where less-risky alternatives are available. Petitioners' recasting of EPA's action as replacing a "first-generation" alternative with a "second-generation" alternative is a mischaracterization. *See* Pet'rs' Br. 35-38; *see supra* Argument I.A. Even if Petitioners' "generation" theory were instructive, by changing the listing status of certain hydrofluorocarbons, EPA's action is only regulating "first-generation" alternatives. Indeed, the regulatory status of the allegedly "second-generation" alternatives did not change in this rulemaking; they had already been approved, and they remain so. In sum, EPA has properly discharged Congress's instruction to promulgate rules that regulate substitutes for ozone-depleting substances, and has reasonably interpreted the statute to allow the Agency to revise those regulations when necessary.

B. EPA's regulations also fully support EPA's action here.

Petitioners' arguments regarding EPA's regulatory authority are even less persuasive than their arguments regarding EPA's statutory authority, *see* Pet'rs' Br. 38-40, because EPA deserves even more deference when interpreting and applying its own regulations, *Auer*, 519 U.S. at 461.

1. Petitioners' challenge to EPA's regulatory authority is untimely.

EPA promulgated regulations over twenty years ago setting forth how it would evaluate the acceptability of alternatives. Petitioners' challenge to EPA's authority as codified in its regulations and as stated in the preamble to the Initial Rule is therefore no more timely than their challenge to EPA's statutory authority. *See* 42 U.S.C. § 7607(b)(1). EPA has always taken the position that the acceptability of substitutes must be evaluated "relative to the [ozone-depleting substances] being replaced, *as well as to other substitutes for the same end-use,*" 40 C.F.R. § 82.170(a) (emphasis added), as Petitioners recognize, Pet'rs' Br. 38. Once again Petitioners misconstrue the facts in an attempt to invalidate EPA's action, erroneously stating that allegedly "second-generation" alternatives are not "substitutes" for ozone-depleting substances within the meaning of EPA's regulations. Pet'rs' Br. 39. But the alternatives Petitioners reference were submitted to EPA for approval under the Alternatives Program, and EPA approved them. *See* 80 Fed. Reg. at 42,937. EPA did not reopen those approvals in this rulemaking. Such substances are therefore indeed "substitutes," and Petitioners' arguments to the contrary come too late. But even if timely, Petitioners' argument does not withstand scrutiny.

2. EPA has reasonably asserted the authority to compare all available alternatives.

Contrary to Petitioners' implications, Pet'rs' Br. 39-40, nowhere has EPA stated that the "generation" of an alternative is important in the comparative risk

framework. 59 Fed. Reg. at 13,052. EPA does not have a “first-generation” list and a “second-generation” list. EPA simply lists approved alternatives for each end-use, and here EPA compared those alternatives against each other in light of new information, the end result being an up-to-date list for each end-use. Final Rule, 80 Fed. Reg. at 42,936. Petitioners’ contention that EPA has taken the position that “second-generation” substitutes may not be compared against “first-generation” substitutes for the purpose of assessing the “first generation” substitute’s acceptability, Pet’rs’ Br. 39, is false. EPA has said nothing of the kind.

Petitioners attempt to find support in EPA’s response to comments about “second-generation” alternatives in the Initial Rule, but take EPA’s statement out of context. EPA simply stated that a producer of a non-ozone-depleting substitute need not submit it for EPA review under the reporting requirements of section 7671k(e) and 40 C.F.R. § 82.176(a) if intended as a replacement for a different non-ozone-depleting substitute. *See* 59 Fed. Reg. at 13,052. Nevertheless, manufacturers have voluntarily sought approval for alternatives that Petitioners would consider to be “second-generation,” *see* 80 Fed. Reg. at 42,937; EPA’s approvals of those alternatives are not subject to challenge here. EPA never stated that such alternatives could not form a basis for comparison against other alternatives, or that so-called “first-generation” alternatives could not be removed from the list of acceptable substitutes due to the advent of superior “second-generation” alternatives. In fact, EPA has explicitly stated that changes to the lists could consider “new data on either additional

substitutes or on characteristics of substitutes previously reviewed.” 59 Fed. Reg. at 13,047. Simply put, EPA’s action here is wholly distinct from what Petitioners surmise, and is wholly supported by EPA’s regulations.

Petitioners’ citation to EPA’s response to OZ Technology’s petition is misguided at best. *See* Pet’rs’ Br. 40. OZ Technology specifically requested that EPA change the listing status of HC-12a from unacceptable to acceptable, and the status of HFC-134a from acceptable to unacceptable. In responding, EPA simply sought to clarify that, in evaluating OZ Technology’s request, EPA was not reviewing the acceptability of HC-12a as a substitute for HFC-134a. EPA, Response to OZ Technology’s Petition, Att. at 1, JAXX. That statement did not form the basis of EPA’s decision, contrary to Petitioners’ implication. Rather, EPA’s decision was based on the Agency’s determination that OZ Technology submitted inadequate information regarding the flammability of HC-12a. *Id.* at 2, JAXX.

Finally, even if Petitioners’ “second-generation” theory held together in concept, it fails in practice. EPA has made clear that “as long as [ozone-depleting substances] are being used, any substitute designed to replace these chemicals is subject to review under section [7671k].” Initial Rule, 59 Fed. Reg. at 13,052. Although in some cases the use of ozone-depleting substances has ceased, we are not yet in a “second-generation” substitute world. For example, for end-uses within the refrigeration sector such as supermarket systems and remote condensing units, end-users are still directly replacing ozone-depleting substances with Alternatives Program

alternatives. *See* Supermarket Co. ABC Comments at 1, EPA-HQ-OAR-2014-0198-0200, JAXX. Ultimately, Petitioners' distorted vision of EPA's authority merits little consideration; EPA's interpretation of its regulatory authority deserves deference.

C. EPA never changed position; there was therefore no change in position to explain.

Petitioners alternatively argue that, if EPA has the authority to do what it did, it changed its position without explanation. *See* Pet'rs' Br. 41-43. As explained above, EPA did not change its position; rather, Petitioners twist EPA's action in an attempt to suggest it is not consistent with past Agency positions. *See supra* Argument I.A. EPA acted fully consistent with its long-held position in determining that certain hydrofluorocarbons should no longer be on the list of approved alternatives for some end-uses in light of the increased awareness of the risk posed by climate change and the addition of alternatives that pose a lower risk to human health and the environment over the past twenty years. None of Petitioners' arguments have merit.

II. EPA's revisions to the list of approved alternatives to ozone-depleting substances were neither arbitrary nor capricious.

EPA has followed Congress's instruction to promulgate regulations that restrict the use of alternatives to ozone-depleting substances that may adversely affect human health or the environment when other alternatives are both (a) currently or potentially available and (b) pose a lower overall risk to human health or the environment. *See supra* Statement of the Case I. Those regulations identify a set of criteria that EPA uses to evaluate such alternatives. Since then, EPA has applied the criteria in its

regulations to update the Alternatives Program lists as the suite of alternatives and knowledge about risks to human health and the environment have evolved. EPA's restriction of certain hydrofluorocarbons in the specific end-uses addressed in this Rule is no different. Whether considering EPA's assessment of comparative risk, atmospheric effects, or cost, EPA's decision is fully grounded in the facts and the law. In short, in taking this action, EPA considered the relevant factors, fully explained its reasoning, and amply supported its decision with reference to relevant record data and information. The arbitrary and capricious standard requires nothing more. *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43.

A. Petitioners' challenges to EPA's interpretation of its regulations are untimely.

Petitioners continue to raise untimely arguments when criticizing how EPA has applied its comparative risk framework. Over twenty years ago, EPA reasonably set forth the criteria it would use to assess substitutes for ozone-depleting substances within a comparative risk framework. Concerns about EPA's approach were raised and responded to at the time. *See supra* Statement of the Case I.B.2. EPA did not revisit its interpretation of the criteria here; that EPA explained its regulations in responding to comments is not to the contrary. *See Kennecott Utah Copper Corp. v. U.S. Dep't of Interior*, 88 F.3d 1191, 1213 (D.C. Cir. 1996) (“[W]hen the agency merely responds to an unsolicited comment by reaffirming its prior position, that response does not create a new opportunity for review.”).

B. EPA properly found that other available alternatives to ozone-depleting substances pose a lower overall risk than certain hydrofluorocarbons.

When EPA initially approved both the hydrofluorocarbons addressed in the Rule and the alternatives to which they were compared, EPA assessed all criteria the Agency's regulations require. *See generally* Tables of Alternatives for End-Uses Considered in the Final Rule, EPA-HQ-OAR-2014-0198-0243, JAXX. Those characteristics have not changed, and EPA incorporated those rulemakings here. *See* 80 Fed. Reg. at 42,905. What has changed, however, is the urgency of the risk climate change poses to human health and the environment, and therefore how that risk is considered in the comparative risk framework. When reviewing EPA's judgments in this regard, "EPA, not the court, has the technical expertise to decide what inferences may be drawn from the characteristics of . . . substances and to formulate policy with respect to what risks are acceptable." *NRDC v. EPA*, 824 F.2d 1146, 1163 (D.C. Cir. 1987) (citations and quotation marks omitted). The Court's role is to "determine whether the agency has exercised a reasoned discretion, with reasons that do not deviate from or ignore the ascertainable legislative intent." *Id.* (citations and quotation marks omitted). EPA's action comports with this standard.

Petitioners' contention that EPA "must make a finding that the substitute poses a significant risk" before restricting any previously-approved SNAP substitute, Pet'rs' Br. 47, finds no support in the statute or regulations. Rather than identify a specific quantum of risk, EPA must simply determine that the alternative "may" pose

a risk and that other alternatives are available that pose an overall lower risk to human health and the environment. *See* 42 U.S.C. § 7671k(c). EPA's statement over twenty years ago that it would not take action to remove substitutes where the difference was "marginal[]" is not to the contrary. 59 Fed. Reg. at 13,046. EPA did not bind itself to make a specific finding of "significant risk" regarding the alternative subject to removal based on absolute criteria, nor does EPA need to do so. *See Catamba Cty., N.C. v. EPA*, 571 F.3d 20, 39 (D.C. Cir. 2009) (finding reasonable a multi-factor test that "lacks a definite threshold or clear line of demarcation" (internal quotations and citations omitted)). Rather, EPA has consistently made its decisions on the basis of comparisons among the alternatives being considered in accordance with Congress's directive and does not draw bright-line cutoffs or establish thresholds of emissions. *E.g.*, Final Rule, 80 Fed. Reg. at 42,904 (describing the risk of certain hydrofluorocarbons as "significantly greater" than other alternatives without identifying a specific risk level).

In making the comparisons EPA's regulations require, EPA discussed its assessment of the overwhelming evidence of the risk greenhouse gases such as hydrofluorocarbons pose. EPA provided a comprehensive description of the science relating to the risks associated with greenhouse gas air pollution, which pollution includes hydrofluorocarbons, and those risks have been verified by prior and subsequent science. *See* Proposed Rule, 79 Fed. Reg. at 46,133. In addition, EPA identified the additional carbon dioxide-equivalent emissions that would be avoided

by using other alternatives rather than hydrofluorocarbons. Climate Benefits of the SNAP Program Status Change Rule, July 2015, at 13-14, EPA-HQ-OAR-2014-0198-0239, JAXX-XX. Alternatives that are available now could replace ozone-depleting substances instead of hydrofluorocarbons and effect a near-100 percent reduction in the growth of carbon dioxide-equivalent emissions in certain sectors. *Id.* Petitioners' attempt to minimize EPA's findings as establishing only "some risk to climate" ignores the record. But even if EPA were not entirely certain as to the extent of the deleterious effects of hydrofluorocarbons, "the existence of some uncertainty does not, without more, warrant invalidation" of EPA's determination of risk. *Coal. for Responsible Regulation*, 684 F.3d at 121. Much like CAA section 7521(a), which this Court has found to require "precautionary, forward-looking scientific judgment," *id.* at 122, section 7671k sets forth a precautionary standard, requiring the restriction of the use of an alternative where EPA determines it "may present adverse effects to human health or the environment." 42 U.S.C. § 7671k(c) (emphasis added). EPA has made that determination here, which is all that Congress requires.

C. EPA appropriately considered atmospheric effects, and the central role of global warming potential to those effects, as one of the criteria in its analysis.

"Atmospheric effects and related health and environmental impacts" is one of seven criteria EPA evaluates as part of its comparative risk framework. 40 C.F.R. § 82.180(a)(7)(i). In the Proposed Rule, EPA explained that this criterion includes an evaluation of "ozone depletion potential and the 100-year integrated [global warming

potential] of compounds to assess atmospheric effects.” 79 Fed. Reg. at 46,131. Petitioners assert that additional data points must be considered, such as indirect contributions to global warming, environmental release data, and pollution control data. Pet’rs’ Br. 48-49, 49 n.4. Although manufacturers seeking to introduce a substance into interstate commerce must submit that information to EPA under section 7671k(e), 40 C.F.R. § 82.178(a)(6), (11), such information may inform, but does not govern, EPA’s decisional criteria under section 7671k(c), *id.* § 82.180(a)(7). EPA is free to use the range of available information in its decision-making; it is the role of EPA, not Petitioners, to determine what is relevant. *City of Waukesha v. EPA*, 320 F.3d 228, 248-51 (D.C. Cir. 2003).

In arguing that EPA should conduct more in-depth analyses of energy efficiency, emissions, and controls, Petitioners would require EPA to undertake unprecedented amounts of additional analysis, effectively necessitating knowing how much of a substance every piece of equipment would use, how efficient that piece of equipment is, the way the equipment is operated, and what kind of energy source powers that equipment—all for each regulated end-use. But neither the statute nor EPA’s regulations require such excruciating detail. EPA reasonably assessed and compared the relative atmospheric effects of the alternatives under analysis, and adequately explained the Agency’s conclusions in responding to Petitioners’ comments. The law requires no more.

1. EPA properly explained the role of global warming potential in the atmospheric effects criterion.

Petitioners' argument that EPA improperly used global warming potential in applying the comparative risk framework is wrong. Pet'rs' Br. 49-53. Contrary to Petitioners' implication, global warming potential is not just a raw number untethered from any indication of actual risk. EPA has explained that "global warming potential considers both radiative forcing¹¹ and atmospheric lifetime, with different [] values based upon the amount of impact a substance is anticipated to have over 20 years, 100 years, or 500 years." For this rulemaking, EPA used the "100-year integrated global warming potential," the value EPA has used in the past. RTC 162, JAXX. Global warming potential is the "recommended metric to compare future climate impacts of greenhouse gas emissions," according to the Intergovernmental Panel on Climate Change, providing a tool for "multi-gas emitters [to] compare and compose mitigation measures." *Id.* It is precisely because global warming potential is a constant, independent of factors specific to a particular application, that it is useful in a comparative risk framework.

EPA's consideration of global warming potential as central to the atmospheric effects criterion dates from the preamble to the Initial Rule. EPA addressed

¹¹ Radiative forcing is "[a] measure of how a climate forcing agent [such as a greenhouse gas] influences the energy balance of Earth, with a positive value indicating a net heat gain to the lower atmosphere, which leads to a globally average surface temperature increase, and a negative value indicating a net heat loss." UNEP Report at 6, JAXX.

comments regarding the use of global warming potential, stating that “[t]he Agency believes that the Congressional mandate to evaluate substitutes based on reducing overall risk to human health and the environment authorizes use of global warming as one of the SNAP evaluation criteria.” 59 Fed. Reg. at 13,049; *see also supra* Statement of the Case I.B.2. EPA also identified hydrofluorocarbons as a potential concern at that time due to global warming potential. 59 Fed. Reg. at 13,071. Since then, the suite of available alternatives to ozone-depleting substances with global warming potentials lower than hydrofluorocarbons has greatly expanded. EPA’s decision to reevaluate the alternatives, and to focus first on those alternatives with the highest global warming potential in light of increasing knowledge of the risks posed by climate change, is fully within the Agency’s authority. *See Allied Local & Reg’l Mfrs. Caucus v. EPA*, 215 F.3d 61, 72 (D.C. Cir. 2000) (“An agency is entitled to the highest deference in deciding priorities among issues, including the sequence and grouping in which it tackles them.” (citations and internal quotations omitted)).

Petitioners’ comparison of hydrofluorocarbons with carbon dioxide in this context is a red herring. Pet’rs’ Br. 51. EPA has never stated that carbon dioxide is “always acceptable” under any test. EPA has determined that, as compared with other alternatives such as hydrofluorocarbons, carbon dioxide poses a lower risk (not “zero”) in certain end-uses as an alternative to ozone-depleting substances. *E.g.*, Final Rule, 80 Fed. Reg. at 42,888 (approving carbon dioxide for motor vehicle air condition systems with use conditions to address the concern that carbon dioxide

“could reduce a driver’s attentiveness and performance” if leaked). EPA is taking action to restrict emissions of carbon dioxide where it makes sense to do so at this time, and this Court is no stranger to EPA’s efforts in this regard. *See, e.g. West Virginia v. EPA*, No. 15-1363, *petition for review filed* (D.C. Cir. Oct. 23, 2015) (challenging EPA’s Clean Power Plan). Here, restricting certain hydrofluorocarbons is consistent with the statutory purpose because, molecule-for-molecule, they are so much more harmful than carbon dioxide that even small amounts make a big difference—depending on the particular substance, hydrofluorocarbons can impact climate change thousands of times more powerfully than carbon dioxide. 79 Fed. Reg. at 46,133. And EPA certainly has the discretion to “whittle away” at the “massive problem[]” of climate change. *Massachusetts*, 549 U.S. at 524. Further, Petitioners turn section 7671k on its head when arguing that EPA would be required to prohibit the use of any alternative with a higher global warming potential than carbon dioxide. *See Pet’rs’ Br.* 51-52. Congress requires EPA to restrict the use of a substance when the Agency has determined it may pose a risk and other less-risky alternatives are available for the same end-use, not to prohibit the use of all other alternatives because one alternative is superior in one respect.

Petitioners’ arguments about blends fare no better. *See Pet’rs’ Br.* 52. Because global warming potential is a chemical-specific value, EPA has determined appropriate global warming potential values for blends by weighting the global warming potential of the different components by the mass percentage in the blend.

Thus, if a piece of equipment uses a small amount of HFC-134a but mostly other substances with lower global warming potentials, the overall blend would have a lower global warming potential. For example, in the Proposed Rule, EPA described the individual global warming potentials of each component of the refrigerant R-404A and calculated the global warming potential for the blend as 3,920, based upon the mass percentages of the three hydrofluorocarbons in the blend. 79 Fed. Reg. at 46,143-44. So where a blend containing one or more hydrofluorocarbons has a lower global warming potential than another blend or hydrofluorocarbon that is available in the same end-use, and EPA finds, based on a comparison of all regulatory criteria, that the former poses a lower overall risk than the latter, EPA may restrict the use of the latter.

Petitioners' citation of section 7671a(e) is a non sequitur, Pet'rs' Br. 53, because Petitioners acknowledge that provision as applying only to ozone-depleting substances, not their alternatives. In any event, EPA has long maintained that section 7671a(e) does not override the mandate in section 7671k(c) to consider the overall risk to human health and the environment, and that EPA could find no basis to exclude climate change from an analysis of overall risk. Final Rule, 80 Fed. Reg. at 42,937-38 (citing the Initial Rule, 59 Fed. Reg. at 13,094). Moreover, EPA did not use global warming potential as the sole basis for evaluating whether to restrict the use of hydrofluorocarbons. While the risk of climate change was the impetus for reassessing the comparative risks of available substitutes for ozone-depleting substances, EPA

conducted a thorough analysis of all its regulatory criteria to determine where restrictions on the use of hydrofluorocarbons would be appropriate. *See* Proposed Rule, 79 Fed. Reg. at 46,135-56.

2. EPA's conclusion about the appropriate role of energy efficiency information in its analysis was reasonable.

Although not clarifying exactly what EPA should have done differently, Petitioners argue that EPA did not place enough importance on energy efficiency in the assessment of comparative risk. Pet'rs' Br. 53-57. But EPA's comparative risk framework criteria do not include an explicit requirement to address energy efficiency. In the Initial Rule, EPA explained that energy efficiency "resulting from production or use of the substitutes" could be one of the elements of the atmospheric effects criteria as part of the "total global warming potential" analysis. 59 Fed. Reg. at 13,068. In practice, EPA uses energy efficiency data to inform its analysis of the "cost and availability" criteria, specifically, whether an alternative can be used in compliance with U.S. Department of Energy regulations that set energy efficiency standards for certain sectors. RTC 86, JAXX. No one provided information to EPA suggesting that the remaining available substitutes could not meet those standards, or that all the alternatives remaining acceptable for use would result in lower energy efficiency than those for which EPA changed the status. RTC 179, JAXX. In fact, the information available to EPA indicated that the opposite was true. *Id.*

Furthermore, Petitioners ignore the nature of EPA's action here. All the alternatives subject to comparison in this rulemaking have already been approved for inclusion in the Alternatives Program. EPA has already concluded that the overall climate impacts of the compared alternatives were not greater than the overall climate impacts of the hydrofluorocarbons at issue. *See, e.g.*, 76 Fed. Reg. 17,488, 17,500-01 (Mar. 29, 2011); 76 Fed. Reg. 78,832, 78,838 (Dec. 20, 2011). EPA did not receive information contradicting its earlier conclusions in this regard in this rulemaking. An Agency deserves a high degree of deference when making decisions about what data are relevant, *City of Waukesha*, 320 F.3d at 248-51, and EPA thoroughly explained what energy efficiency information it considered as part of its decision and how that information was used.

EPA noted that there is no "established Agency practice of including energy efficiency in the overall risk analysis," RTC 179, JAXX, because EPA has found it impractical to perform a detailed analysis of indirect global warming impacts associated with a particular substitute. EPA explained both in the Response to Comments and in the preamble to the Final Rule why this is. RTC 179-80, JAXX-XX; 80 Fed. Reg. at 42,921-22. For example, the inherent energy efficiency of the substitute is not the same as the energy efficiency of equipment using that substitute. To analyze efficiency the way Petitioners suggest, *see* Pet'rs' Br. 57, would require EPA to identify not only every type of equipment but also each model, identify or predict the amount of each available substitute that might be used in each type of equipment,

make assumptions about how the equipment would be operated, assess what type of electricity was used to both manufacture the substance and power the equipment or manufacturing process, and so on. *See* Final Rule, 80 Fed. Reg. at 42,921; RTC 178-80, JAXX-XX. Simply put, that is unrealistic. That Petitioners would have assigned more importance to energy efficiency than EPA determined was appropriate is no reason to invalidate EPA's action. *Miss. Comm'n*, 790 F.3d at 162.

3. EPA reasonably applied the regulatory criteria to the evaluation of the risk of emissions of hydrofluorocarbons.

Petitioners likewise fail to persuade that EPA's action was deficient because EPA identified hydrofluorocarbons as posing a greater risk than other available substitutes due to the collective harm of their emissions over time instead of an assessment of emissions specific to each instance of hydrofluorocarbon use. *See* Pet'rs' Br. 57-61. Under the statute and EPA's regulations, it is enough for EPA to identify an alternative—here hydrofluorocarbons—as posing an atmospheric risk, and then to compare that risk to the atmospheric risk posed by other substitutes, in conjunction with EPA's other regulatory criteria, to determine whether the overall risks of other available alternatives are lower. *See* 40 C.F.R. § 82.170.

Petitioners again ignore that EPA is not assessing hydrofluorocarbons in isolation, determining what amount of emissions might trigger a restriction on their use; rather, EPA is using the information it already has about the effects of emissions of certain hydrofluorocarbons as compared with other available alternatives, and

determining whether the overall risk of those hydrofluorocarbons is greater. Because the cumulative effects of both current and future emissions of certain hydrofluorocarbons with high global warming potential is the risk EPA identified here, it was reasonable for EPA to focus on comparisons of global warming potential as directly relatable to impacts on climate. *See* RTC 161-62, JAXX-XX.

Petitioners' comparison of EPA's conclusion in the Endangerment Finding that greenhouse gas emissions from motor vehicles contribute to air pollution with EPA's conclusions here, Pet'rs' Br. 59, is a gross oversimplification. Assessing the aggregate contribution of cars to air pollution is undeniably more "simple and straightforward" than, for example, assessing the contribution of emissions of hydrofluorocarbons from each end-use in every sector covered by the Alternatives Program. Petitioners' comparison of hydrofluorocarbons with volatile organic compounds is similarly inapt. Central to EPA's analysis of hydrofluorocarbons was the projected growth in their emissions, exacerbating the risk of their continued use; the same is not true for volatile organic compounds. RTC 173, JAXX.¹²

In any case, a requirement to "assess the contribution of each banned HFC in each end use or each sector to . . . global warming," Pet'rs' Br. 61, far exceeds any reasonable construction of what is required to assess the risk from one criterion, much less extrapolated to the multiple types of risk considered in the "overall risk"

¹² Petitioners' references to exposure assessments and environmental release data, Pet'rs' Br. 58, also ignore the nature of the risk EPA identified.

analysis. Indeed, whereas a contribution analysis was explicitly required for the Endangerment Finding before regulating motor vehicle emissions, *see* 42 U.S.C. § 7521(a), “overall risk” is the standard EPA is held to here, *id.* § 7671k(c). And in considering “overall risk,” it is entirely reasonable for EPA to consider the likelihood of rapid hydrofluorocarbon emissions growth writ large, which EPA found was the case here.

4. EPA reasonably considered controls on hydrofluorocarbons to the extent relevant to its comparative risk analysis.

Petitioners err in arguing that EPA inadequately considered controls on emissions of hydrofluorocarbons. *See* Pet’rs’ Br. 62-66. EPA did not “reject” the idea of such controls in the Final Rule. But EPA did determine that the available controls were insufficient to mitigate the risk of hydrofluorocarbons. Final Rule, 80 Fed. Reg. at 42,899. EPA’s judgment in this regard is entitled to deference. *Miss. Comm’n*, 790 F.3d at 150, 162.

EPA requires manufacturers subject to the requirements of section 7671k(e) to submit “[e]nvironmental release data,” including “available information on any pollution controls used or that could be used in association with the substitute.” 40 C.F.R. § 82.178(a)(11). These submissions do not become criteria in EPA’s comparative risk analysis under section 7671k(c). *See* 40 C.F.R. § 82.180(a)(7). Rather, EPA uses this information, as appropriate, in applying its regulatory criteria. *Id.* § 82.180(a)(7).

EPA was well within its discretion to determine that, given the differences in global warming potential between certain hydrofluorocarbons and other available alternatives, restricting the use of those hydrofluorocarbons in specific end-uses is preferable to allowing continued use with controls that would not entirely limit emissions. For example, although CAA section 7671g imposes prohibitions on *knowing* venting of refrigerants in the course of certain activities, EPA does not treat equipment leaks, such as leaks from supermarket systems or cars, as “knowing” venting under its current section 7671g implementing regulations. 40 C.F.R. § 82.154(a)(1). Nor does the prohibition on intentional venting apply to non-refrigerant uses, such as aerosols and foams. For those reasons, EPA has determined that the venting prohibition does not mitigate the global warming potential risk from the hydrofluorocarbons at issue such that EPA could conclude that they did not pose more risk than other available substitutes. RTC 166-67, JAXX-XX. All things being equal, an unintentional release of a hydrofluorocarbon is still worse than an unintentional release of a substance with a lower global warming potential.¹³

Additionally, the Failure Mode and Effect Analysis technique Petitioners suggest, Pet’rs’ Br. 65, does not address refrigerant leaks due to vehicle collisions, and could not address many types of leaks that could occur due to the motion of vehicles.

¹³ Although EPA has recently proposed a rule that would further reduce emissions of refrigerants, 80 Fed. Reg. 69,458 (Nov. 9, 2015), using a refrigerant with a lower global warming potential than a hydrofluorocarbon would still pose lower overall risk.

Neither can the technique address the release of foam blowing agent from closed-cell foams in a landfill. Further, aerosol cans are emissive by their very nature; controls on those products are not realistic. *See* RTC 166-67, JAXX-XX. EPA's determination that controls were inadequate to overcome the risk posed by hydrofluorocarbons was entirely reasonable.

D. The Final Rule comports with EPA's regulations in regard to consideration of cost.

Congress directed EPA to restrict the use of alternatives to ozone-depleting substances based upon (1) a reduction of overall risk to human health and the environment and (2) availability. 42 U.S.C. § 7671k(c). Nowhere in this provision does Congress mention cost. Congress therefore left a "gap for [EPA] to fill" with respect to whether cost is a valid consideration as to either the risk analysis or the availability analysis. *Chevron*, 467 U.S. at 843-44. In the Initial Rule, EPA reasonably interpreted section 7671k(c) to allow consideration of the cost of the substitute under review in determining whether it could be considered "available." 40 C.F.R. § 82.180(a)(7)(vii); 1994 RTC 20, JAXX. EPA did not include other cost considerations in its regulatory criteria. Petitioners' arguments regarding consideration of cost, Pet'rs' Br. 66-68, fail for two principal reasons: (1) EPA's regulations do not provide for considering the types of costs Petitioners raise, such as the cost of transition to other alternatives; and (2) even if the regulations could be read so as to allow for consideration of such costs, it is reasonable for EPA to elect not to consider them because they are too speculative

to provide meaningful information for EPA's analysis. EPA's interpretation of its own regulations is deserving of heightened deference.

1. As explained, EPA has separate regulations for (1) the information that manufacturers seeking to introduce a substance into interstate commerce must submit, *see* 40 C.F.R. § 82.178, and (2) the criteria EPA considers to determine acceptability of an alternative to ozone-depleting substances, *see id.* § 82.180(a)(7). The former request information on the “cost . . . of any technology modifications” necessary to use an alternative to an ozone-depleting substance, as well as the “expected average cost of the alternative,” and also allow petitioners to identify “[o]ther critical cost considerations . . . as appropriate.” *Id.* § 82.178(a)(13)-(14). The latter include “[c]ost and availability of the substitute” as one of seven categories EPA evaluates as part of its acceptability determinations. 40 C.F.R. § 82.180(a)(7)(vii). Of note is that “cost and availability” is one category—EPA considers cost and availability as being intertwined. Under EPA's long-established interpretation of its regulations, cost is not an independent basis for an acceptability determination, and EPA does not consider transition costs.¹⁴ Petitioners' assertion that EPA must “make

¹⁴ *See Honeywell Int'l Inc. v. E.P.A.*, 374 F.3d 1363, 1378 (D.C. Cir. 2004), *as amended* (Jan. 7, 2005), *opinion withdrawn in part on reconsideration*, 393 F.3d 1315 (D.C. Cir. 2005) (“While the SNAP regulations make the cost and availability of the substitute an element of acceptability . . . that concern is limited to whether EPA has . . . reason to prohibit its use Under the SNAP regulations the fact that it might be difficult or time-consuming for some small businesses or others to use other alternatives is irrelevant, so long as those alternatives exist. Consideration of transition costs is thus

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decisions based on” specific information about cost, Pet’rs’ Br. 66, is inconsistent with how EPA has applied its regulations.¹⁵ EPA has explained that it uses cost and availability information as part of the overall environmental analysis, assessing how likely it is that the alternative will be used in the marketplace, and therefore what kind of an environmental impact it will have. 76 Fed. Reg. at 17,511-2.

EPA acknowledges that, before this Court’s decision in *Honeywell International Inc. v. EPA*, EPA had discussed its consideration of cost in other contexts, such as whether “grandfathering” existing uses for some period of time would be appropriate when changing the status of an acceptable substitute to unacceptable. *See, e.g.*, 67 Fed. Reg. 47,703, 47,709-10 (July 22, 2002). But on remand from this Court’s decision in *Honeywell*, EPA explicitly made its decision solely on the basis of technical feasibility, not cost. 70 Fed. Reg. 67,120, 67,123 (Nov. 4, 2005).

Since that time, EPA has discussed cost in terms of the actual cost of the substitute, and not in terms of consequential costs, such as transition costs or energy efficiency costs. *See, e.g.*, 76 Fed. Reg. at 17,491, 17,510 (discussing the cost of HFO-

precluded by the SNAP regulations as currently written, irrespective of whether it might be permitted under CAA § [7671k](c).” (internal quotation marks and citations omitted)) (Rogers, J. concurring in part and dissenting in part).

¹⁵ Petitioners also cobble together their preferred “critical cost considerations,” Pet’rs’ Br. 66, by referencing distinct information requirements for the joint review of substances under both the Alternatives Program and the Toxic Substances Control Act Premanufacture Notice program, which is not implicated here. *See* 59 Fed. Reg. at 13,064.

1234yf with respect to its cost per pound, and specifically declining to consider transitional costs to end-users). This interpretation finds support in EPA's original interpretation of its regulations, when EPA recognized that "the transition to substitutes for [ozone-depleting substances] may involve significant development costs," 1994 RTC 19, JAXX, but declined to state that it would consider such costs as a reason to not approve or disapprove a particular alternative. EPA has explained that "EPA's requirement for information on cost, anticipated availability in the market, and anticipated market share" is used "for the purposes of predicting market penetration and thus how much of a particular substitute might be used and thus pose an environmental risk." 76 Fed. Reg. at 17,512. EPA's use of cost and availability are bound up with the comparative risk framework that has an end goal of protecting human health and the environment; cost is not used simply for cost's sake, and EPA has been consistent on this point. *See id.* at 17,513; *see also* 80 Fed. Reg. 19,454, 19,486 (April 10, 2015) (recognizing that "manufacturers choosing to use one of the refrigerants listed . . . may need to make capital investments," but that is a matter left to "their own business considerations"). Petitioners raise no argument as to how this interpretation is unreasonable.

2. Petitioners are no more persuasive advocating the consideration of transition and energy efficiency costs as a practical matter. Pet'rs' Br. 68. While the Final Rule imposed new restrictions on the use of certain hydrofluorocarbons, it did not specify a different alternative that must be used for any particular end-use. To

require EPA to consider transition and energy efficiency costs would be to require EPA to guess which substitute each and every end-user may opt to use instead. Not only that, but such a requirement would also force EPA to guess the extent to which each end-user would choose to absorb the costs or pass them along to consumers. *See* RTC 80, JAXX. Unlike these costs, the raw cost of a substitute is a relatively fixed number that EPA can use as a benchmark to assess marketability and, consequently, environmental effects.

Even if EPA were to assess other cost impacts, Petitioner Arkema “did not provide specific cost or supply information regarding redesigning equipment or specific information on operating costs for chemical plants that would have allowed [EPA] to analyze the impacts as requested by Arkema.” Final Rule, 80 Fed. Reg. at 42,943. By not equipping EPA to adequately assess their request, Petitioners therefore waived any argument that assessing these costs was necessary. *See* 42 U.S.C. § 7607(d)(7)(B). In sum, EPA reasonably followed its regulations and longstanding practice regarding the use of cost information.

III. EPA’s use of a comparative risk framework instead of a bright-line threshold for acceptability is a reasonable way to assess the risk of an alternative.

In the Final Rule, EPA reasonably applied its Alternatives Program criteria when assessing, on an end-use by end-use basis, whether certain hydrofluorocarbons posed a greater overall risk than other available alternatives. Petitioners’ argument that EPA was required to identify and base its decision on “objective standards,” a

“metric,” or a “threshold,” Pet’rs’ Br. 69-73, finds no support in the statute, regulations, or case law.

By its terms, section 7671k presumes that EPA will compare alternatives when determining what level of risk is acceptable, not that EPA will set thresholds or cutoffs. Since both science and industry evolve, this makes eminent sense. EPA’s Initial Rule reflected Congress’s intent by setting up a comparative risk framework within which alternatives are examined based on attributes relevant to health and environmental effects and the availability of other alternatives. EPA uses this comparative risk framework on an end-use by end-use basis, which ensures that restrictions on the use of alternatives are no more extensive than necessary. EPA need not articulate a bright-line rule when it is implementing a statute that provides the Agency with broad discretionary authority. *Catamba Cty.*, 571 F.3d at 26; *Miss. Comm’n*, 790 F.3d at 150; *see also Coal. for Responsible Regulation*, 684 F.3d at 122-23. Indeed, in the Initial Rule EPA explained that “a single index to rank all substitutes based on risks . . . would not allow for sufficient flexibility in making appropriate risk management decisions” that must also consider issues such as the quality of the available data. 59 Fed. Reg. at 13,046.¹⁶

¹⁶ Commenters requested EPA to identify fixed criteria over twenty years ago; EPA explained then why that was inappropriate. 1994 RTC 20, JAXX. Therefore, Petitioners’ arguments are untimely yet again. *See Med. Waste*, 645 F.3d at 427.

Much like Petitioners' contention that EPA must make a finding of "significant risk," *see supra* Argument II.B., Petitioners' argument that EPA must identify an acceptable amount of global warming potential completely disregards the multi-factor, comparative nature of EPA's action. Pet'rs' Br. 69-70. Similarly, Petitioners' claim that EPA did not have a "discernable basis" for determining what level of global warming potential was unacceptable, *see* Pet'rs' Br. 70-71, misses the mark. Petitioners ignore that EPA must consider risk in conjunction with availability, and on an end-use by end-use basis. In this Rule EPA determined that hydrofluorocarbons, as a class of chemicals, may adversely affect human health and the environment due to their effects on climate change. 79 Fed. Reg. at 46,133. EPA was thus bound to restrict their use where other less risky alternatives were available. But under the statute and EPA's Alternatives Program, EPA cannot set a bright line as to a global warming potential level that is acceptable across the board, because EPA must assess risk in the context of what substitutes are available in a particular end-use. In so doing, EPA reasonably changed the status of certain hydrofluorocarbons for some end-uses, but did not change the status of the same hydrofluorocarbons for others.¹⁷ RTC 173, JAXX.

¹⁷ In the Proposed Rule, EPA recognized that numerous substitutes included on the acceptable lists were not yet in use or were being developed for use within a particular end-use. Thus, to ensure that users would still be able to manufacture products such as refrigeration systems and vehicles with air conditioning systems, EPA's proposal focused on maintaining as acceptable sufficient substitutes to allow

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Petitioners' reliance on *OZ Technology*, Pet'rs' Br. 73, is particularly inapt. At issue in that case was EPA's determination that a petition submitted by OZ Technology was incomplete because the company did not provide an adequate risk analysis of flammability as required by EPA's regulations, given the substance's known flammability concerns. *OZ Tech. Inc. v. EPA*, 129 F.3d 631, 636 (D.C. Cir. 1997). Neither the Court nor EPA indicated that an across-the-board standard for flammability risk was warranted. Further, in arguing that EPA must quantify a standard for global warming potential here, Petitioners fail to appreciate the different risk analysis required for flammability as opposed to global warming potential. While both flammability and global warming potential are physical properties of a substance, the immediate hazard posed by a substance's catching fire is wholly distinct from the eventual climate impacts resulting from collective emissions. *See* RTC 161-62, JXXX-XX. In the present rulemaking EPA has identified the risk—adverse climate impacts of certain hydrofluorocarbons—and analyzed it consistent with its regulations, as discussed previously. Petitioners' dissatisfaction with that analysis should not be confused with a failure to perform it.

continued production of products after the change of status. *See, e.g.*, 79 Fed. Reg. at 46,144 (discussing which listed alternatives were in use or in development for use in new condensing units and supermarket systems); *see also* 80 Fed. Reg. at 42,920 (rejecting comment that EPA set a bright line test for global warming potential, noting that EPA is relying on certain refrigerants with a global warming potential above the bright line recommended by the commenters to support a conclusion that other alternatives are available).

Further, that none of the other case law Petitioners cite is within the large body of CAA jurisprudence is telling. Petitioners' citation to *Industrial Union Department, AFL-CIO v. American Petroleum Institute*, 448 U.S. 607 (1980), is inapposite. Unlike here, where Congress provided EPA a broad "overall risk" standard, in *Industrial Union* Congress required the Secretary of the Department of Labor to "set the standard [for toxic materials or harmful physical agents] which most adequately assures . . . that no employee will suffer material impairment." *Id.* at 612 (citation omitted). Congress allowed far greater latitude in section 7671k than it did in the statute in *Industrial Union*. Nor are Petitioners persuasive in their citation of *Tripoli Rocketry Ass'n, Inc. v. Bureau of Alcohol, Tobacco, Firearms, & Explosives*, 437 F.3d 75 (D.C. Cir. 2006), to support the assertion that EPA needs to identify a bright-line threshold here. Petitioners fail to explain how one bright-line threshold could possibly be applicable to each different end-use EPA has evaluated, or how such a threshold is required by statute or regulation. Additionally, the methodological flaw the court identified in *Tripoli*—not designating any points of comparison—is not present here, where EPA's decision turned on several types of comparisons. *Id.* at 82. *Dithiocarbamate Task Force v. EPA*, 98 F.3d 1394 (D.C. Cir. 1996), also presented an entirely different scenario. There, this Court found that EPA did not satisfy specific numeric benchmarks identified by its own regulations. *Id.* at 1402. Not so here. Congress requires EPA to disallow the use of an alternative where other alternatives that reduce the "overall risk to human health and the environment" are available. 42 U.S.C. § 7671k(c). Congress

did not require EPA to identify a benchmark quantity of risk—nor could one be reasonably set in light of the broad mandate to consider “overall risk” and the “availability” of multiple substitutes in a wide array of end-uses. EPA adequately explained how it used its comparative risk framework to determine where restrictions on hydrofluorocarbons were warranted. EPA need do no more.

CONCLUSION

Congress requires EPA to limit the use of potentially harmful alternatives to ozone-depleting substances where other less-risky substitutes are available. EPA has found that certain hydrofluorocarbons may have adverse effects on human health and the environment. EPA used its comparative risk framework to identify end-uses where alternatives that pose a lower overall risk than those hydrofluorocarbons are available, did so in a carefully tailored manner, and adequately explained its decisions. The Court should deny the petitions.

Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE WITH
FEDERAL RULE OF APPELLATE PROCEDURE 32(A)**

I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Garamond, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) and Circuit Rule 32(e)(1) because it contains 13,993 words, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii) and Circuit Rule 32(e)(1), according to the count of Microsoft Word.

/s/ Elizabeth B. Dawson

ELIZABETH B. DAWSON

CERTIFICATE OF SERVICE

I hereby certify that on May 27, 2016, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system.

The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

/s/ Elizabeth B. Dawson

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