DEPARTMENT OF ECOLOGY
State of Washington

Concise Explanatory Statement
Chapter 173-443 WAC, Hydrofluorocarbons (HFCs)

Summary of rulemaking and response to comments

December 2020

Publication 20-02-026

Publication and Contact Information

This document is available on the Department of Ecology's website at:
https://fortress.wa.gov/ecy/publications/summarypages/2002026.html

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Concise Explanatory Statement

Chapter 173-443-WAC

Hydrofluorocarbons (HFCs)

Air Quality Program

Washington State Department of Ecology

Olympia, Washington

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Introduction

The purpose of a Concise Explanatory Statement is to:

- Meet the Administrative Procedure Act (APA) requirements for agencies to prepare a Concise Explanatory Statement (RCW 34.05.325).
- Provide reasons for adopting the rule.
- Describe any differences between the proposed rule and the adopted rule.
- Provide Ecology's response to public comments.

This Concise Explanatory Statement provides information on the Washington State Department of Ecology's (Ecology) rule adoption for:

Title:	Hydrofluorocarbons (HFCs)
WAC Chapter:	173-443
Adopted date:	December 10, 2020
Effective date:	January 10, 2021

To see more information related to this rulemaking or other Ecology rulemakings please visit our website: https://ecology.wa.gov/About-us/How-we-operate/Laws-rules-rulemaking.

Reasons for Adopting the Rule

The Washington Legislature specifically directed Ecology to engage in rulemaking to implement a program for transitioning away from Hydrofluorocarbons (HFCs). Engrossed Second Substitute House Bill 1112 (RCW 70A.45.080[1]) was signed into law on May 7, 2019.

The rule prohibits the use of HFCs and other substitutes in various equipment in the air conditioning and refrigeration, aerosol propellant, and foam end-use categories. The prohibitions occur in a phased approach, similar to rules adopted under EPA's Significant New Alternatives Policy (SNAP) program and HFC rules adopted or proposed for adoption in other states around the country.

The rule defines requirements for manufacturers, importers, and distributors of covered products and equipment to:

- Notify Ecology about the use of HFCs and other prohibited substitutes.
- Disclose HFCs and other substitutes used in an on-product label or other designated format.

The EPA SNAP program implements section 612 of the amended federal Clean Air Act of 1990, which requires EPA to evaluate substitutes for ozone-depleting substances to reduce overall risk to human health and the environment. You can find specifics on SNAP at EPA SNAP Regulations.[2]

The rule implements the prohibitions in the same end-use categories as in EPA SNAP Rules 20 and 21 that were in effect on January 3, 2017, but with a new timeline for the prohibitions to take effect. Washington is one of several states that have adopted, or are in the process of adopting, HFC rules in response to the partial vacature of SNAP Rules 20 and 21 at the federal level.[3]

Differences between the Proposed Rule and Adopted Rule

RCW 34.05.325(6)(a)(ii) requires Ecology to describe the differences between the text of the proposed rule as published in the Washington State Register and the text of the rule as adopted, other than editing changes, stating the reasons for the differences.

There are some differences between the proposed rule filed on June 16, 2020 and the adopted rule filed on December 10, 2020. Ecology made these changes for all or some of the following reasons:

- In response to comments we received.

[1] https://app.leg.wa.gov/rcw/default.aspx?cite=70A.45.080
[2] https://www.epa.gov/snap/snap-regulations
[3] The District of Columbia Circuit Court of Appeals in 2017 and 2019 partially vacated EPA SNAP Rules 20 and 21. See Mexichem Fluor, Inc. v. EPA, 866 F.3d 451 (D.C. Cir. 2017); Mexichem Fluor, Inc. v. EPA, No. 17-1024 (D.C. Cir. Apr. 5, 2019) (unpublished).

- To ensure clarity and consistency.
- To meet the intent of the authorizing statute.

The following content describes the changes and Ecology's reasons for making them.

Throughout Rule

We updated references to Ecology RCWs that were recodified to implement House Bill 2246, which reorganized environmental health laws without making any substantive or policy changes.

WAC 173-443-030: Definitions and Acronyms

We revised the following definitions in the foam end-use category in response to a public comment to align the definitions closer to industry terminology. These adopted definitions align with those used in the U.S. Climate Alliance (USCA) model rule, as it existed in October 2020, except for "foam system," which is not defined in the USCA model rule.

> **"Flexible polyurethane"** means a nonrigid ~~synthetic~~ polyurethane foam including, but not limited to, that used in furniture, bedding, and chair cushions ~~containing polymers of urethane radicals including, but not limited to, that used in furniture, bedding, chair cushions, and shoe soles~~.
>
> **"Foam blowing agent"** means a ~~product or~~ substance that functions as a source of gas to generate bubbles or cells in the mixture during the formation of foam ~~used to produce the product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening or phase transition~~.
>
> **"Foam system"** means a multipart liquid ~~material~~ product that expands when mixed to form a foam ~~solid or flexible substance in which thin films of material separate pockets of gas~~.
>
> **"Integral skin polyurethane"** means a ~~synthetic~~ self-skinning polyurethane foam ~~containing polymers of urethane radicals~~ including, but not limited to, that used in ~~shoe soles and~~ car steering wheels and dashboards.
>
> **"Rigid polyurethane appliance foam"** means polyurethane ~~insulation~~ foam in domestic appliances used for insulation.
>
> **"Rigid polyurethane commercial refrigeration and sandwich panels"** means polyurethane foam used to provide insulation ~~for use~~ in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.
>
> **"Rigid polyurethane high-pressure two-component spray foam"** means a liquid polyurethane ~~a~~ foam system ~~product that is pressurized 800-1600 psi during manufacture;~~ sold ~~in pressurized containers~~ as two parts (i.e., A-side and B-side) in nonpressurized containers; and is field or factory ~~blown and~~ applied in situ using high-pressure proportioning pumps at 800 – 1600 psi ~~to propel the foam components,~~ and an

application gun to mix and dispense the chemical components ~~may use liquid blowing agents without an additional propellant~~.

"Rigid polyurethane low-pressure two-component spray foam" means a ~~foam product~~ liquid polyurethane foam system ~~that is pressurized to less than 250 psi during manufacture;~~ sold ~~in pressurized containers~~ as two parts (i.e., A-side and B-side) in containers that are pressurized to less than 250 psi during manufacture of the system for application without pumps; and are typically applied in situ relying upon a liquid blowing agent and/or gaseous foam blowing agent that also serves as a propellant ~~so pumps typically are not needed~~.

"Rigid polyurethane marine flotation foam" means buoyancy or flotation polyurethane foam used in boat and ship manufacturing for both structural and flotation purposes.

"Rigid polyurethane one-component foam sealants" means a polyurethane foam generally packaged in aerosol cans that is applied in situ using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.

"Rigid polyurethane slabstock and other" means a rigid closed-cell polyurethane foam ~~containing polymers of urethane radicals~~ formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

We added a definition for the term "stationary" in response to a public comment to address ambiguity in the definition of "refrigeration equipment." The adopted definition aligns with California's 2018 HFC rule.

"Stationary" means the system is (1) installed in a building, structure, or facility; or (2) attached to a foundation, or if not attached, will reside at the same location for more than twelve consecutive months; or (3) located intermittently at the same facility for at least two consecutive years and operates at that facility a total of at least 90 days each year.

We added a definition of "sufficient disclosure" to address ambiguity in the option of using another jurisdiction's label for refrigeration and foam end-uses.

"Sufficient disclosure" means providing the name of the substitute.

WAC 173-443-060 Prohibitions

Section 060(2):

We added additional distribution methods in the sell-through provision to align with similar provisions in the HFC law and USCA model rule.

Products and equipment manufactured prior to the applicable effective date of a prohibition in WAC 173-443-040 may be sold, leased, rented, imported, exported, distributed, installed, ~~or~~ used, or otherwise introduced into Washington commerce after the date of prohibition.

Section 060(2)(c):

We expanded the sell-through provision from "spray foam systems" to "polyurethane foam systems" in response to a public comment.

> Polyurethane ~~Spray~~ foam systems manufactured (blended) before an applicable prohibition date and not yet applied on site may be used after the prohibition date.

WAC 173-443-070 Product Labeling and Disclosure Requirements

Throughout section:

We removed the qualifier "HFC" from all references to "HFC disclosure requirements of another jurisdiction" because disclosure can be required for substitutes that are not HFCs when the transition to a non-HFC substitute occurs after July 28, 2019 (effective date of Washington's HFC law).

Section 070(3)(a):

We revised the order in which the two federal agencies appear in response to a public comment to ensure that readers understand that this regulation covers products regulated by the U.S. Consumer Product Safety Commission.

> For aerosol products regulated by the U.S. Consumer Product Safety Commission, the U.S. Food and Drug Administration excluding prescription drug products, ~~the U.S. Consumer Product Safety Commission,~~ or products that are not covered by (b) of this subsection.

Section 070(4) and (5):

We added the option of using another jurisdiction's label and clarified when it must be combined with online disclosure in Subsections (4)(a)(iii) and (iv), (4)(c)(iv) and (v), and (5)(a)(iv) and (v) in response to a public comment to expand the labeling options to include online disclosure. The additional option applies to the refrigerant used in household refrigeration, commercial refrigeration, and centrifugal and positive displacement chiller end-uses.

> A label required by another jurisdiction with sufficient ~~HFC~~ disclosure requirements; ~~and online disclosure;~~
>
> A label required by another jurisdiction that does not disclose the substitute; and online disclosure; or

Section 070(6):

We revised Subsections (6)(a)(ii)(C) and (D) and (6)(b)(iv) and (v) so that online disclosure is only required with use of another jurisdiction's label if the other jurisdiction's label does not adequately disclose the substitute. We made this change in response to a public comment that online disclosure should be not required if the label required by another jurisdiction discloses the substitute. The revision applies to retail and nonretail foam products.

> A label required by another jurisdiction with sufficient ~~HFC~~ disclosure requirements; ~~and online disclosure;~~
>
> A label required by another jurisdiction that does not disclose the substitute; and online disclosure; or

We revised terminology in Subsection (6)(c) to align with revisions in WAC 173-443-060(2)(c).

> For the foam blowing agent used in polyurethane foam systems, including spray foam systems:

We added two new options in Subsection (6)(c)(iv) and (v) to allow use of another jurisdiction's label for polyurethane foam systems. We made the change in response to a public comment to allow other state disclosure statements for all foam products.

> A label required by another jurisdiction with sufficient disclosure requirements;
>
> A label required by another jurisdiction that does not disclose the substitute; and online disclosure; or

Section 070(7):

We removed unnecessary language to improve consistency with other subsections.

> Ecology must approve in advance the use of a symbol or code ~~to comply with this section~~.

Section 070(9):

We added clarification that online publication of a safety data sheet, owner's manual, or other product document qualifies as "online disclosure."

> Online disclosure may occur through online publication of an owner's manual, safety data sheet, or other documentation that provides information about the product to the end-user of the product.

WAC 173-443-080 Manufacturer Notification

Section 080(1):

We clarified that notification is only required for manufacturers using HFCs or other prohibited substitutes for an end-use listed in WAC 173-443-040. This change addresses a public comment

to clarify that manufacturers that use HFCs or other substitutes listed in WAC 173-443-040 are not required to submit notification for an end-use that WAC 173-443-040 does not list.

> A manufacturer of a product or equipment that contains, uses, or will use HFCs or other substitutes prohibited for an end-use listed in WAC 173-443-040 or a representative on behalf of the manufacturer, must report to ecology consistent with WAC 173-443-090 and 173-443-100.

List of Commenters and Responses to Comments

We accepted comments between June 16 and July 28, 2020. We included excerpts of the comments as received with minor edits for clarity. You can see the original content of the comments we received at our online website.[4] These comments remain available online for two years after the rule adoption date.

We grouped comments and topics together and organized them by topic. Under each topic heading, you can see all the comments we received for that topic, followed by responses to the comments.

Table 1: List of Commenters

Affiliation	Commenter	Topics	Comment Number(s)
Business			
Beveridge & Diamond, P.C.	Weber, David	Clarifications	B-1-1
The Boeing Company	Marshall, Kristin	Definitions: Stationary	B-6-1
The Boeing Company	Marshall, Kristin	Definition: Refrigeration Equipment	B-6-2
The Boeing Company	Marshall, Kristin	Clarifications	B-6-3
Collins Aerospace	Sherman, Kristen	Definitions: Stationary	B-2-1
Collins Aerospace	Sherman, Kristen	Definitions: Chillers and Commercial Refrigeration	B-2-2
Collins Aerospace	Sherman, Kristen	Applicability	B-2-4
Collins Aerospace	Sherman, Kristen	Definitions: Refrigeration Equipment	B-2-3
Daikin US Corporation	Banoub, Christina	Definitions: Refrigeration Equipment	B-7-2
Daikin US Corporation	Banoub, Christina	Labeling and Disclosure	B-7-3
Daikin US Corporation	Banoub, Christina	Refrigerant Reclamation	B-7-1, B-7-4
Daikin US Corporation	Banoub, Christina	Training and Guidance	B-7-5
Illinois Tool Works Inc.	Washington, Kevin	Support	B-3-1

[4] http://aq.ecology.commentinput.com/?id=g7B9h

Affiliation	Commenter	Topics	Comment Number(s)
Manufacturer		Prohibition Date Extensions	B-5-1
Organization			
Air-Conditioning, Heating, and Refrigeration Institute	Breese, Christopher	Labeling and Disclosure	O-6-1, O-9-1
Center for the Polyurethanes Industry	Wieroniey, Stephen	Applicability	O-3-4
Center for the Polyurethanes Industry	Wieroniey, Stephen	Labeling and Disclosure	O-3-3
Center for the Polyurethanes Industry	Wieroniey, Stephen	Sell-through Provision	O-3-1, O-3-2
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Flexible Polyurethane	O-3-6
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Foam Blowing Agent	O-3-7
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Foam System	O-3-5
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Integral Skin Polyurethane	O-3-8
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane Appliance Foam	O-3-9
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane Commercial Refrigeration and Sandwich Panels	O-3-10
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane High-Pressure Two –Component Spray Foam	O-3-11
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane Low-Pressure Two Component Spray Foam	O-3-12
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane Marine Flotation Foam	O-3-13
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane One-Component Foam Sealants	O-3-14

Affiliation	Commenter	Topics	Comment Number(s)
Center for the Polyurethanes Industry	Wieroniey, Stephen	Definitions: Rigid Polyurethane Slabstock and Other	O-3-15
Household & Commercial Products Association	Georges, Nicholas	Applicability	O-4-2
Household & Commercial Products Association	Georges, Nicholas	Support	O-4-1
Household & Commercial Products Association	Georges, Nicholas	Labeling and Disclosure	O-4-3, O-4-4
National Aerosol Association	Raymond, Douglas	Applicability	O-7-1
Natural Resources Defense Council	Theodoridi, Christina	Support	O-1-1
Polyisocyanurate Insulation Manufacturers Association	Koscher, Justin	Support	O-2-1
Polyisocyanurate Insulation Manufacturers Association	Koscher, Justin	EPA SNAP Rule 23	O-2-2
Window and Door Manufacturers Association	McKenney, Kevin	Applicability	O-5-1

Comments and Responses:

We grouped and organized comments and responses together by topic. Under each topic heading, you can see all the comments Ecology received for that topic followed by our response to all the comments on that topic.

We used the following topics to group comments together:

- Applicability
- Clarifications
- Definitions:
    - Refrigeration Equipment
    - Flexible Polyurethane
    - Foam Blowing Agent
    - Foam System
    - Integral Skin Polyurethane
    - Refrigeration Equipment
    - Rigid Polyurethane Appliance Foam
    - Rigid Polyurethane Commercial Refrigeration and Sandwich Panels
    - Rigid Polyurethane High-Pressure Two-Component Spray Foam
    - Rigid Polyurethane Low-Pressure Two-Component Spray Foam
    - Rigid Polyurethane Marine Flotation Foam
    - Rigid Polyurethane One-Component Foam Sealants
    - Chillers and Commercial Refrigeration
    - Rigid Polyurethane Slabstock and Other
    - Stationary
- EPA SNAP Rule 23
- Labeling and Disclosure
- Refrigerant Reclamation
- Request for Extension
- Sell-through Provision
- Support
- Training and Guidance

Comments and Reponses on Applicability

Commenters: Household & Commercial Products Association (HCPA), Window and Door Manufacturers Association (WDMA), Collins Aerospace, National Aerosol Association (NAA), Center for the Polyurethanes Industry (CPI).

Center for the Polyurethanes Industry - Comment O-3-4

American Chemistry Council, Center for the Polyurethanes Industry (CPI) believes section WAC 173-443-020 (Applicability) needs additional clarification to ensure it provides a functional exemption for the labeling of polyurethane products.

The statements in the proposed regulations and the Preliminary Regulatory Analyses raise several questions. Does [Ecology] plan to only exempt manufacturers that only had low [Global Warming Potential] (GWP) formulations on the market as of June 28, 2019? If [Ecology] is willing to exempt some low-GWP products, why would [Ecology] not extend this exemption to all low-GWP products? This is an arbitrary concept that should be reconsidered.

To improve the utility of the applicability exemption, CPI recommends two changes to the disclosure applicability. First, the exemption should apply to individual products, rather than an entire manufacturer's portfolio. Second, the exemption date should be extended to the effective date of restriction for each end use. CPI believes these changes will clarify the scope of the exemption and improve its utility. Essentially, these changes allow [Ecology] to simply exempt all low-GWP products from the labeling provisions.

Response to O-3-4:

Ecology has attempted to maximize flexibility within the scope of what the HFC law allows. In this case, the referenced applicability exemption centers entirely on the definition of “manufacturer“ in the law. It also focuses on the fundamental legislative intent, as clearly stated in the intent section, that this program begin a, “transition to the use of less damaging HFCs or suitable substitutes ... in Washington.“ It is a normal interpretation of statutory intent to assume the date that the Washington Legislature intended this “transition“ to begin is the effective date of the law (July 28, 2019). Therefore, this date is not “arbitrary,“ as the commenter suggests. It is a well-reasoned interpretation of the law consistent with general statutory principles.

As noted above, we derived the flexibility offered in this section from the definition of “manufacturer,“ which is focused on the concept of a business or business unit, and not a physical product. Ecology worked within that concept to allow manufacturers to define how they wish us to treat them with respect to the products they make. In this way, manufacturers can treat certain portions of their operations differently than other portions based on the products that a particular portion makes. Ultimately, the focus of the rule remains on a business unit, and not an individual product, in a manner consistent with the law.

Ecology has used its discretion to extend the time that labeling is required to one year past an applicable prohibition date or one year after the effective date of this rule. In practice, this eliminates the need for labeling for many products covered by the law, and gives ample time for those with prohibition dates in the future to adapt.

We did not revise the rule as requested.

Collins Aerospace - Comment B-2-4

Ecology should consider inserting language clarifying that aircraft components are outside the scope of Ecology's proposed rule. The definition changes might be unnecessary if a broad statement was included in Section 173-443-020 (Applicability) stating that the rules are not applicable to aircraft components.

Collins Aerospace respectfully requests that Ecology consider including language in the Applicability section of WAC 173-443-020, as follows:

WAC 173-443-020 Applicability:

(1) The requirements of this chapter apply to any person who offers for sale, leases, rents, installs, or otherwise causes to enter into Washington commerce any product or equipment that contains, uses, or will use HFCs or other substitutes for an end-use listed in WAC 173-443-040.

(2) Labeling requirements.

(3) The requirements of this chapter do not apply to aircraft and aircraft components subject to certification requirements of the Federal Aviation Administration.

Response to B-2-4:

The Legislature contemplated the role of aircraft and aircraft parts in the law as evidenced by the inclusion of the specific language about labeling noted by the commenter. Moreover, we added a definition of “stationary” to clarify the component definitions in relation to understanding the role of mobile sources. Adding a blanket exemption for all aircraft-related aspects of the law is unnecessary and extends the scope of the rule beyond the plain language of the law.

We did not revise the rule as requested.

Household & Commercial Products Association - Comment O-4-2

HCPA seeks additional clarity on the applicability of the labeling requirements in regards aerosol products that never contained HFCs. There is confusion around the definition of the word “substitute“ in the rule.

National Aerosol Association - Comment O-7-1

NAA seeks additional clarity on the applicability of the labeling requirements in regards aerosol products that never contained HFCs. There is confusion around the definition of the word "substitute" in the rule.

Response to O-4-2 and O-7-1:

Ecology recognizes that there continues to be confusion around how the applicability section works in practice. Although much attention has been given to the word "substitute" and the definition for that term in the rule (which come from the EPA SNAP rules), the operative concept here are HFCs themselves, regardless of whether they serve as a substitute (in the SNAP sense) or not. It is a binary concept. Either a product made by a manufacturer contains HFCs, or it does not, upon that date. If a manufacturer makes such a product, then the labeling requirements apply. However, we note that the labeling requirements, especially for aerosol products, recognize existing labeling on products in most, if not the vast majority, of circumstances.

In addition, Ecology has provided additional flexibility for companies to subdivide their manufacturing operations into different functional business units. These can be actual business units within a company or a hypothetical segmentation done solely for making this applicability determination. We added this flexibility to address companies that make a myriad of products, across numerous product classes. This enables them to avoid the applicability determination across the entire company if, for example, one business division continues to make a refrigeration product of some sort on that cutoff date that contains HFCs, but another business division makes another product (for example, an aerosol cleaning product of some sort) that no longer (or never did) contain HFCs. In this sense, for the same company, the refrigeration end-use "manufacturer" will have triggered the applicability determination, but the aerosol "manufacturer" within that same company will not have and the labeling requirements will remain for the products within that segment of the company.

Window and Door Manufacturers Association - Comment O-5-1

WDMA is seeking additional clarity regarding the applicability of the labeling requirements when considering the definitions of "retail foam products" and "non-retail foam products" contained in the proposed rule. Specifically, Ecology should clarify that a manufacturer utilizing a foam product as an input into another product, but is not the manufacturer of the foam itself, is not subject to the labeling requirements of the proposed rule.

To provide more detail to the question we are asking, some WDMA member companies manufacture residential exterior doors that use a foam core, which is blown into the door. This foam is encased inside the door and is not manufactured by the company manufacturing the exterior door. The definition of "retail foam products" and "non-retail foam products" seem to exclude the door manufacturer from any product labeling because they don't manufacture the foam. However, Ecology should clarify this distinction in the final rule.

Response to O-5-1

Ecology agrees that a door manufacturer that does not manufacture the foam that it installs or blows into its doors is not subject to the labeling requirements of this rule. With the exception of manufacturers of refrigeration equipment and chillers, any manufacturer that installs or blows foam that it did not manufacture into a product that it did manufacture is not responsible for labeling the foam. In these cases, the manufacturer of the foam is responsible to meet the labeling requirement for nonretail foam under WAC 173-443-070(6)(a). We believe the rule language as written is sufficiently clear on this point.

We note that manufacturers using foam in the production of their products are responsible to understand the compliance status of the foam they use. It is their responsibility to not allow products that use prohibited foams under this rule into Washington commerce.

Comments and Reponses on Clarifications

Commenters: Beveridge & Diamond, P.C., The Boeing Company

Beveridge & Diamond, P.C. - Comment B-1-1

Beveridge & Diamond, P.C., proposes the following amendment to WAC 173-443-080(1):

(1) A manufacturer of a product or equipment that contains, uses, or will use HFCs or other substitutes prohibited for an end-use listed in WAC 173-443-040 or a representative on behalf of the manufacturer, must report to ecology consistent with WAC 173-443-090 and 173-443-100.

Adding the phrase "for an end-use listed" to WAC 173-443-080(1) eliminates the possibility of any ambiguity as to whether the notification requirement applies to manufacturers of equipment that contains, uses, or will use HFCs or other substitutes listed in WAC 173-443-040 but for end-uses that are not listed in WAC 173-443-040.

Response to B-1-1

Ecology added the phrase "for an end-use listed" to WAC 173-443-080(1) to eliminate potential ambiguity. It clarifies that the notification requirement in WAC 173-443-080(1) applies to manufacturers of products and equipment that contain, use, or will use HFCs or other substitutes for end-uses listed in WAC 173-443-040 and not to end-uses that are not listed in WAC 173-443-040 regardless of the substitute used.

The Boeing Company - Comment B-6-3

We suggest one additional correction in the definition of "substitute." The proposed rule refers to "2-BPT" and it should be changed to "2-BTP" to correctly identify the fire extinguishing agent 2-bromo-3,3,3-trifluoropropene.

Response to B-6-3

Ecology corrected the reference to "2-BTP" as requested.

Comments and Responses on Definitions: "Refrigeration Equipment"

Commenters: Daikin US Corporation, The Boeing Company, Collins Aerospace

Daikin US Corporation - Comment B-7-2

Washington has not included a definition of the word "use," and Daikin US will happily assist in creating and updating [definitions] that are both clear and uniform with other states.

Response to B-7-2

The Washington HFC law and this rule differ from other states in that the prohibition language, which most states have purposefully harmonized, does not prohibit the "use" of products with affected substitutes. While Ecology recognizes that most of the states doing similar rules or laws include a "use" definition, the lack of that term in our prohibition language does not create an urgent need to include a definition in the rule. We recognize that the word "use" does appear in other parts of the rule language, but in keeping with standard rulemaking practice, the dictionary definition of "use" seems sufficient for those instances, negating the need for a specialized definition for the term.

We did not revise the rule as requested.

The Boeing Company - Comment B-6-2

The Boeing Company urges the agency to add "chillers" to the examples listed in the definition of "refrigeration equipment." Adding "chillers" to the list of examples makes it understood that chillers are covered by the definition of "refrigeration equipment." Without this addition, the definition could be misconstrued to exclude chillers. The use of "not limited to" in the draft is not enough to prevent such misunderstanding.

Collins Aerospace - Comment B-2-3

Collins Aerospace recommends adding the words "chiller-type refrigeration equipment"to the list of examples in Ecology's proposed definition of "refrigeration equipment." Adding "chiller-type refrigeration equipment" to the list of examples clarifies that certain items of refrigeration equipment manufactured by Collins Aerospace that are referred to as chillers (though not meeting Ecology's regulatory definition of "chiller") are contemplated by the definition of "refrigeration equipment," and deliberately excluded because they are not "stationary."

Response to B-6-2 and B-2-3

Ecology appreciates that specific terminology used within industry sectors may not precisely match the definitions in the rule. We intend the rule's definitions to apply

generally within those industry sectors. The definition of "refrigeration equipment" matches the definition used in the U.S. Climate Alliance (USCA) model rule, as it existed in October 2020. The USCA model rule is the framework used by states in the process of adopting HFC rules. We used the definitions in the USCA model rule for all end-uses except in instances where Washington's HFC law required the use of different terms.

We did not revise the rule as requested.

Comments and Responses on Definitions: "Flexible Polyurethane"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-6

CPI recommends the following end-use definition:

"Flexible Polyurethane" means a non-rigid ~~synthetic~~ polyurethane foam ~~containing polymers created by the reaction of isocyanate and polyol~~ including, but not limited to that used in furniture, bedding, and chair cushions ~~and shoe soles~~.

Response to O-3-6

Ecology revised the definition of "flexible polyurethane" as requested with a minor exception. We added a comma after "but not limited to" to maintain consistent formatting. The adopted definition aligns with the "flexible polyurethane" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Foam Blowing Agent"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-7

CPI recommends the following end-use definition:

"Foam Blowing Agent" means a product or substance ~~used to produce the product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening or phase transition~~ that functions as a source of gas to generate bubbles in the mixture during the formation of foam.

Response to O-3-7

Ecology revised the definition of "foam blowing agent" as requested with minor exceptions. We added "or cells" and eliminated "product" to maintain a definition

consistent with the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states:

"Foam Blowing Agent" means a ~~product or~~ substance that functions as a source of gas to generate bubbles or cells in the mixture during the formation of foam.

Comments and Responses on Definitions: "Foam System"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-5

The proposed regulations include a definition of "foam." CPI recommends referencing the definition of "foam" in the definition of "foam system." This change further aligns the definition of "foam system" with industry understanding of these terms.

"Foam system" means a multipart liquid product material that expands when mixed to form a foam ~~solid or flexible substance in which thin films of material separate pocket of gas~~.

Response to O-3-5

Ecology revised the definition of "foam system" as requested. We agree that referencing the word "foam," a defined term in the rule, in the definition of "foam system" improves clarity. The term "foam system" is not included in the USCA model rule, as it existed in October 2020, or in other state HFC rules with the exception of California.

Comments and Responses on Definitions: "Integral Skin Polyurethane"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-8

CPI recommends the following end-use definition:

"Integral Skin Polyurethane" means a ~~synthetic~~ self-skinning polyurethane foam ~~containing polyurethane polymers formed by the reaction of an isocyuanate and a polyol~~, including but not limited to that used in ~~shoe soles and~~ car steering wheels and dashboards.

Response to O-3-8

Ecology revised the definition of "integral skin polyurethane" as requested with a minor exception. We added a comma after "including but not limited to" to maintain consistent formatting. The adopted definition aligns with the "integral skin polyurethane" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane Appliance Foam"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-9

CPI recommends the following end-use definition:

"Rigid Polyurethane Appliance Foam" means polyurethane ~~insulation~~ foam in domestic appliances used for insulation.

Response to O-3-9

Ecology revised the definition of "rigid polyurethane appliance foam" as requested. The adopted definition aligns with the "rigid polyurethane appliance foam" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane Commercial Refrigeration and Sandwich Panels"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-10

CPI recommends the following end-use definition:

"Rigid Polyurethane Commercial Refrigeration and Sandwich Panels" means polyurethane foam used to provide insulation ~~for use~~ in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.

Response to O-3-10

Ecology revised the definition of "rigid polyurethane commercial refrigeration and sandwich panels" as requested. The adopted definition aligns with the "rigid polyurethane commercial refrigeration and sandwich panels" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane High-Pressure Two-Component Spray Foam"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-11

CPI recommends the following end-use definition:

"Rigid Polyurethane High-pressure Two-Component Spray Foam" means a liquid polyurethane foam system sold as two parts (i.e., A-side and B-side) in non-pressurized containers; ~~product that is pressurized 800 - 1600 pounds per square inch (psi) during manufacture; sold in pressurized containers as two parts (i.e., A-side and b-side);~~ and is field or factory ~~blown~~ applied in situ using high-pressure proportioning pumps at 800-1600 pounds per square inch (psi) and an application gun to mix and dispense the chemical components ~~to propel the foam components, and may use liquid blowing agents without an additional propellant~~.

Response to O-3-11

Ecology revised the definition of "rigid polyurethane high-pressure two-component spray foam" as requested. The adopted definition aligns with the "rigid polyurethane high-pressure two-component spray foam" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane Low-Pressure Two-Component Spray Foam"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-12

CPI recommends the following end-use definition:

"Rigid Polyurethane Low-pressure Two-component Spray Foam" means a liquid polyurethane foam system ~~product~~ sold as two parts (i.e., A-side and B-side) in containers that are ~~is~~ pressurized to less than 250 psi during manufacture of the system for application without pumps; ~~sold in pressurized container s two parts (i.e., A-side and B-side);~~ and are typically applied in situ relying upon a liquid blowing agent and/or gaseous foam blowing agent that also serves as a propellant ~~so pumps typically are not needed~~.

Response to O-3-12

Ecology revised the definition of "rigid polyurethane low-pressure two-component spray foam" as requested. The adopted definition aligns with the "rigid polyurethane low-pressure two-component spray foam" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane Marine Flotation Foam"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-13

CPI recommends the following end-use definition:

"Rigid Polyurethane Marine Flotation Foam" means buoyancy or flotation polyurethane foam used in boat and ship manufacturing for both structural and flotation purposes.

Response to O-3-13

Ecology revised the definition of "rigid polyurethane marine flotation foam" as requested. The adopted definition aligns with the "rigid polyurethane marine flotation foam" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Rigid Polyurethane One-Component Foam Sealants"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-14

CPI recommends the following end-use definition:

"Rigid Polyurethane One-component Foam Sealants" means a polyurethane foam generally packaged in aerosol cans that is applied in situ using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.

Response to O-3-14

Ecology revised the definition of "rigid polyurethane one-component foam sealants" as requested. The adopted definition aligns with the "rigid polyurethane one-component" definition used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Chillers and Commercial Refrigeration Equipment"

Commenters: Collins Aerospace

Collins Aerospace - Comment B-2-2

Collins Aerospace suggests that the word "stationary" should be added to the definitions of "Centrifugal Chiller," "Commercial Refrigeration Equipment," "Positive Displacement Chiller," and "Stand-Alone Unit."

Collins Aerospace does not believe that the proposed regulations as currently written are applicable to its products. However, this equipment could be misconstrued as falling under certain categories of end- uses due to its complexity, resulting in some regulatory uncertainty. To effectuate Ecology's intent to limit the regulations to "stationary" sources and eliminate any ambiguity, we ask that the term "stationary" be added to the definitions of "centrifugal chiller," "commercial refrigeration," "equipment," "positive displacement chiller," and "stand-alone unit."

Response to B-2-2

The definitions of "centrifugal chiller," "commercial refrigeration equipment," "positive displacement chiller" and "stand-alone unit" align with those used in the USCA model rule, as it existed in October 2020. Ecology used the USCA model rule definitions except in instances where the Washington HFC law required the use of different terms. Several manufacturers expressed their desire for states to use consistent terminology.

We did not revise the rule as requested.

Comments and Responses on Definitions: "Rigid Polyurethane Slabstock and Other"

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-15

CPI recommends the following end-use definition:

"Right Polyurethane Slabstock and Other" means a rigid closed-cell polyurethane foam ~~containing urethane polymers produced by the reaction of an isocyanate and a polymer and~~ formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

Response to O-3-15

Ecology revised the definition of "rigid polyurethane slabstock and other" as requested. The adopted definition aligns with the "rigid polyurethane slabstock and other" definition

used in the USCA model rule, as it existed in October 2020, and in HFC rules proposed or adopted in other states.

Comments and Responses on Definitions: "Stationary"

Commenters: The Boeing Company, Collins Aerospace

Collins Aerospace - Comment B-2-1

Collins Aerospace requests that Ecology add a definition "stationary" to the proposed rules. Because the undefined term "stationary device" is used in that definition instead of "stationary source" as defined in WAC 173-400-030(91), the rule could be misinterpreted. We recommend adding the definition of "stationary" set forth below to the proposed rules to address ambiguity in the definition of "refrigeration equipment" and clarify the meaning of "stationary" by adding that term. Ecology's proposed definition of "refrigeration equipment" when coupled with an additional definition of "stationary" would ensure clarity, consistent application, and regulatory certainty.

"Stationary" means the system is (i) installed in a building, structure, or facility; (ii) attached to a foundation, or if not attached, will reside at the same location for more than twelve consecutive months; or (iii) located intermittently at the same facility for at least two consecutive years and operates at that facility a total of at least 90 days each year.

The Boeing Company - Comment B-6-1

The Boeing Company urges the agency to add this definition of "stationary" to the final rule:

"Stationary" means the system is (i) installed in a building, structure, or facility; (ii) attached to a foundation, or if not attached, will reside at the same location for more than twelve consecutive months; or (iii) located intermittently at the same facility for at least two consecutive years and operates at that facility a total of at least 90 days each year.

The definition of "refrigerant equipment" in the proposed language for WAC 173-443 implies that the intent is to regulate HFC-containing equipment at stationary sources. However, because the undefined term "stationary device" is used instead of "stationary source" as defined in WAC 173-400-030(91), the rule could be misinterpreted. The current use of "stationary device" when paired with a definition of "stationary," would provide better clarity, consistent application, and regulatory certainty across the aerospace supply chain.

Response to B-2-1 and B-6-1

Ecology added a definition of "stationary" to the rule as requested. We agree that adding a definition of "stationary" clarifies that the intent of this rule is to regulate HFC-containing equipment used in stationary applications within the commercial refrigeration end-use category.

The undefined term "stationary device" is included in the definition of "refrigeration equipment" to align with the definition used in the USCA model rule, as it existed in October 2020, and in other state HFC rules. The term "stationary source," as defined in WAC 173-400-030(91), cannot be applied (or misapplied) to this rule as the statutory authority for Chapter 173-400 WAC is Chapter 70A.15 RCW[5] so its definitions do not apply to this rule. The statutory authority for this rulemaking is Chapter 70A.45 RCW[6].

Comments and Responses on EPA SNAP 23

Commenters: Polyisocyanurate Insulation Manufacturers Association (PIMA)

Polyisocyanurate Insulation Manufacturers Association - Comment O-2-2

PIMA supports the level playing field created by the proposed use restrictions and prohibition dates in Section 040 (List of prohibited substitutes) for the foams end-use category. This level playing is especially important for the building foam insulation product sector in which many products are in direct competition with one another.

We strongly urge [Ecology] to maintain the proposed use restrictions and prohibition dates for the foams end-use category in the permanent rule, and reject any modifications that would permit the continued use of high-GWP substitutes and blends thereof for specific foam end-uses (with the exception of the military, space, and aeronautics exemptions included in Section 050).

Response to O-2-2

Ecology assumes the commenter is requesting that we maintain the prohibitions adopted in this rule if EPA adopts the proposed SNAP Rule 23, which would allow a hydrofluorocarbon blend for certain foam end-uses.

We are aware following the developments of the proposed rulemaking for the SNAP Rule 23. Given the timing of the Ecology rulemaking, and the uncertainty when or if EPA will finalize the SNAP Rule 23 as proposed, we have no plans at this time to modify the status for any substitute in this rule. Alignment with the SNAP Rule 23, as required in RCW 70A.45.080,[7] would occur in a future rulemaking.

Comments and Responses on Labeling and Disclosure

Commenters: Center for the Polyurethanes Industry (CPI), Household & Commercial Products Association (HCPA), Daikin US Corporation, Air-Conditioning, Heating, and Refrigeration Institute (AHRI)

[5] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.15
[6] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.45
[7] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.45.080

Air-Conditioning, Heating, and Refrigeration Institute - Comment O-9-1

AHRI suggests a disclosure statement as follows:

> "This equipment meets the regulatory requirements for hydrofluorocarbons in all states as of the manufacturing date. Only those refrigerants approved in the state for specific end-uses may be used."

For products sold in the market nationally, a state-by-state patchwork of regulations imposes a significant additional burden on manufacturers that they need to comply with each state's requirements.

Response to O-9-1:

The Washington HFC law requires disclosure of the substitute in an on-product or on-equipment label. The disclosure statement suggested by the commenter does not meet this requirement.

The law also requires that Ecology recognize existing labeling that provides sufficient disclosure. To provide additional flexibility to manufacturers and recognize this tenant of the law, Ecology added the option of using another jurisdiction's label, which the manufacturer must combine with online disclosure if the other jurisdiction's label does not sufficiently disclose the substitute. A label required by another jurisdiction that Ecology deems sufficient will satisfy the labeling requirement without online disclosure.

Air-Conditioning, Heating, and Refrigeration Institute - Comment O-6-1

AHRI requests additional flexibility in administrative requirements by including allowance of internet or electronic only disclosures in lieu of physical labels.

AHRI respectfully requests the following modifications to the proposed regulation:

- Modify the language for on online disclosure from "On-product or on-equipment symbol or code; and online disclosure" to "On-product or on-equipment symbol or code or online disclosure."
- Include the ability to include the disclosure via the owner's manual in every section applying to HVAC equipment and "non-retail foams."

AHRI notes that currently several subsections of the proposed rule include the option to include disclosures in the owner's manual for the product, however this option is missing from several sections, including Section (4) Subsection (c), Section (5) Subsection (a), and Section (6) Subsection (a).

Response to O-6-1

Ecology revised language applicable to refrigeration equipment in WAC 173-443(070)(4) and (5) and to foam products in WAC 173-443-070(6) to add the option of using another jurisdiction's label and combined that option with online disclosure if the other

jurisdiction's label provides information about the use of HFCs, but does not disclose the substitute. We also added clarification that online publication of an owner's manual qualifies as online disclosure.

The HFC law is clear that it intends for a manufacturer to attach or affix a physical label to the product in question. The combination of a label on the product and an online disclosure provides a balance between the different parts of the law that address labeling while giving manufacturers more flexibility. It also provides the flexibility to defer the specific chemical name to an online venue that may be able to provide better context for that level of specificity.

Daikin US Corporation - Comment B-7-3

Daikin US Corporation suggests adding online disclosure options.

Daikin would like to thank Ecology for accepting the [Underwriters Laboratories] (UL) label as meeting disclosure requirements. However, if [Ecology] chooses to add additional forms of disclosure, Daikin US supports AHRI's suggestion of online disclosure as a means of disclosure that does not burden manufacturers while utilizing existing labeling methods.

Response to B-7-3

Using online disclosure as the sole mechanism for disclosure does not satisfy the requirement of Washington's HFC law. The law requires manufacturers to disclose the substitute through an on-product or on-equipment label. To increase flexibility and to recognize that online disclosure can be an informative tool for consumers, Ecology added labeling options for commercial refrigeration equipment to allow for online disclosure in combination with an existing label required by another jurisdiction, in a manner similar to foam products.

Center for the Polyurethanes Industry - Comment O-3-3

It is not clear why Ecology is requiring a disclosure on the label and online disclosure for polyurethane materials. If a product label provides disclosure of the substitute, an additional online disclosure should not be required. Mandating manufacturers to place a disclosure on the product and online is a significant expansion of the disclosure requirements, beyond the intent of HB 1112.

CPI's preferred solution would be to allow polyurethane manufacturers to disclose the compliance status of polyurethane products on the label and disclose the exact substitute used in the product using an online disclosure. Providing a disclosure statement, focused on compliance status, will provide regulators and product users the information needed to ensure that product being installed in Washington complies with the final regulations. This change aligns the Washington HFC labeling requirements with other states.

Response to O-3-3

Ecology agrees that, in the specific case where a product label (i.e., a label affixed to a product) discloses the substitute in use, then it should not also be required that an online disclosure method be used to disclose the same information about the substitute used in the product. We added language to the rule to recognize this situation and eliminate the need for (in this case) redundant disclosure.

Household & Commercial Products Association - Comment O-4-3

HCPA recommends rewording WAC 173-443-070(3)(a):

HCPA recommends rewording the first labeling requirement method for aerosol products by listing products regulated by the U.S. Consumer Product Safety Commission ahead of products regulated by the U.S. Food and Drug Administration (excluding prescription drugs). This modification would have this section read as follows:

> "For aerosol products regulated by the U.S. Consumer Product Safety Commission, the U.S. Food and Drug Administration excluding prescription drug products, or products that are not covered by (b) of this…"

HCPA requests this modification so that it cannot be misinterpreted that products regulated by the U.S. Consumer Product Safety Commission are excluded from this section.

Response to O-4-3

Ecology revised the order in which the federal regulatory agencies applicable to aerosol propellant products appear in WAC 173-443-070(3)(a) to list the U.S. Consumer Product Safety Commission ahead of the U.S. Food and Drug Administration as requested.

Household & Commercial Products Association - Comment O-4-4

HCPA respectfully requests clarification on nomenclature requirements for labeling disclosure. The proposed permanent rule does not specify a specific nomenclature for how aerosol propellants need to be disclosed. There are a number of federal government agencies that regulate aerosol products depending on their application, some of which have very specific nomenclature requirements while others do not. By not including a specific nomenclature requirement within this rule, aerosol product manufacturers would be able to comply with federal nomenclature requirements for various products.

HCPA respectfully requests a response from Ecology on the lack of a nomenclature requirement within the proposed rule to mean that aerosol product manufacturers can utilize existing federal nomenclature requirements to comply with proposed rule's disclosure requirements.

Response to O-4-4

Ecology established labeling options that recognize existing labeling that provides sufficient disclosure as required in Washington's HFC law. We therefore support disclosure of the substitute using the nomenclature as it appears on existing federal or

state-required labeling, or as it appears on other product documents such as the safety data sheet if there is not an existing label that adequately discloses the substitute.

Comments and Responses on Refrigerant Reclamation

Commenters: Daikin US Corporation

Daikin US Corporation - Comment B-7-1

Daikin US suggests adding a definition for "reclaim" as follows:

"Reclaim" means to reprocess recovered refrigerant to all of the specifications in appendix A of this subpart (based on AHRI Standard 700-2016, Specifications for Refrigerants) that are applicable to that refrigerant and to verify that the refrigerant meets these specifications using the analytical methodology prescribed in section 5 of appendix A of this subpart."

Response to B-7-1

The rule does not address reclamation, as Washington's HFC law does not contemplate the issue. Ecology therefore did not include a definition of "reclaim." The term is not used in the rule.

We did not revise the rule as requested.

Daikin US Corporation - Comment B-7-4

Daikin US recommends adding provisions to promote refrigerant reclamation in order to promote best practices. As the only HVACR equipment manufacturer that is also a producer of refrigerants, we suggest that an essential part of any strategy to reduce HFC emissions should be to address refrigerant management. Any ban that does not exempt reclaimed product will leave stranded all existing equipment that relies on a banned refrigerant.

Response to B-7-4

Ecology appreciates the benefits of refrigerant reclamation as a means of reducing the overall use of HFC emissions; however, this rule implements the requirements of Washington's HFC law, which does not address refrigerant reclamation.

We did not revise the rule as requested.

Comments and Responses on Sell-through Provision

Commenters: Center for the Polyurethanes Industry (CPI)

Center for the Polyurethanes Industry - Comment O-3-1

CPI appreciates Ecology's inclusion of a sell-through provision for spray polyurethane foam systems in section WAC 173-443-060(2)(c) (Prohibitions). Ecology's amendments, per our

March 25, 2020 comments, to the sell-through provisions clarify the intent of the sell-through period as it relates to spray polyurethane foam systems. However, CPI believes it is logical to extend this sell-through period to all polyurethane foam systems. Accordingly, CPI recommends the following changes to section WAC 173-443-060(2)(c) (Prohibitions):

"Polyurethane ~~Spray~~ foam systems manufactured (blended) before an applicable prohibition date and not yet applied on site may be used after the prohibition date."

Response to O-3-1

Ecology expanded the sell-through provision from "spray foam systems" to "polyurethane foam systems" as requested.

Center for the Polyurethanes Industry - Comment O-3-2

CPI appreciates [Ecology] including a sell-through period in section WAC 173-443-060(2) (Prohibitions). However, the sell-through provision does not explicitly allow products to be used after they are manufactured. While "use" of a product is likely included in the term "otherwise introduced into Washington commerce," inserting language to clearly state products manufactured before the date of restriction can be used after the date of restriction will further align [Ecology's] regulations with other states regulating, or proposing to regulate HFC foam blowing agents.

Response to O-3-2

The "sell through" language should have included the word "use" and other terms to conform with the applicable statutory language. We revised the rule to add "used" as well as "imported, exported, distributed, and installed" to align with the HFC law and USCA model rule, as it existed in October 2020.

Comments and Responses on Support

Commenters: Natural Resources Defense Council (NRDC), Polyisocyanurate Insulation Manufacturers Association (PIMA), Household & Commercial Products Association (HCPA), Illinois Tool Works Inc. (ITW).

Household & Commercial Products Association - Comment O-4-1

HCPA supports Ecology's phase-down of the use of high-GWP HFCs in a manner consistent with other states. Ecology's approach is consistent with other state actions, which is critical so that industry has regulatory certainty for compliance and future planning, investment, sales and research and development decisions.

Illinois Tool Works Inc. - Comment B-4-1

ITW appreciates provisions that are contained with respect to commercial refrigeration equipment, that call for the transition dates and the effective date for the transition for our class of equipment. The labeling constructs both for refrigerants and for foam blowing agents and your

willingness to align your language with other states who are attempting to put forward similar policies. We are grateful for the open and transparent process and your willingness to both seek out and be inclusive of stakeholders' feedback.

Illinois Tool Works Inc. - Comment B-3-1

ITW appreciates [Ecology's] desire for consumer transparency and awareness regarding products entering and used in the state. To that end, we support the disclosure requirements for the use of HFCs in refrigerant and foam blown into commercial foodservice equipment. Again, the proposed rule would allow for refrigerant labeling to be satisfied using an approved, third-party label (or data plate), and also provide less burdensome foam labeling options because the third-party label (data plate) does not provide, nor can it be amended to indicate, which foam blowing agent was used for the product's insulation.

Natural Resources Defense Council - Comment O-1-1

The NRDC would like to commend [Ecology] for their prompt action to reduce greenhouse gas emissions from hydrofluorocarbons (HFCs). NRDC strongly encourages [Ecology] to adopt the transition schedule as proposed. The proposed schedule is aligned with that of other U.S. Climate Alliance states and thus will avoid a regulatory patchwork. The NRDC is in strong support of the proposed regulation and we thank the [Ecology] for the opportunity to weigh in.

Polyisocyanurate Insulation Manufacturers Association - Comment O-2-1

PIMA supports the modifications made to Section 020 "Applicability" with respect to the proposed labeling requirements. In earlier comments, PIMA expressed concerns related to the applicability of the labeling requirements for specific end-uses where the use of the prohibited HFC substitutes was discontinued many years ago or, in the case of polyisocyanurate insulation boardstock, were never used. With the addition of the language for subsection (2) under Applicability, we now believe [Ecology] has appropriately scoped the labeling requirements to apply to only those end-uses where the disclosures will be most helpful to enforcement efforts and informative to consumers. We encourage [Ecology] to maintain the proposed language for subsection (2) in the permanent rule.

Response to O-4-1, B-4-1, B-3-1, O-1-1, and O-2-1

Ecology thanks you for these comments.

Comments and Responses on Training and Guidance

Commenters: Daikin US Corporation

Daikin US Corporation - Comment B-7-5

Training and servicing requirements for technicians will be important considerations for future regulations. The industry intends to develop a standardized training program for technicians,

contractors, wholesalers, and trainers. Daikin US is willing to work with [Ecology] and other stakeholders to provide guidance on training materials and curriculum.

Response to B-7-5

The adopted rule does not include any training and service requirements for technicians; however, we could evaluate whether to include these requirements in a future rulemaking effort.

Ecology recognizes the importance of training guidance for the successful implementation of the transition away from HFCs and support the development of standardized training. We appreciate your offer and will support any guidance that is developed.

Comments and Responses on Prohibition Date Extensions

Commenters: Manufacturer

Manufacturer - Comment B-5-1

We received a request for a modification of prohibition deadlines and/or temporary enforcement discretion of six months for compact, full-size and built-in refrigerators due to possible COVID-19 impact.

Response to B-5-1

Ecology reviewed the suggestion, but did not extend the prohibition dates in the rule. We will work individually with manufacturers that request additional time to meet applicable prohibition dates and associated reporting requirements due to COVID-19.

We did not revise the rule as requested.