Hydrofluorocarbons (HFCs)
Chapter 173-443 WAC

Rulemaking Stakeholder Meeting
December 17, 2019
WA Hydrofluorocarbon Law

RCW 70.235.080, et al.

- HFC restriction dates set in law
- Initial notification by Dec 31, 2019
- Status update notification within 120 days of an applicable restriction date
- Product labeling

More information:
www.ecology.wa.gov/HFC
www.ecology.wa.gov/HFCrulemaking
Agenda

• Welcome & logistics
• Rulemaking economic analyses overview
  – What to expect during process
  – Questions to consider
• Labeling strategies
  – Review proposed labeling strategies
• Next steps

www.ecology.wa.gov/HFC
www.ecology.wa.gov/HFCrulemaking
Economic Analysis at Ecology

Sam Wilson, Regulatory Analyst
Ecology Governmental Relations
sam.wilson@ecy.wa.gov | (360) 407-7476
Overview

• **Our economic analyses support:**
  – Rules
  – General permits
  – Legislative reports and requests, Chemical Action Plans, etc.

• **Our economic analyses rely on:**
  – Real world quantitative data
  – Qualitative information
  – Comprehensive regional economic models
  – Rigorous methods

• **Economics analyses are conducted independently**
Economic analyses during rulemaking

**Rule Proposal Phase (CR-102)**
- **Preliminary Regulatory Analyses** document published with proposed rule language

**Rule Adoption Phase (CR-103)**
- **Final Regulatory Analyses** document published with final rule language
- Response to economic comments in CES
How can you contribute?

- We regularly work with stakeholders to:
  - **Gather data**
    - Baseline operating costs
    - Anticipated costs or benefits related to the change
    - Potential qualitative impacts
  - **Check assumptions**
  - **Truth our modeling structure**
A few key questions to consider

• How would the rule changes affect you?

• What specific costs or benefits do you expect as a result of the changes?

• In what ways could we achieve the goals of the changes while mitigating costs to you?

See “Economic questions” handout for more info
Thank you

Sam Wilson
Regulatory Analyst | Governmental Relations
Washington State Department of Ecology
360.407.7476 | sam.wilson@ecy.wa.gov
Labeling Strategies

Aerosol Propellants: 1:45 p.m. – 2:20 p.m.

Foams: 2:30 p.m. – 3:30 p.m.

A/C, Refrigeration: 3:30 p.m. – 4:20 p.m.
# Aerosol Propellants

## Consumer products

1) Substitute listed on product label, or,  
2) Substitute listed on box or packaging label, or,  
3) An on-product symbol plus online substitute disclosure, or,  
4) An on-box or on-packaging symbol plus online substitute disclosure.

## Other products (with demonstrable regulatory label format limitations)

1) Any of the options above (1-4), or,  
2) A product insert (SDS or paper disclosure) and online disclosure.
<table>
<thead>
<tr>
<th>Foams</th>
<th>Labeling and Disclosure Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexible polyurethane</strong></td>
<td>For manufacturer end-use products: Substitute disclosed on unit label and/or any of the consumer product options below.</td>
</tr>
<tr>
<td></td>
<td>For consumer end-user products: 1) Substitute listed on product label, or, 2) Substitute listed on box or packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) An on-box or on-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Rigid polyurethane: Marine Flotation</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Polystyrene extruded sheet</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Integral skin polyurethane</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Polyolefin</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Polystyrene extruded boardstock and billet</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Rigid polyurethane: Sandwich Panels</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Phenolic insulation board</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Bunstock</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
</tr>
<tr>
<td><strong>Rigid polyurethane: Spray</strong></td>
<td>Substitute disclosed on unit label, or, in lieu of or in addition to unit labels, either: 1) Substitute listed on product label, or, 2) Substitute listed on packaging label, or, 3) An on-product symbol plus online substitute disclosure, or, 4) On-packaging symbol plus online substitute disclosure.</td>
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</table>
## Chillers, Refrigeration, and Foam

### Refrigerator Equipment Foam

<table>
<thead>
<tr>
<th>Refrigerator Equipment Foam</th>
<th>Labeling and Disclosure Requirement(s)</th>
</tr>
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<tbody>
<tr>
<td>Rigid polyurethane: Appliances</td>
<td>Unit label</td>
</tr>
<tr>
<td>Rigid polyurethane: Commercial Refrigeration</td>
<td>In addition, see refrigeration requirements related to disclosure of foam to end users of refrigeration products.</td>
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</tbody>
</table>

### Air Conditioning and Refrigeration

<table>
<thead>
<tr>
<th>Refrigeration Equipment</th>
<th>Refrigerant(s)</th>
<th>Foam Installed or Blown in Product at Manufacturer</th>
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<tbody>
<tr>
<td>Built-in residential consumer refrigeration products</td>
<td>Applicable substitute listed on safety label (UL or equivalent) on product.</td>
<td>Substitute disclosed: 1) On UL Label, or, 2) On dedicated label, or, 3) In owner’s manual.</td>
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<tr>
<td>Compact residential consumer refrigeration products</td>
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<tr>
<td>Residential consumer refrigeration products other than compact and built-in residential consumer refrigeration products</td>
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<tr>
<td>Vending machines</td>
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<td>Stand-alone units</td>
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<tr>
<td>Centrifugal chillers</td>
<td>1) Applicable substitute(s) listed on safety label (UL or equivalent) on refrigeration equipment, or, 2) On dedicated label.</td>
<td>Substitute disclosed: 1) On dedicated label, or, 2) In owner’s manual, or, 3) Through an on-equipment symbol (approved by Ecology) plus online substitute disclosure.</td>
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<td>Positive displacement chillers</td>
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<td>Refrigerated food processing and dispensing equipment</td>
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<td>Remote condensing units</td>
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<td>Supermarket systems</td>
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<td>Cold storage warehouses</td>
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Next Steps

- **Dec 31, 2019** initial notifications due
- **January 28, 2019** stakeholder meeting
- **Jan. - Feb. 2020** post names of manufacturers who submit initial notification on HFC website
- **Jan. - March 2020** draft rule language
- **March - April 2020** begin economic analysis outreach

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## Rulemaking Timeline

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Activity Description</th>
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<tbody>
<tr>
<td>Nov. 2019 – March 2020</td>
<td>Hold stakeholder meetings</td>
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<tr>
<td>Jan. – March 2020</td>
<td>Draft rule language</td>
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<td>April – June 2020</td>
<td>Prepare rule proposal materials</td>
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<tr>
<td></td>
<td>• Regulatory Analyses</td>
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<td></td>
<td>• State Environmental Policy Act (SEPA) checklist</td>
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<td></td>
<td>• Proposed rule language</td>
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<tr>
<td>June 2020</td>
<td>Propose rule, open public comment period</td>
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<tr>
<td>July 2020</td>
<td>Public hearing, close public comment period</td>
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<tr>
<td>Oct. – Nov. 2020</td>
<td>Adopt rule</td>
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<tr>
<td>Nov. – Dec. 2020</td>
<td>Rule effective (31 days after adoption)</td>
</tr>
</tbody>
</table>

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Contact Info

Find more information:

HFC Program:  www.ecology.wa.gov/HFC
HFC Rulemaking: www.ecology.wa.gov/HFCrulemaking

Email:

Rulemaking questions
linda.kildahl@ecy.wa.gov

Using SAW to upload HFC initial notification
texkjo.sullivan@ecy.wa.gov

All other questions
HFC@ecy.wa.gov