

August 30, 2023

Comments from effecterra on
proposed amendments to

Chapter 173-443 WAC Hydrofluorocarbons (HFCs) and Other Fluorinated Greenhouse Gases

Submitted via this portal: <https://aq.ecology.commentinput.com/?id=trCUMYBx2G>

effecterra appreciates the opportunity to provide comments on Washington (WA) State Department of Ecology's (Ecology) proposed amendments to *Chapter 173-443 WAC Hydrofluorocarbons (HFCs) and Other Fluorinated Greenhouse Gases* ("proposed rule").

effecterra is a Public Benefit Corporation that provides sustainability technical support to companies and investors, as well as government entities. One of our niche specialties is in addressing emissions of super-polluting greenhouse gases like hydrofluorocarbons, or HFCs. Overall, we strongly support Ecology's proposed rule and would like to see a swift finalization and adoption. We are providing comments below on specific aspects of the proposed rule that drive the intent of the rule and we believe would improve both clarity and effectiveness.

1. Chillers – GWP limits for refrigeration but prohibited substances list for air conditioning

The proposed rule currently includes GWP limits for new chillers when used for refrigeration purposes (e.g., retail food refrigeration, ice rinks, industrial process refrigeration) but includes a list of prohibited substances when it comes to new chillers used for air-conditioning. While we understand that the dual approach may have resulted from Ecology's interpretation of HB 1050, this type of a dual approach for the same equipment type is confusing, may lead to accidental non-compliance, and does not send a clear regulatory signal. We recommend adopting a consistent strategy and employing GWP limits for all types of new chillers. The EPA's proposed Technology Transitions¹ (TT) Rule places GWP thresholds on new chillers, and consistency with the federal proposal will help eliminate confusion.

2. Hybrid or integrated refrigeration and air-conditioning systems

The proposed regulation does not address hybrid or integrated systems, where the same system is used for meeting both the refrigeration and the HVAC loads. This is a technology which is gaining popularity. We recognize that the definition of "industrial process refrigeration" addresses systems that may be used to meet multiple loads, but a similar definition is not in place for other types of refrigeration equipment. To avoid regulatory loopholes, there should be GWP limits on hybrid or integrated systems. Ideally, if a system can be used to meet both refrigeration and air-conditioning

¹ Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under Subsection (i) the American Innovation and Manufacturing Act of 2020. A Proposed Rule by the Environmental Protection Agency on 12/15/2022. Available at: <https://www.federalregister.gov/documents/2022/12/15/2022-26981/phasedown-of-hydrofluorocarbons-restrictions-on-the-use-of-certain-hydrofluorocarbons-under>

needs, then the GWP limit on that system should be the stricter of the two. We strongly recommend addressing hybrid or integrated systems and placing the stricter of the applicable GWP limits on them, depending on end-use.

3. Effective date for “other” air conditioning (AC) equipment

Under the proposed rule, all new AC equipment will be prohibited from using refrigerants with a GWP value greater than 750, with staggered effective dates. For the category of “other types of air conditioning equipment”, the effective date for the prohibition is listed as January 1, 2028. The preliminary regulatory analyses mentions that state building code changes necessary for enabling lower-GWP alternatives will be adopted by January 1, 2026.² In our opinion, an additional two years of delay is not warranted beyond that.

Under the EPA’s proposed TT rule, a similar prohibition (700 GWP) could become effective nationally, earlier than 2028. If both rules are finalized as proposed, because Ecology will finalize this rule after EPA’s finalization of the TT rule, it could appear that WA has adopted a delayed effective date as compared to the EPA’s rule. This may be construed as allowing sales of high-GWP ACs in WA beyond the federal compliance date, which may lead to confusion and non-compliance. Therefore, we recommend an effective date of January 1, 2026, for new other types of AC equipment category.

4. Emerging HFC end-uses

Non-fossil-fuel-combustion technologies like heat pumps are a vital tool for building decarbonization that help reduce energy-related greenhouse gas emissions and improve air quality. However, we must remain cognizant that heat pumps currently use high-GWP HFCs or blends containing HFCs as heat transfer fluids, and we cannot ignore the potential for HFC emissions from these emerging sources. In the proposed rule, Ecology addresses heat pumps used for air- or space-conditioning with a 750 GWP limit. However, several non-space-conditioning uses of heat pumps are also projected to increase under building electrification efforts. This includes heat pump water heaters, clothes dryers, and pool and spa heat pumps. Unchecked proliferation of high-GWP heat pump technologies may offset the GHG emissions benefits expected from building decarbonization efforts. As the California Air Resources Board outlined in their 2022 Scoping Plan,³ addressing F-gas emissions from heat pumps is necessary to fully preserve the climate benefits derived from building decarbonization. Similarly, The New York State Scoping Plan also highlights the importance of reducing HFC emissions from heat pumps in tandem with building decarbonization efforts.⁴

² State of Washington Department of Ecology, Preliminary Regulatory Analyses for Chapter 173-443 WAC, Hydrofluorocarbons (HFCs) and Chapter 173-455 WAC, Air Quality Fee Rule (2023). Available at: <https://apps.ecology.wa.gov/publications/UIPages/documents/2302081.pdf>

³ California Air Resources Board. 2022 Scoping Plan for Achieving Carbon Neutrality (2022). Available at: <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>

⁴ New York State Climate Action Council. 2022. New York State Climate Action Council Scoping Plan (2022). Available at: <https://climate.ny.gov/-/media/project/climate/files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf>

Time is of the essence. Under the 2022 Inflation Reduction Act, the federal government is heavily incentivizing heat pumps technologies, including heat pump water heaters.⁵ Placing practicable and progressive GWP limits on those sectors will be important for adoption of sustainable, low-climate-impact heat pump technologies and pave the way for holistic building decarbonization. We encourage Ecology to address emerging HFC sectors, such as heat pumps used for water heating and clothes drying with GWP limits.

5. Effective date for small containers of refrigerants

In both the informational guidebook and the proposed regulatory text, the effective date for a GWP limit of 150 on small containers of automotive refrigerant and non-essential consumer products is listed as July 25, 2021. We request Ecology to clarify whether this is correct since the regulatory amendments are likely to be finalized in late 2023.

6. Refrigerant Management Program (RMP)

- a. **Inclusion of AC systems in the RMP:** We applaud the decision to include AC systems in the RMP. We would recommend this to all states looking to adopt a refrigerant management program.
- b. **Reporting requirement for reclaimers:** Per the requirements, only certified refrigerant reclaimers who *reclaim* any high-GWP refrigerant in Washington must submit an annual report to Ecology. However, in many cases, refrigerant is recovered in the state but sent out of state for reclamation. To get better data collection and reporting on the true extent of refrigerant recovery in the state, we recommend amending the language such that certified reclaimers who *recover and/or reclaim* any high-GWP refrigerants in Washington will be required to submit an annual report to Ecology. The reporting requirement proposed by Ecology also exists in CARB's RMP regulation, one that we hope will get addressed when CARB amends their RMP rule.

Thank you again for the opportunity to provide comments.

We look forward to working with Ecology to finalize this rule that provides a progressive and pragmatic path for reducing HFC emissions.

Sincerely,



Richie Kaur, Ph.D.
Program Leader – Sustainability, Policy & Technical Services

⁵ https://www.energystar.gov/about/federal_tax_credits;
<https://www.rewiringamerica.org/ira-fact-sheets>

Co-Founders of Effecterra:



Tristam Coffin



Michael May



Chris Vallis