

Hydrofluorocarbons (HFCs) Rulemaking Chapter 173-443 WAC

February 3, 2022

Meet the Panel

Hydrofluorocarbon Rulemaking Team

Eman Jabali – Meeting Host

Tina Maurer – Meeting Host

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Janée Zakoren – Community Outreach & Engagement Specialist

Agenda



- Welcome and logistics
- Overview of 2021 HFC law (HB 1050)
- Common terms
- Overview of rulemaking
- Discuss draft language for GWP thresholds (HB 1050, Section 8)
- Wrap up, next stakeholder meeting

Common Terms and Acronyms

Revised Code of Washington (RCW)

Laws enacted in Washington

Washington Administrative Code (WAC)

Codified regulations (i.e., rules) detailing how a state agency will implement a law

Rulemaking

Administrative process for formulation and adoption of a rule (RCW 34.05.010)

GWP

Global Warming Potential (100-year)

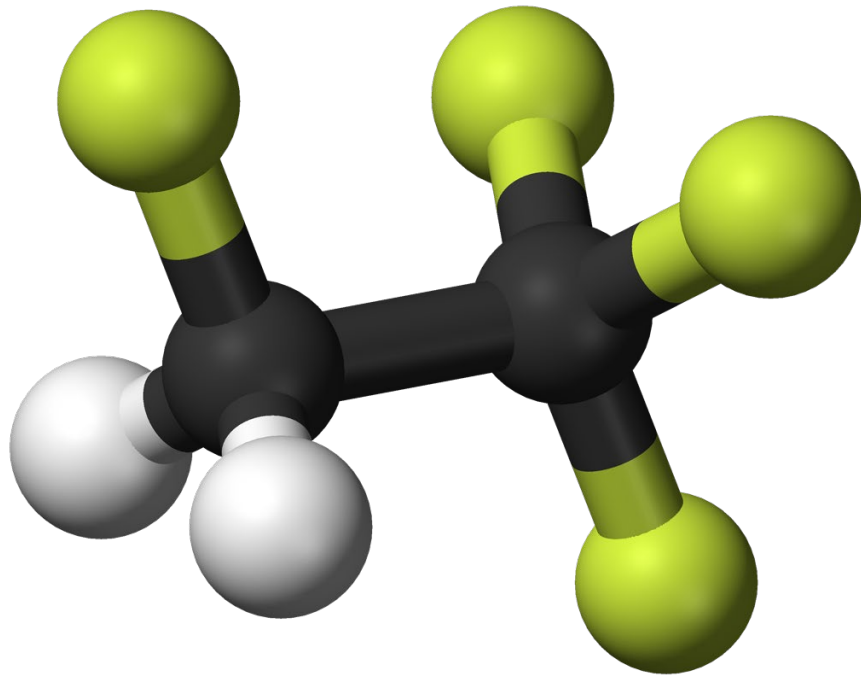
SNAP

Significant New Alternatives Program

RMP

Washington's Refrigerant Management Program

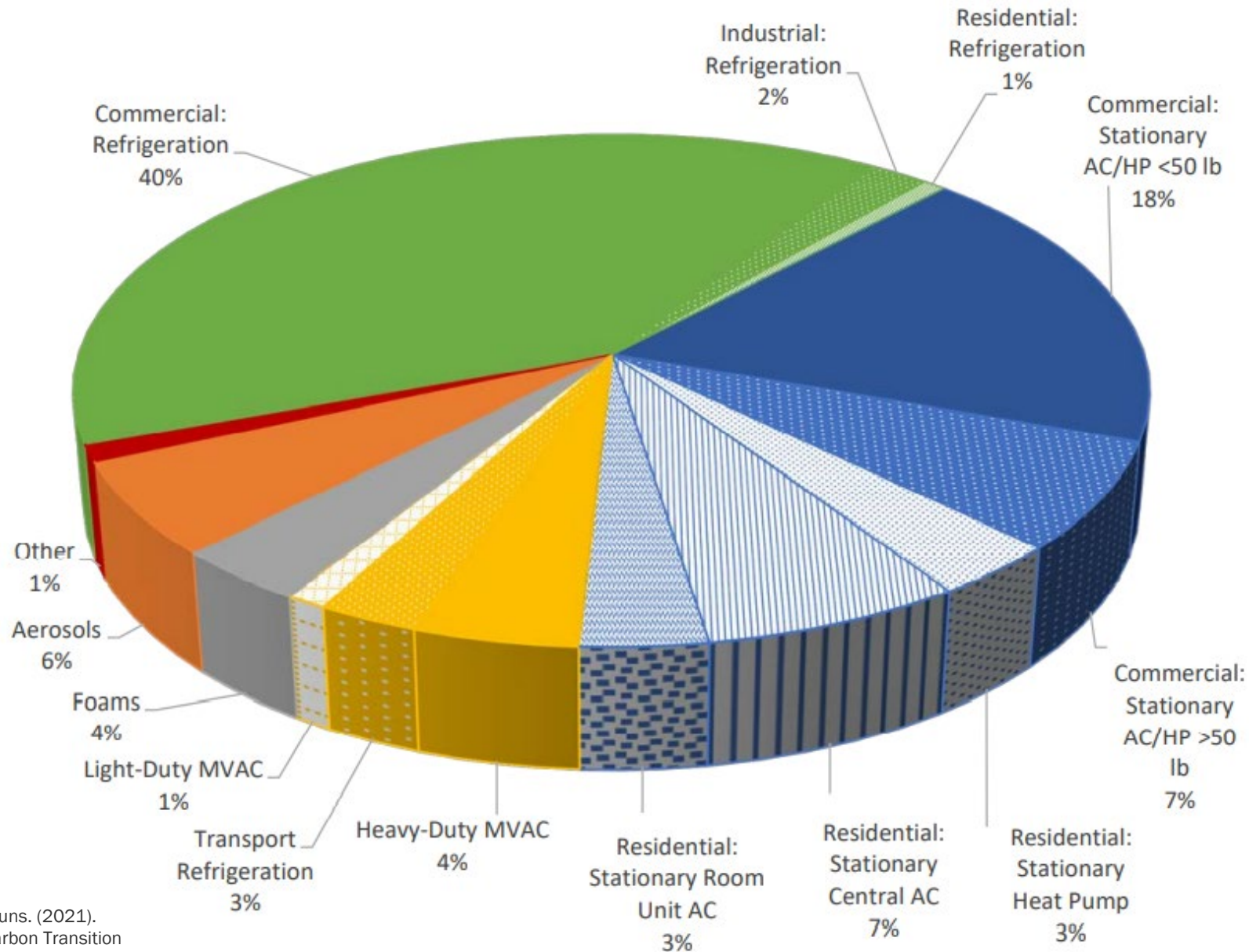
Hydrofluorocarbons (HFCs)



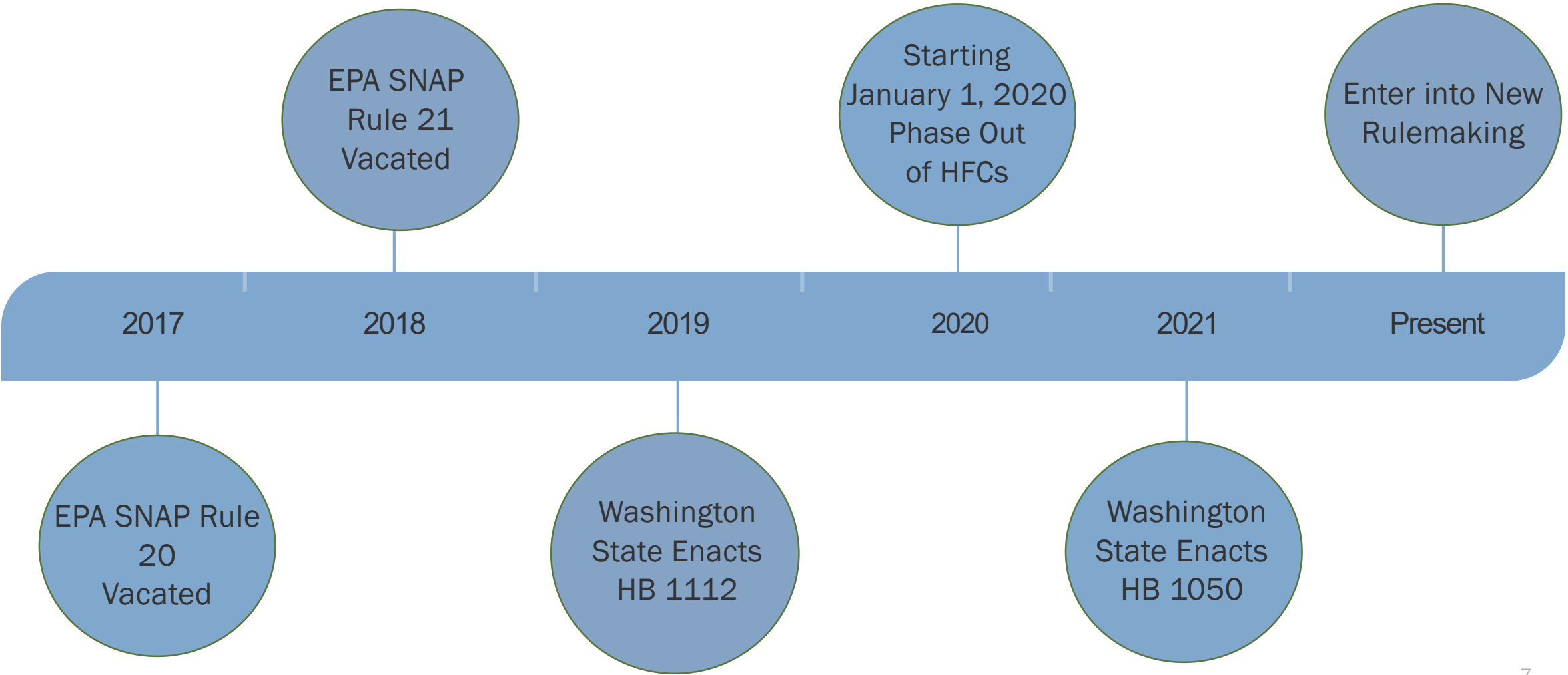
1,1,1,2-tetrafluoroethane

- Ozone-friendly replacement to chlorofluorocarbons and other ozone depleting substances
- Used as refrigerants, in spray foams, propellants, and others
- High GWP – up to 15,000 times more impactful than carbon dioxide
- HFCs account for 4 million metric tons of carbon emissions in Washington each year

Projected Washington HFC Emissions by End-Use



Federal Rules & State Legislation Overview



Broad Scope of HFC Law

Chapter 70A.60 RCW



Passed in 2021, HB 1050 expands the 2019 law to phase out major uses of certain HFCs and reduce HFC emissions by 1.3 million metric tons/year.

Ecology's Role

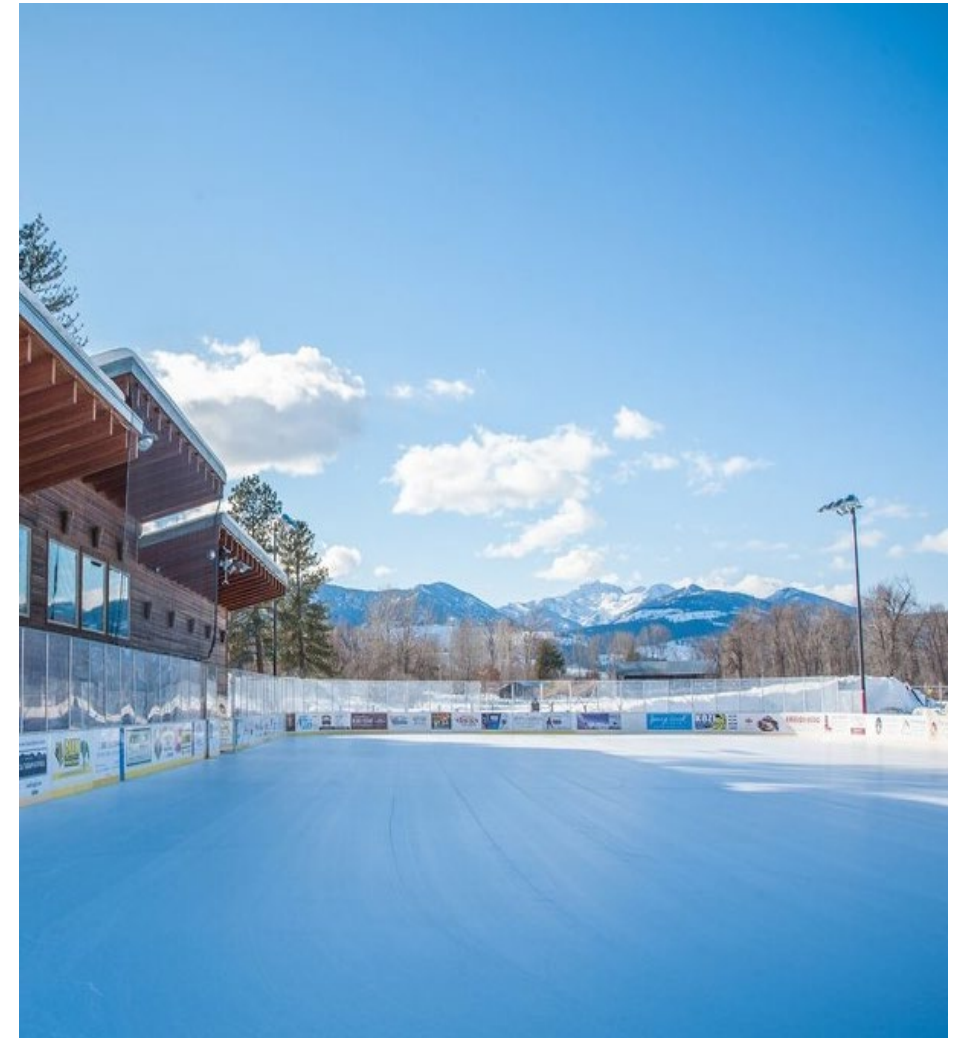
- New GWP thresholds
- Development of Refrigerant Management Plan (RMP)
- Legislative reports
- Requirements for handling ozone-depleting substances extended to HFCs

Rulemaking Overview

- Chapter 173-443 WAC, Hydrofluorocarbons (HFCs)
- Chapter 70A.60 RCW, Hydrofluorocarbons Emissions Reduction (HB 1050)

Scope of Rulemaking – Required Elements

- Greenhouse gas potential (GWP) thresholds for new equipment in ice rinks
- Refrigerant Management Program (RMP) for commercial refrigeration and air conditioning systems using 50 pounds of refrigerant or more



Scope of Rulemaking – Required Elements

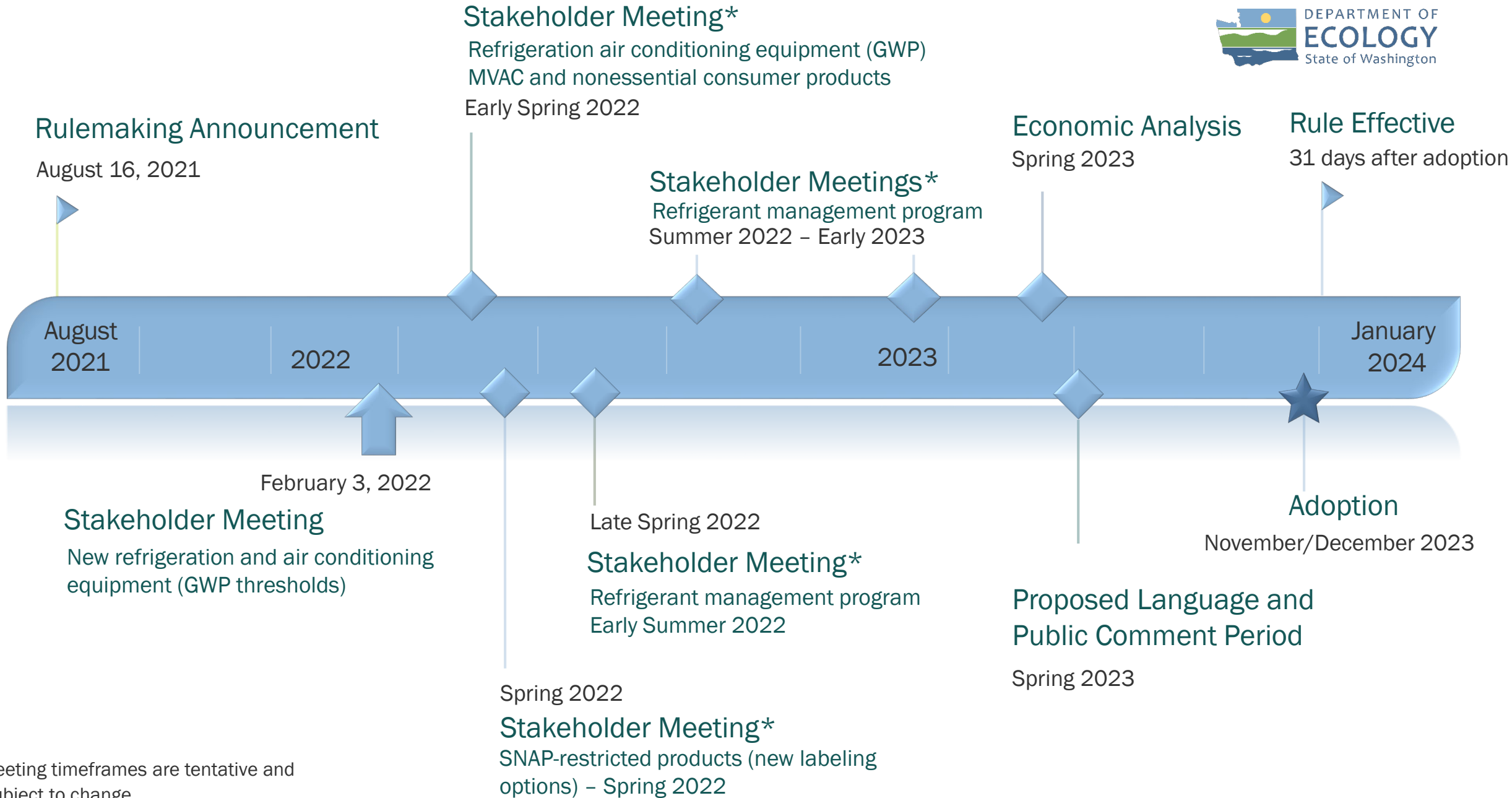


- HFCs added to existing requirements for ozone depleting refrigerants
 - MVAC small can recharge
 - Nonessential consumer products
- New labeling options for SNAP-restricted products

Scope of Rulemaking – Optional Elements

- GWP thresholds for refrigeration (>50 lbs.) and air conditioning equipment
- Labeling, reporting, and recordkeeping
- Fees to support RMP
 - Adding new section to Air Quality Fee Rule
- Process for exemptions and variances





*Meeting timeframes are tentative and subject to change

Questions

Draft Rule Language Review

- Policy and purpose
- Applicability
- New refrigeration (including ice rinks) and air conditioning equipment

RCW 70A.60.020 (HB 1050, Section 8)

- GWP thresholds
- Labeling and disclosure
- Recordkeeping

Draft Rule Language Review

- 010 – Policy and purpose
 - Expanded to include other fluorinated gases
- 020 – Applicability
 - Expanded to include:
 - Manufacturers of products and equipment containing HFCs
 - Owners/operators of stationary refrigeration and air conditioning
 - Technicians and others who service equipment
 - Refrigerant distributors, reclaimers, and recyclers
- 030– Definitions (future meeting)

Draft Rule Language Review

- 040 – List of prohibited substances
 - Table 1
 - SNAP-like prohibitions
 - Minor formatting changes
 - Table 2 – Refrigeration >50 pounds, 150 GWP
 - Table 3 – Air conditioning, 750 GWP
 - Table 4 – MVAC recharge and nonessential consumer products (future meeting)

Table 2. Stationary refrigeration equipment

General End-Use	Specific End-Use	Prohibited Substances (Refrigerant GWP)	Effective Date: * New Facilities # Existing Facilities
Refrigeration equipment	Retail food refrigeration containing more than 50 pounds of refrigerant	150+	* January 1, 2024 # January 1, 202--
Industrial process refrigeration, excluding chillers	Industrial process refrigeration that does not use a chiller containing more than 50 pounds of refrigerant	150+	* January 1, 2024 # January 1, 202--
Chillers used for industrial process refrigeration purposes	Industrial process refrigeration containing more than 50 pounds of refrigerant	150+	* January 1, 2024 # January 1, 202--
Cold storage warehouses	Cold storage warehouses containing more than 50 pounds of refrigerant	150+	* January 1, 2024 # January 1, 202--
Ice rinks (new facilities)	Refrigeration equipment containing more than 50 pounds of refrigerant installed in a new facility	150+	* January 1, 2024
Ice rinks (existing facilities)	Refrigeration equipment containing more than 50 pounds of refrigerant installed in an existing facility	750+	# January 1, 2024

Table 3. Stationary air conditioning equipment

General End-Use	Specific End-Use	Prohibited Substances (Refrigerant GWP)	Effective Date: * New Facilities # Existing Facilities
Air conditioning equipment	Room/wall/window air conditioning equipment, PTACs, PTHPs, portable air conditioning equipment, and residential dehumidifiers	750+	* January 1, 2024 # January 1, 202--
Air conditioning equipment	Variable refrigerant flow (VRF) or volume system	750+	* January 1, 2026 # January 1, 202--
Air conditioning equipment	Other types of air conditioning equipment used in residential and nonresidential applications	750+	* January 1, 2025 # January 1, 202--

Draft Rule Language Review

- 050 – Exemptions to prohibitions
 - Table 1
 - SNAP-like prohibitions
 - No changes
 - Table 2 – Refrigeration equipment
 - Table 3 – Air conditioning equipment
 - Table 4 – MVAC recharge and nonessential consumer products (future meeting)

Table 2. Exemptions for stationary refrigeration equipment

Retail refrigeration equipment	Refrigerants with a GWP 150 or more	Equipment with 50 pounds or less of refrigerant
Industrial process refrigeration, excluding chillers	150+	<50 pounds
Chillers used for industrial process refrigeration	150+	<50 pounds
Cold storage warehouses	150+	<50 pounds

Table 3. Exemptions for stationary air conditioning equipment

End-Use Category	Prohibited Substances (Refrigerant GWP)	Exemptions
Room/wall/window air conditioning equipment, PTACs, PTHPs, portable air conditioning equipment, and residential dehumidifiers	750+	
Variable refrigerant flow (VRF) or volume system	750+	
Other types of air conditioning equipment used in residential and nonresidential applications	750+	

Draft Rule Language Review

065 – Requirements for refrigeration with >50 pounds of refrigerant (Table 2)

070 – Requirements for air conditioning (Table 3)

Disclosure: On-product label

- Refrigerant type
- Charge size
- Date of manufacture

Recordkeeping: 5 years

- Types of records

Draft Rule Language Review

- 080 – Petition for variance
- GWP thresholds, Tables 2 and 3
 - Impossibility
 - Application, demonstrate lower risk substitute is not available, does not harm human or environmental health
 - Public comment period
 - Approval and disapproval
 - Force majeure
 - Application
 - Public comment period
 - Approval and disapproval

Draft Rule Language Review – Wrap Up

- Comment online: <https://aq.ecology.commentinput.com/?id=6FM8R>

Future Meetings

- Continued refrigeration and air conditioning discussion (March)
- MVAC recharge and nonessential consumer products (March)
- New SNAP labeling options (TBD)
- Refrigerant Management Program (TBD)

Ecology Contacts

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Rulemaking

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HFC Web Pages

Compliance assistance, submitting reports

<https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Hydrofluorocarbons>

Rulemaking

<https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-443-455>

Informal comments

<https://aq.ecology.commentinput.com/?id=6FM8R>