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(Submitted online at <http://ac.ecology.commentinput.com/?id=Ypx2G>)

Comments to Washington: Chapter 173- 443 WAC, Hydrofluorocarbons (informal comment period)

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The following comments are from Daikin US Corporation (Daikin US) in response to the Washington State Department of Ecology (Ecology) stakeholder meeting on January 28, 2020 regarding the Chapter 173-443 WAC initial draft rule language to regulate HFCs.

On September 26, 2019, Daikin announced its intent to develop ducted and ductless residential, light-commercial, and applied products utilizing R-32 refrigerant for the North American market. Daikin selected R-32 due to the drastically lower GWP profile when compared to the currently commonly used R-410A, its energy efficiency benefits, and the ease to reuse, reclaim, and recycle the refrigerant.

While Daikin US contends that federal regulations are the most desirable way to regulate the phase-down of hydrofluorocarbons, we intend to work with individual states as they look to achieve their emissions reduction goals. Our goal is to assist states and territories to adopt and implement consistent laws and regulations, and to avoid a patchwork of differing regulations. Meeting state greenhouse gas reduction objectives and meeting the desire for comfort cooling is a fundamental part of crafting these regulations.

Thank you for considering comments received during the previous stakeholder meeting, especially those related to use of symbolic and online databases as disclosure methods for refrigeration equipment and chillers. Also, thank you for clarifying that foam installed in refrigeration equipment and chillers may be disclosed in an owner's manual.

Daikin US's comments will focus on suggestions on aligning regulations across states and with the EPA's SNAP 20 and 21 rules to create a harmonized framework of HFC regulations across the country.

### **Definitions**

These comments are intended both to support the comments of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), the national trade association for HVAC equipment manufacturers and in addition to the comments from AHRI.



Washington State is the only state currently proposing HFC phasedown regulations that does not include a definition for the word “new” in its draft proposal. Other states have included a definition for “new” but have left an ambiguity by not also defining “New Refrigeration Equipment.” Daikin US believes that the simplest solution is to include the definition of “new” that other states are adopting but also adding a definition for “New Refrigeration Equipment” and “Nominal Compressor Capacity.”

First, the generic definition for “new” can be as follows:

Products or equipment that are manufactured after the compliance date or installed with new or used components, expanded by the addition of components to increase system capacity after the compliance date or replaced or cumulatively replaced after the compliance date such that the cumulative capital cost of replacement exceeds 50% of the capital cost of replacing the whole system.

Second, the definitions of “New Refrigeration Equipment” and “Nominal Compressor Capacity” can be as follows:

“New Refrigeration Equipment” means

- 1) Any refrigeration equipment system, manufactured after the compliance date of this regulation, that is first installed for an intended purpose using new or used components; or
  - a) Additions to existing equipment such that they increase the total nominal compressor capacity of a system after the compliance date
- 2) Any refrigeration equipment that is modified such that it is:
  - a) Modified to increase the total nominal compressor capacity of a system after the compliance date; or
  - b) Replaced or cumulatively replaced after the compliance date at, such that the capital cost of subsequent service, repair, or replacement would exceed 50 percent of the capital cost of replacing the entire refrigeration system based on quoted system replacement cost

“Nominal Compressor Capacity” means the capacity of the system’s compressor(s) based on published ratings in accordance with a recognized standard such as AHRI Standard 540.

Daikin US also supports 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.



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Finally, Washington has not included a definition of the word “use” and Daikin US will happily assist in crafting and updating definitions that are both clear and as uniform with other states’ regulations as possible. We welcome any feedback that staff may have regarding these included definitions or any other future definitions.

### **WAC 173-443-060**

Again, here we support the comments of AHRI asking for the following language to be added to WAC 173-443-060

- (a) Except where an existing system is retrofit, nothing in this regulation requires a person that acquired a product or equipment containing a prohibited substance prior to the compliance date of the prohibition in WAC 173-443-040 to cease use of that product or equipment. Products, equipment or substances may be manufactured, sold, imported, exported, distributed, installed and used if it is manufactured prior to the applicable compliance date of the prohibitions in WAC 173-443-040 to service existing equipment or for use outside the state.

### **Disclosures**

Any proposed requirement for a disclosure statement is of serious concern. Daikin US believes that all the information that Washington and other states are requesting is already available on the UL label in the case of air-conditioning equipment and we thank Washington State Department of Ecology staff for the inclusion of “UL or equivalent safety label” as acceptable forms of disclosure listed in WAC 173-443-070.

However, if Washington chooses to add additional forms of disclosure, Daikin US supports AHRI’s suggestion of adding nameplates be added as a means of disclosure that does not burden manufacturers while utilizing existing labeling methods.

### **Clarification of Foam Disclosure Requirements**

Likewise, Daikin US agrees with AHRI that “Non-Retail Foam Products” does not include air-conditioning equipment other than chillers (such as unitary or air-side equipment) based on the scope of this regulation. Thus, HVAC equipment other than chillers are not required to disclose foams containing HFCs. We would like to further clarify that products that are prohibited and exempted based on this regulation should not be subject to labeling requirements in this regulation. Also, the compliance date for labeling should be some time following publication of the final rule. Manufacturers cannot be expected to create a sufficient label before details of requirements and wording are finalized.



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## **Reclaim**

Daikin US recommends Washington consider 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. We believe that any strategy should not only exempt reclaimed refrigerant but should start with a heavy emphasis on the value of refrigerant reclamation as a means to reduce emissions and we strongly recommend that Washington not only exempt it from future sales bans, but also take affirmative steps to promote reclamation. A strategy that promotes the recovery, reclamation and re-use of refrigerants directly achieves the goal of reducing HFC emissions by eliminating, or at least reducing, the need to service existing systems with newly manufactured product.

Daikin recommends the state suggest and encourage that reclamation should also be done in conjunction with mandatory leak repair per existing US EPA requirements.

## **Technician Training**

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. As with past refrigerants transitions, training will be important so that installation, repairs, and maintenance will result in optimized performance and minimized refrigerant losses. Addressing the safety concerns with A2L refrigerants is paramount. On this topic Daikin is willing to work with Washington and other stakeholders to provide guidance on training materials and curriculum.

Thank you for the opportunity to provide these comments.

Sincerely,

A handwritten signature in black ink that reads "Charlie McCrudden".

Charlie McCrudden  
Director, Government Affairs