Rulemaking: Clean Vehicles Program & Hydrofluorocarbons Community Forum

Climate Pollution Reduction Program

January 29, 2025

Ecology staff introductions

- **Meg Baker**, Community Outreach and Environmental Education Specialist
- **Nikki Harris**, Climate Pollution Reduction Program Rulemaking Coordinator
- **Gopika Patwa**, HFC Rule Lead, Environmental Planner
- **Joshua Grice**, Policy and Planning Section Manager
- **Josh Grandbouche**, Zero Emission Vehicle Specialist
- **Dustin Watson**, Mobile Source Air Quality Specialist
- **Rebecca Sears**, Greenhouse Gas Inventory & Transportation Section Manager
- **Tammy Dumitrescu**, HFC Technical Lead, Environmental Specialist

Today's agenda

1. What is rulemaking?
2. Clean Vehicles Program rulemaking
3. Break
4. Hydrofluorocarbons rulemaking

Rulemaking terms

Revised Code of Washington (RCW): Laws enacted in Washington

Washington Administrative Code (WAC): Regulations (i.e., rules) detailing how a law will be implemented

Rulemaking: Administrative process to write and adopt a rule

Why do we write rules?

The legislature adopts a law that requires or allows rulemaking by Ecology

Ecology receives requests or concerns about our rules

Ecology has identified updates to rules that need to be adopted

Rulemaking process

Three Rulemaking Phases

Announcement

- Gather information
- Explore options
- Notify public about rulemaking

Proposal

- Hold public meetings to present ideas
- Accept informal comments as early feedback
- Develop draft rule language
- Host working groups

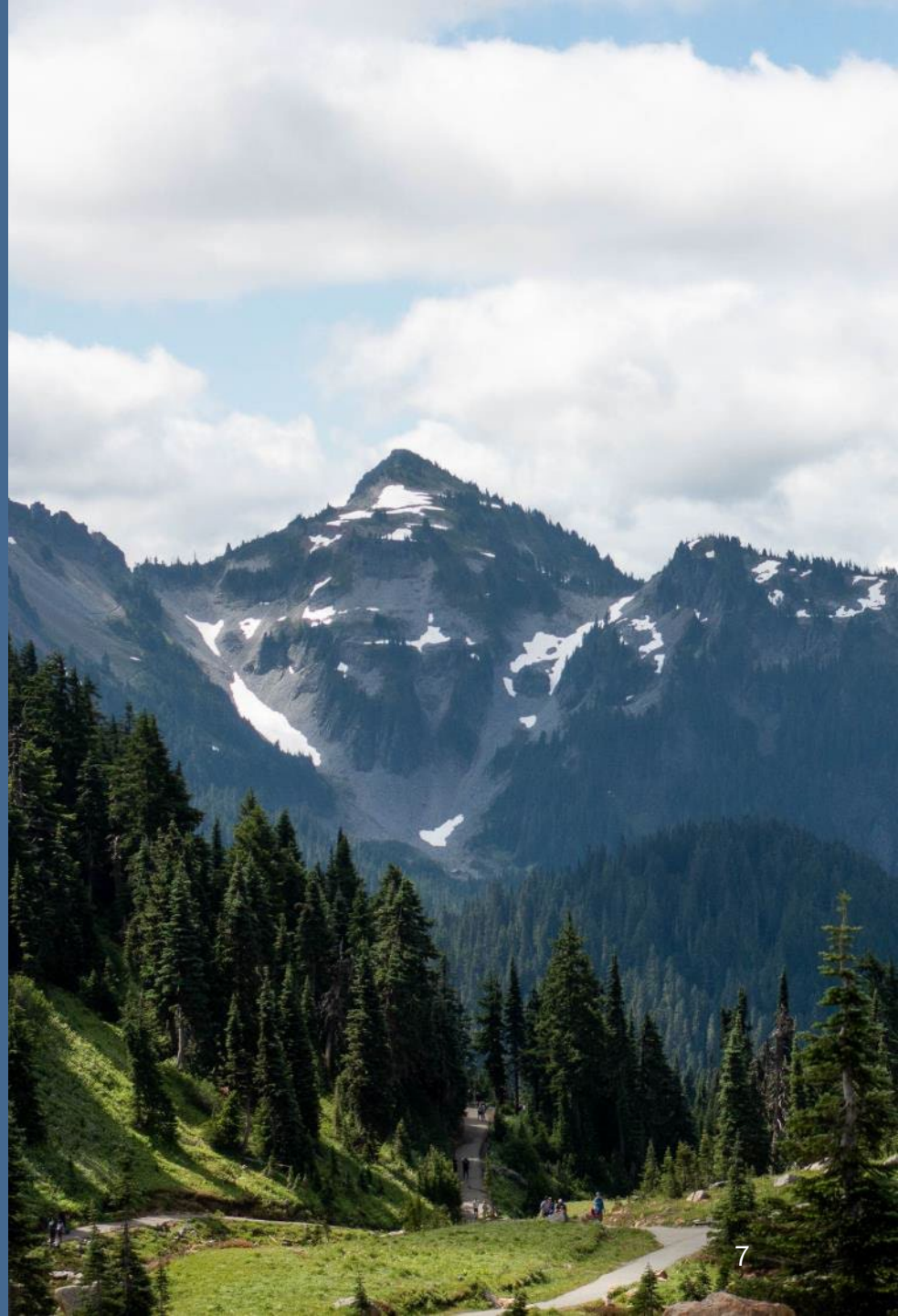
Adoption

- Open the formal public comment period
- Hold public hearing(s)
- Consider and respond to comments
- Finalize the rule

Environmental Justice Assessment (EJA), economic analysis, Tribal engagement and/or consultation

Clean Vehicles Program

Rulemaking



Ecology's Clean Vehicle Program History

- **2005**
  - Clean Car Law
- **2020**
  - Zero-Emission Vehicle (ZEV) Law
  - Revised greenhouse gas targets
- **2021**
  - Advanced Clean Cars and Advanced Clean Trucks rulemaking
- **2022**
  - Advanced Clean Cars II, Heavy-Duty Low-NOx Omnibus, and fleet reporting rulemaking
- **2023-25**
  - Implementing standards and Advanced Clean Trucks/Omnibus amendment rulemaking

Improve air quality in near-port communities and along transportation corridors

Improve consumer choice for ZEV models

Meet climate targets in RCW 70A.45.020, modelled after Paris Climate Accords, IPCC 5th Assessment

Weakening federal greenhouse gas standards

Scope of rulemaking

- Ecology plans to adopt technical amendments to:
  - Advanced Clean Trucks (ACT)
  - Heavy-Duty Low-NOx Omnibus
- These will give greater flexibility to manufacturers and address known concerns.
- To comply with Chapter 70A.30, Ecology is also inviting comment on additional California emissions standards that the agency should consider adopting in the future.

Online public comment is open. Visit the rulemaking webpage.

Scan our QR code

November 2024

Rule announced

December 2024-Summer 2025

Public engagement

Summer 2025

Propose rule

Winter 2025

Adopt rule

Why is this rulemaking necessary?

- Transportation is Washington's **largest source of greenhouse gas emissions** (39%) and a **major contributor of air pollution.**
- Medium- and heavy-duty vehicles contribute ~30% of the state's on-road transportation emissions.
- The state's Transportation Electrification Strategy projects that zero-emission vehicles will reduce our state's greenhouse gas emissions by 9.4 million metric tons of carbon dioxide annually by 2030.

Clean truck regulations

Advanced Clean Trucks

Adopted in 2021

Heavy-Duty Low-NOx Omnibus

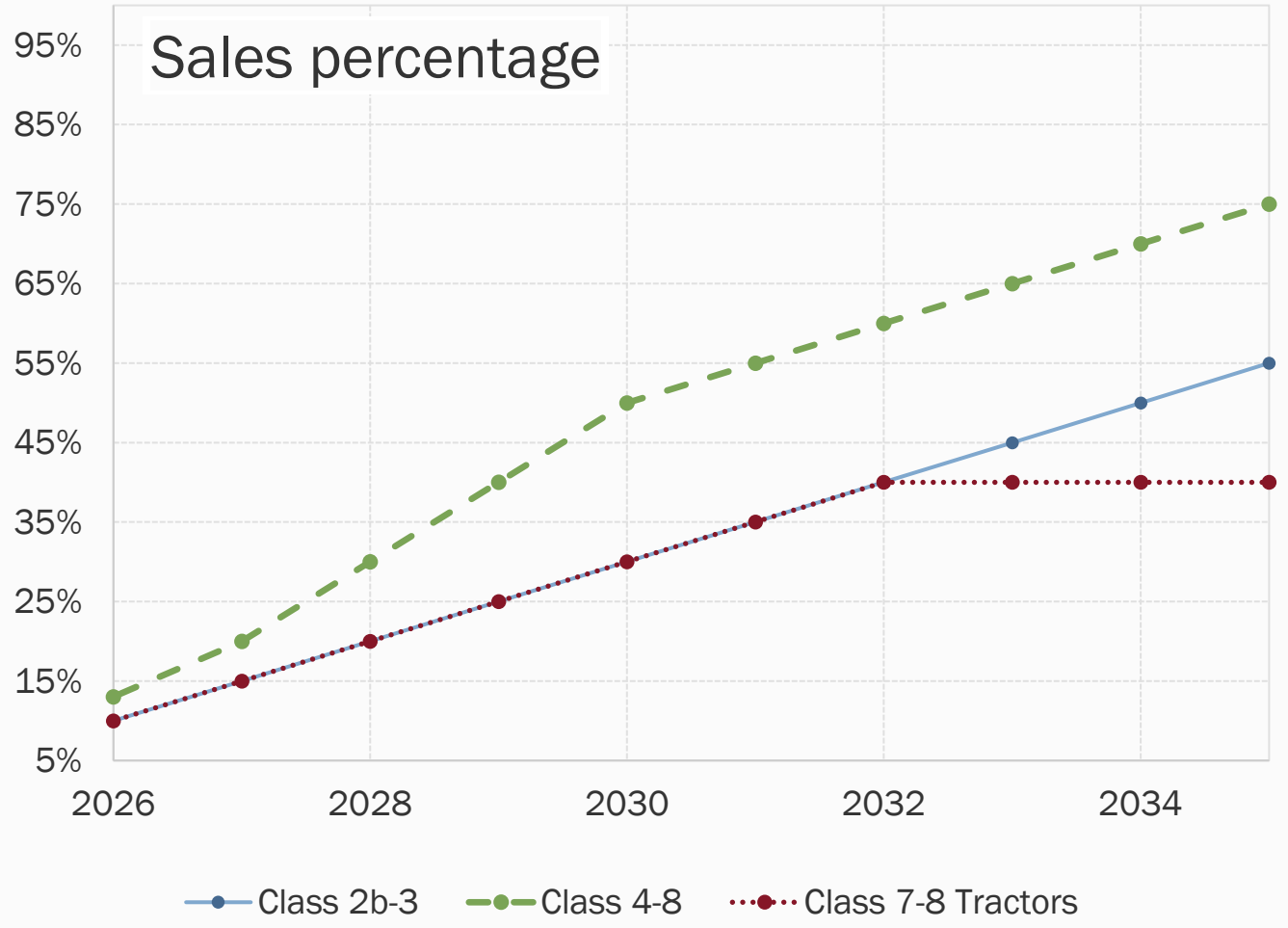
Adopted in 2022

Who do these rules impact?

- Manufacturers that offer new medium- and heavy-duty trucks and engines for sale in Washington
- The rules **do not** apply to Tribes, dealerships, or fleets

How Advanced Clean Trucks (ACT) works

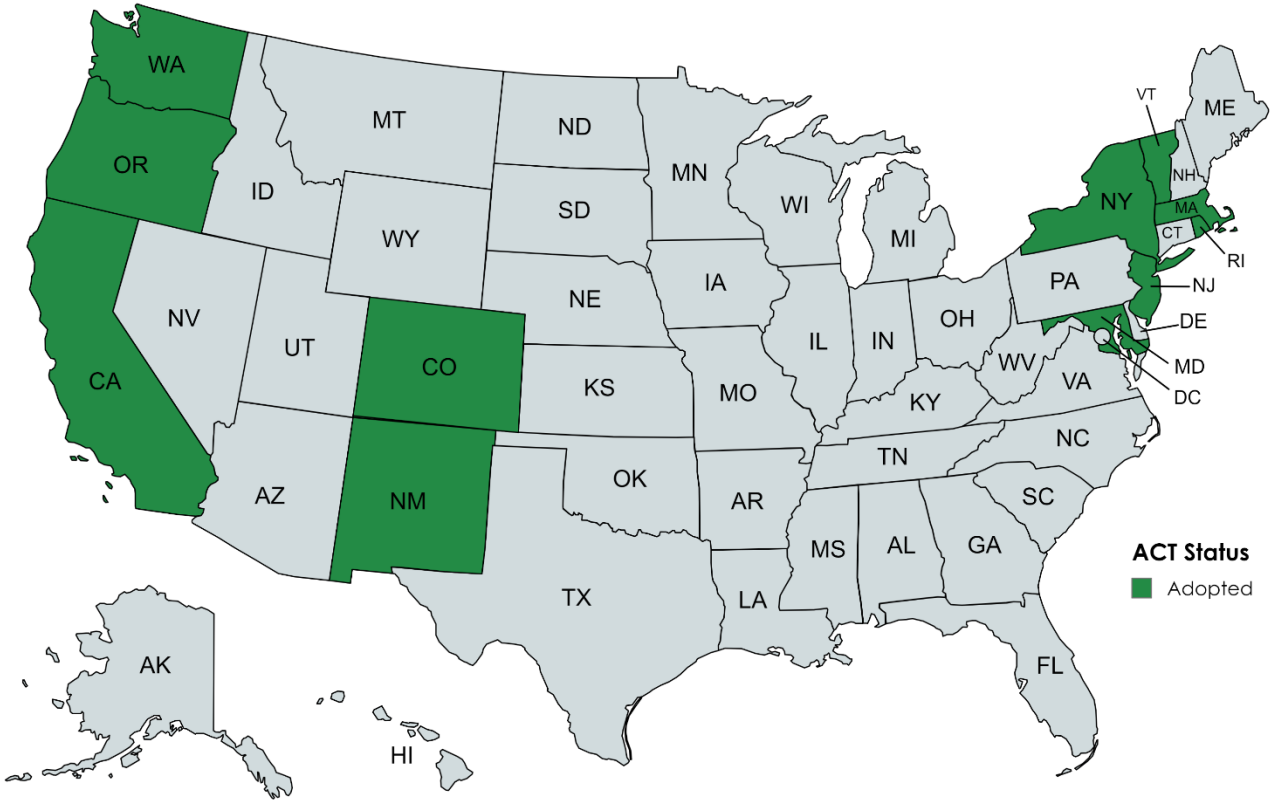
- Initially adopted by Ecology in 2021
- Requires Class 2b-8 truck and engine manufacturers to:
  - **Increase sales** of new zero-emission and plug-in hybrid vehicles each year in Washington
  - **Or purchase credits** from manufacturers who exceed the requirements



Where ACT has been adopted

ACT states represent approximately 25% of the heavy-duty market.

State	Applicable Model Year
California	2024
Colorado	2027
Maryland	2027
Massachusetts	2025
New Jersey	2025
New Mexico	2027
New York	2025
Oregon	2025
Rhode Island	2027
Vermont	2026
Washington	2025



Original Equipment Manufacturer (OEM) exemption:
Emergency vehicles, transit buses, motor coaches, and more

Rule language: WAC 173-423-075 (2) and here: ACT Title 13

Common ACT misconceptions

Myth	Fact
Manufacturers must sell a certain number of zero-emission vehicles before being allowed to sell diesel or gas-powered vehicles.	Manufacturers are not prohibited from selling combustion vehicles before zero-emission vehicles and have multiple compliance options, including selling plug-in hybrids and purchasing credits from other manufacturers with excess credits.
Fleets must purchase zero-emission vehicles starting this year.	ACT only regulates manufacturers.
ACT is banning the sale of certain vehicles.	ACT does not ban the sale of any kind of vehicle.
There is not enough public charging in Washington state to transition to EVs.	ACT was designed to be feasible statewide even without public charging. Public and depot charging are both being rapidly built out in Washington. However, Tribal experiences and concerns related to charging may differ from the statewide picture, and Ecology is particularly interested in Tribal comment on this topic.
There are not very many zero-emission vehicles available now.	Over 190 Class 2b-8 zero-emission vehicles available for sale in the U.S.

Reported model year 2021, 2022, & 2023 vehicle sales in Washington

Manufacturer	Class 2b-8 vehicles Total sales	Class 2b-8 vehicles Total ZEV sales	Class 7-8 tractors Total tractor sales	Class 7-8 tractors Total tractor ZEV sales
Autocar	46	0	0	0
Blue Bird	431	15	0	0
BYD	6	6	2	2
Daimler	2,005	30	1,593	4
Ford	18,041	977	0	0
GM	3,376	22	0	0
Isuzu	1,294	0	0	0
Lightning	11	11	0	0
Lion	3	3	0	0
PACCAR	2,387	5	3,140	3
Rivian	3,605	3,605	0	0
Stellantis	12,167	0	0	0
Tesla	0	0	0	0
Volvo	153	0	465	49
Total (percent of total)	**43,525**	**4,674 (10.7%)**	**5,200**	**58 (1.1%)**

- There were no plug-in hybrid medium- and heavy-duty vehicle sales reported to Ecology for model years 2021, 2022, or 2023.
- These sales were reported by manufacturers and represent the estimate of vehicles available to earn credits.
- 2024 and 2025 sales will be added to this total before reporting compliance begins.

ACT potential rule revisions

- Adopt California's ACT amendments:
  - Edits to clarify existing language
  - Extends shortfall makeup period from one year to three years
  - Compliance to be based on reported sales of vehicles delivered into the state instead of when vehicles reach the ultimate purchaser
  - Additional manufacturer reporting and record retention requirements

ACT potential rule revisions, continued

- Allows secondary manufacturers to buy and sell ACT credits
- Allows manufacturers to certify Class 2b-3 vehicles to the zero-emission powertrain requirements
- Clarifies vehicle and engine labelling requirements so that the vehicle is clearly marked for sale in the Washington/ACT market
- Exempts Omnibus-compliant engines in Class 7-8 vehicles from deficit calculations in model year 2026
  - Reduces the credits needed for Class 7-8 vehicle (tractor and non-tractor) compliance for model year 2026

ACT potential rule revisions, continued

Taken together, these changes address industry concerns by

- Allowing additional time for manufacturers to report and make up a shortfall.
- Increasing manufacturer flexibility to provide combustion and zero-emission models simultaneously.
- Easing requirements for zero-emission Class 7-8 tractor sales in the early years of the program.

ACT benefits

- Large trucks and buses make up just **10%** of on-road vehicles but **30%** of on-road greenhouse gas emissions
  - Even larger shares of particulate matter (PM) and nitrogen oxides (NO_x)
  - Total cost of ownership for some zero-emission vehicles is already lower than diesel counterparts
  - All zero-emission vehicle classes are projected to have models cheaper to own than diesel within the next 10 years

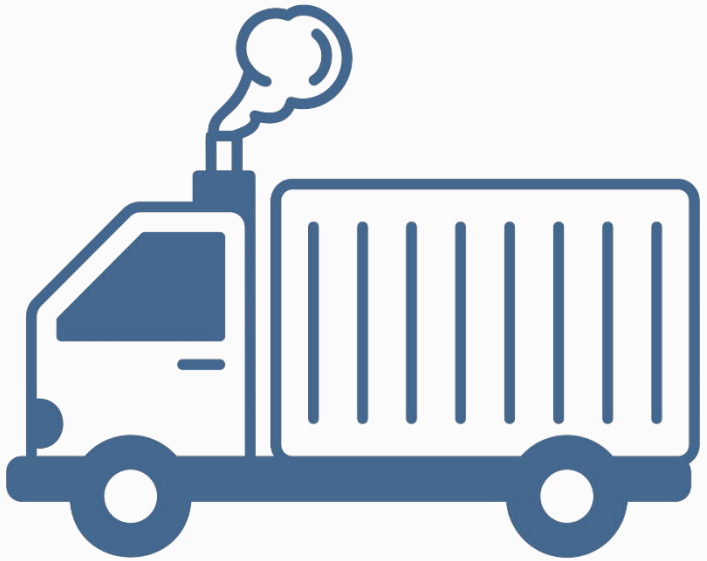
- Advanced Clean Trucks will help WA clean up:
  - **47 million metric tons** of CO_2 through 2050
  - **47%** of NO_x pollution
  - **43%** of $PM_{2.5}$
  - And help avoid **~100** hospital visits and premature deaths annually!

Heavy-Duty Low-NOx Omnibus

- Adopted in Washington in 2022
- Requires heavy-duty engine manufacturers to emit less:
  - nitrogen oxides (NOx)
  - particulate matter (PM)
- Requirements begin 2026
- Rule language: WAC 173-423-081
  - Also here: HD Omnibus Title 13 and HD Omnibus Title 17

Omnibus requirements

- NOx emission standards:
  - **75%** reduction from current standards in 2026
    - Reducing from 0.2 to 0.05 g/bhp-hr
  - **90%** reduction from current standards in 2027 and beyond
    - 0.02 g/bhp-hour
- PM emission standards:
  - **50%** reduction from current standards in 2026 and beyond
    - 0.005 g/bhp-hour
- Reductions achieved mostly through improved after-treatment technologies
- Improved Warranty, Useful Life, and Emissions Warranty requirements
- Implements CARB Phase 2 greenhouse gas standards



Omnibus potential rule revisions

- Adopt the amendments currently under consideration in California:
  - Clarifies existing language in amendments
  - Addresses manufacturer plans to restrict the supply of new diesel engines by allowing “legacy” engines to be sold through 2026, up to 10%
  - Allows for sale of legacy engines before they receive approval for an Omnibus-compliant engine family

Omnibus potential rule revisions, continued

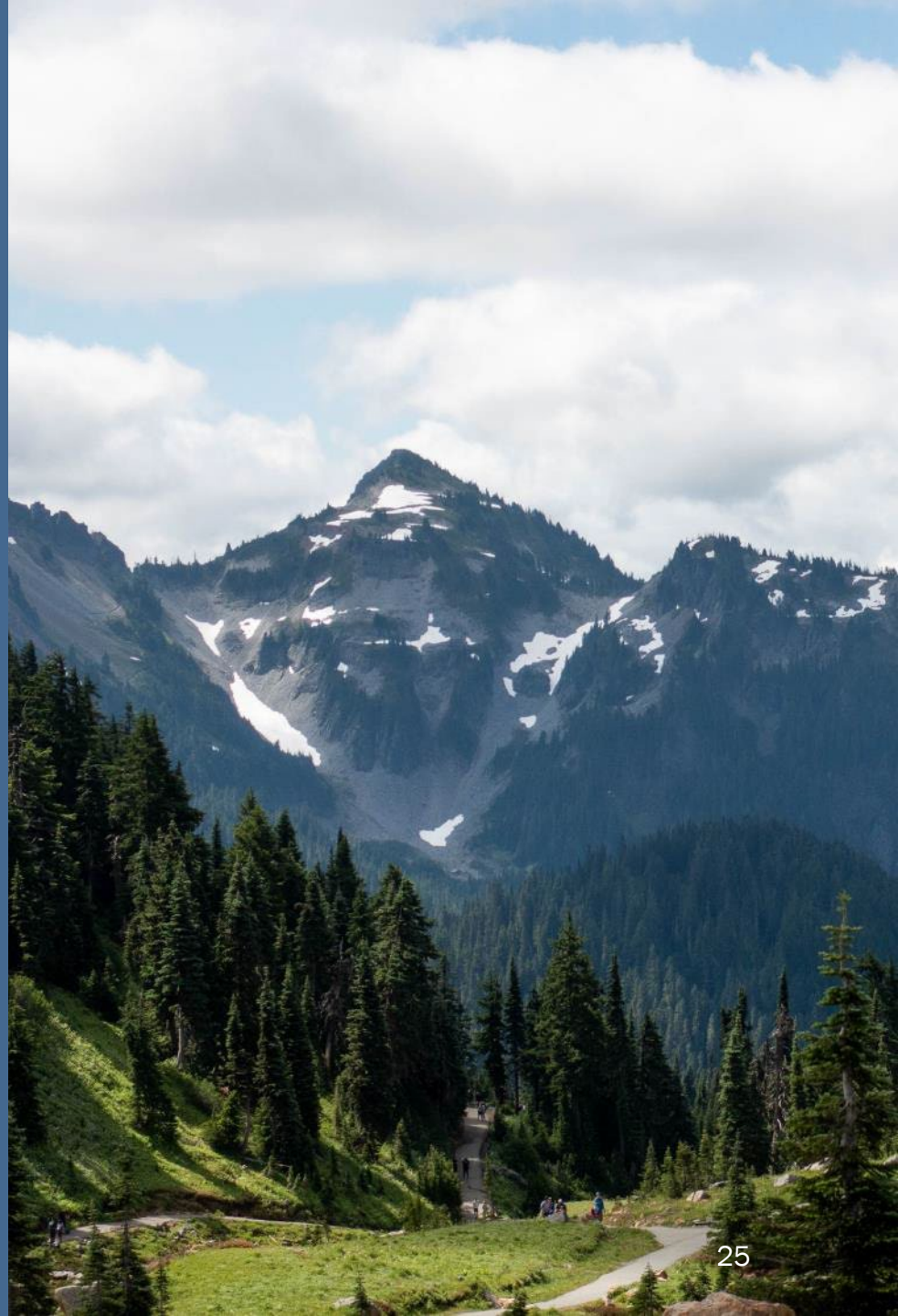
Taken together, these changes allow time for more Omnibus-certified, cleaner-running engines to reach the market while maintaining emissions reductions through offsets to legacy engine sales.

Omnibus benefits

- 35,640 tons of reduced NOx emissions in Washington through 2050
- Improved health outcomes for people living near truck traffic:
  - Fewer premature deaths
  - Fewer hospital admissions for asthma and other breathing difficulties
  - Reduced health care costs for air pollution-related issues

Clean Vehicles Program

Environmental Justice Assessment & public engagement



Environmental Justice Assessment

- We'll conduct an Environmental Justice Assessment to support this rulemaking, as required by the HEAL Act.
- We'll engage with Tribes, vulnerable populations within overburdened communities, and others that may have insight into the impacts of this rulemaking on Washington's communities.

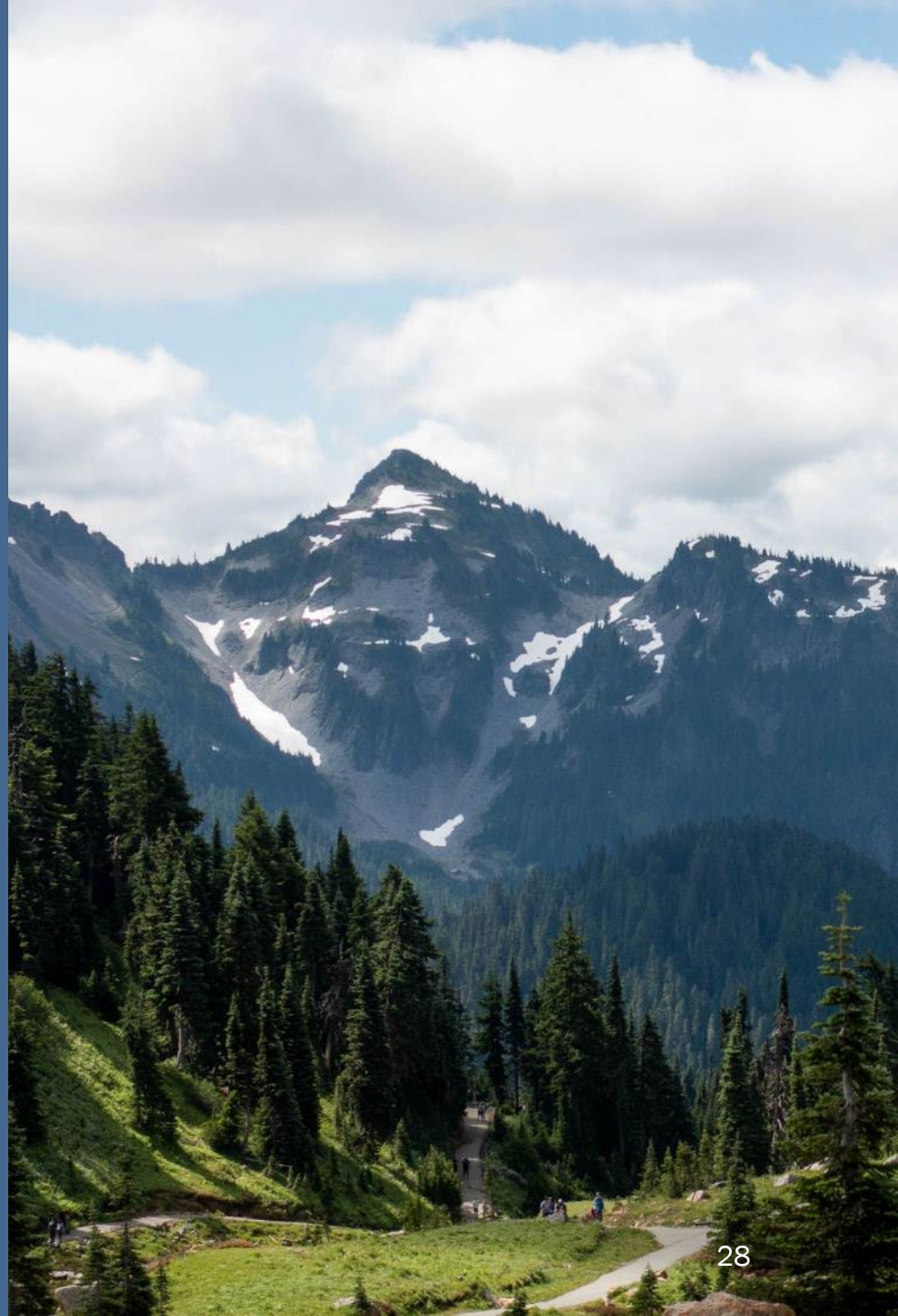
Public engagement

We'll conduct robust public engagement:

- Public informational sessions
- Industry-focused meetings
- Community forums
- Tribal forums
  - Tribes can request additional conversations, engagement, or Government-to-Government consultation
- Public comment periods

- We'll engage the public on the rulemaking and Environmental Justice Assessment prior to proposal

Questions or comments?



Questions

What potential benefits will this rulemaking have for your community?

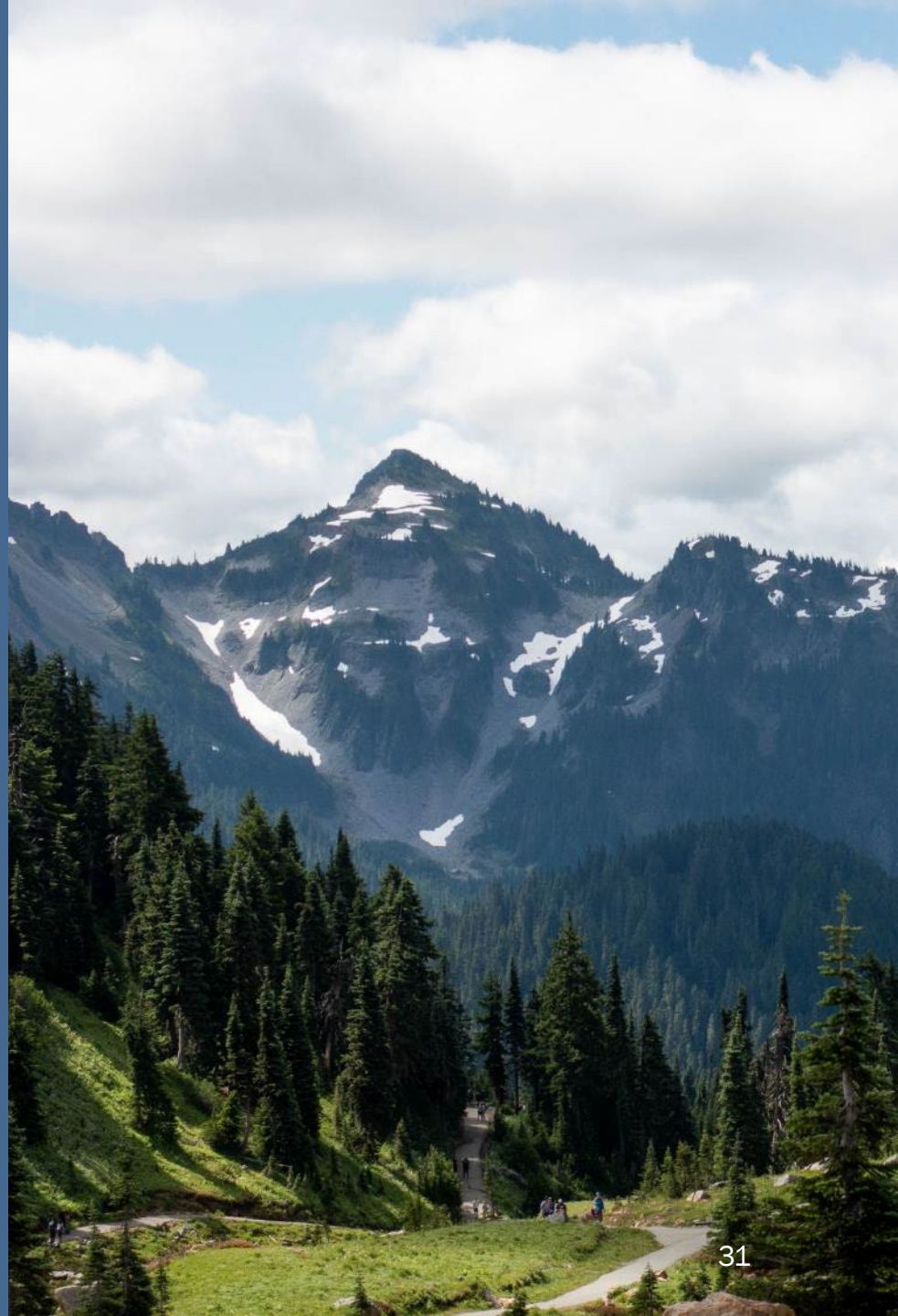
Do you see any potential harms from this rulemaking?

Comment online

Our comment period is live, and it ends Feb. 9, 2025, at 11:59 p.m.

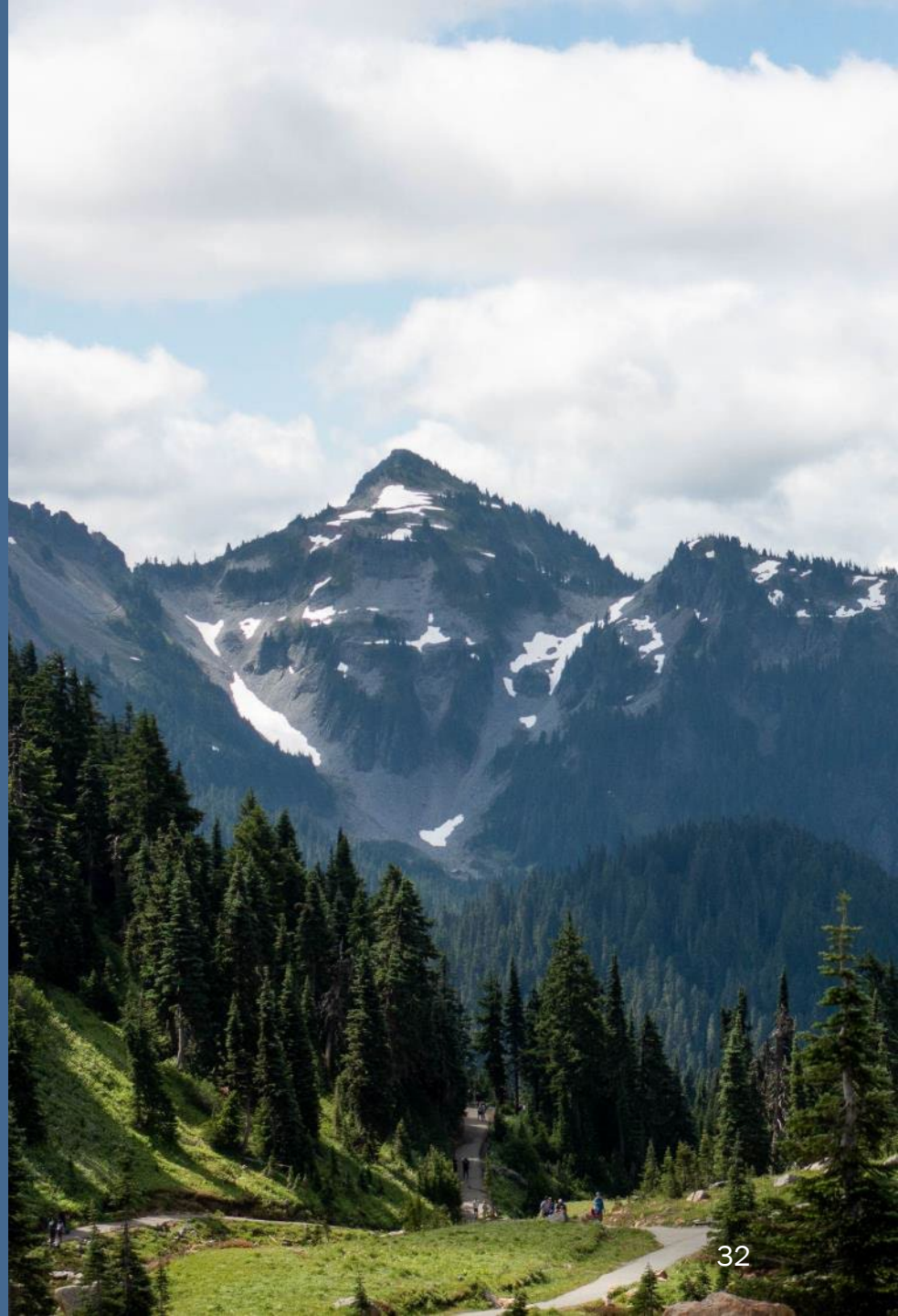
Scan our QR code or click the link above to comment.

Break



Hydrofluorocarbons and Other Fluorinated Gases

Rulemaking



Background

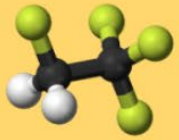
- In 2021, RCW 70A.60 (Hydrofluorocarbons – Emissions Reduction) was signed into law.
- In 2023, Ecology adopted a rule to address these super pollutants in Washington.
- In 2024, Ecology announced the Hydrofluorocarbons and Other Fluorinated Gases rule to amend Chapter 173-443 WAC.

Hydrofluorocarbons (HFCs)

- Ozone friendly replacement to chlorofluorocarbons and other ozone depleting substances
- High Global Warming Potential (GWP); up to 15,000 times more impactful than carbon dioxide

Addressing these short-lived “super pollutants” will make a significant and immediate impact on climate.

HFCs are all around



R-134a

1,1,1,2-tetrafluoroethane

Why HFCs matter

- **HFCs are the fastest-growing greenhouse gas** in the world because of increasing global demand for cooling and refrigeration.
  - State, federal, and international laws and treaties are phasing down production of certain HFCs and shifting to alternatives.
- **HFCs account for more than four million metric tons** of carbon equivalent emissions in Washington each year.
- **Reducing HFC emissions** helps Washington state meet its climate goals.

Cutting costs & climate impact

- Refrigerants are expensive and getting more expensive with time.
- Leaking equipment is less efficient.
- Refrigerants are potent greenhouse gases that contribute to climate change.
- Preventing and stopping leaks quickly is good for bottom lines and for the environment.

What our rule does

- Restricts High Global Warming Potential (GWP) HFCs in certain products
- Creates GWP thresholds on new equipment
- Establishes a refrigerant management program for existing equipment

Current rulemaking context

Objectives:

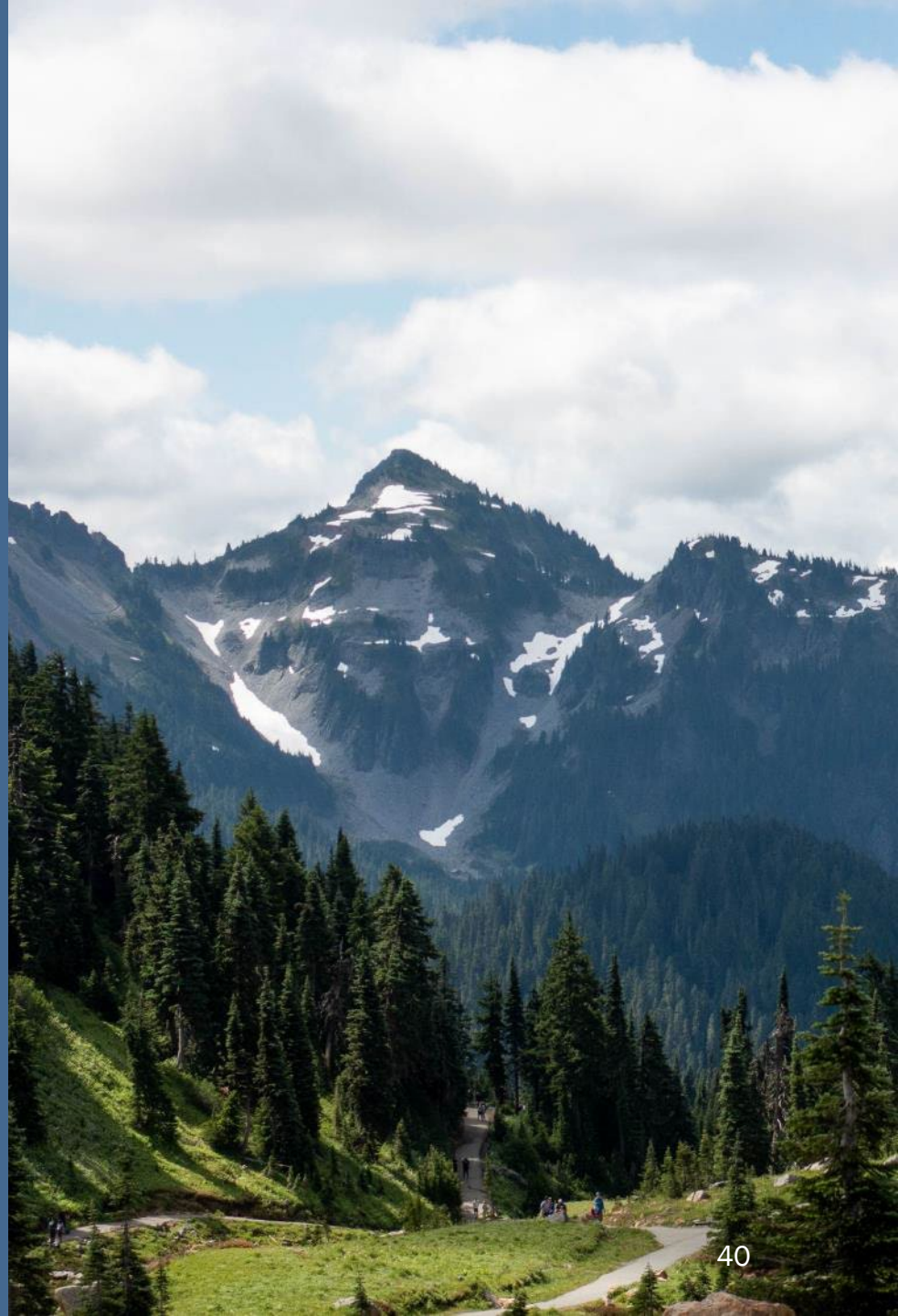
- Support the transition away from using HFCs in products and equipment
- Improve implementation of the statute

Ecology is considering:

- Revisions to WAC 173-443-065 and -075 to modify the sell-through provision
  - This allows equipment manufactured prior to prohibition dates to be sold for a limited amount of time.
- Revisions to WAC 173-443-040 to modify the prohibitions for automatic commercial ice machines
- Other necessary technical and administrative changes

Rulemaking

Language revisions



Sell-through provision

- WAC 173-443-065 and -075 Prohibitions and additional requirements for new or retrofit refrigeration and air conditioning equipment listed in Table 2 and Table 3.
  - (2) Sell through provision. Refrigeration/Air conditioning equipment that is manufactured prior to **Jan. 1, 2024**, may be sold, **leased, rented**, installed, or otherwise introduced into Washington commerce until **Jan. 1, 2026**.
- Rental equipment not included in any other sell through provision
- Specific dates in provision prior to some restriction dates in Tables 2 and 3

Automatic commercial ice machines

- Ecology has elected to refrain from enforcement of the Jan. 1, 2025, effective date in WAC 173-443-040, Table 1
- ACIM manufacturers must comply with EPA's Technology Transitions rule Ecology will update the rule to reflect the EPA requirements
- Ecology issued guidance on Dec. 30,2024

Technical & administrative

- Including, but not limited to:
  - Clarifying language
  - Changing program titles
    - Air Quality Program to Climate Pollution Reduction Program
  - Fixing typos

Rulemaking timeline

Rule announcement

- Introduce rulemaking
- Public meetings
- Rule development
- Informal public comment periods

October 2024 – July 2025

Issued guidance
December 2024

Rule proposal

- Announce public hearings
- Provide proposed rule language
- Formal comment period
  - Hold public hearings
  - Submit comments

July 2025 – Fall 2025

Rule adoption

- Adopt final rule language (File CR-103)
- Concise Explanatory Statement
- Economic analysis
- Rule effective after 31 Days

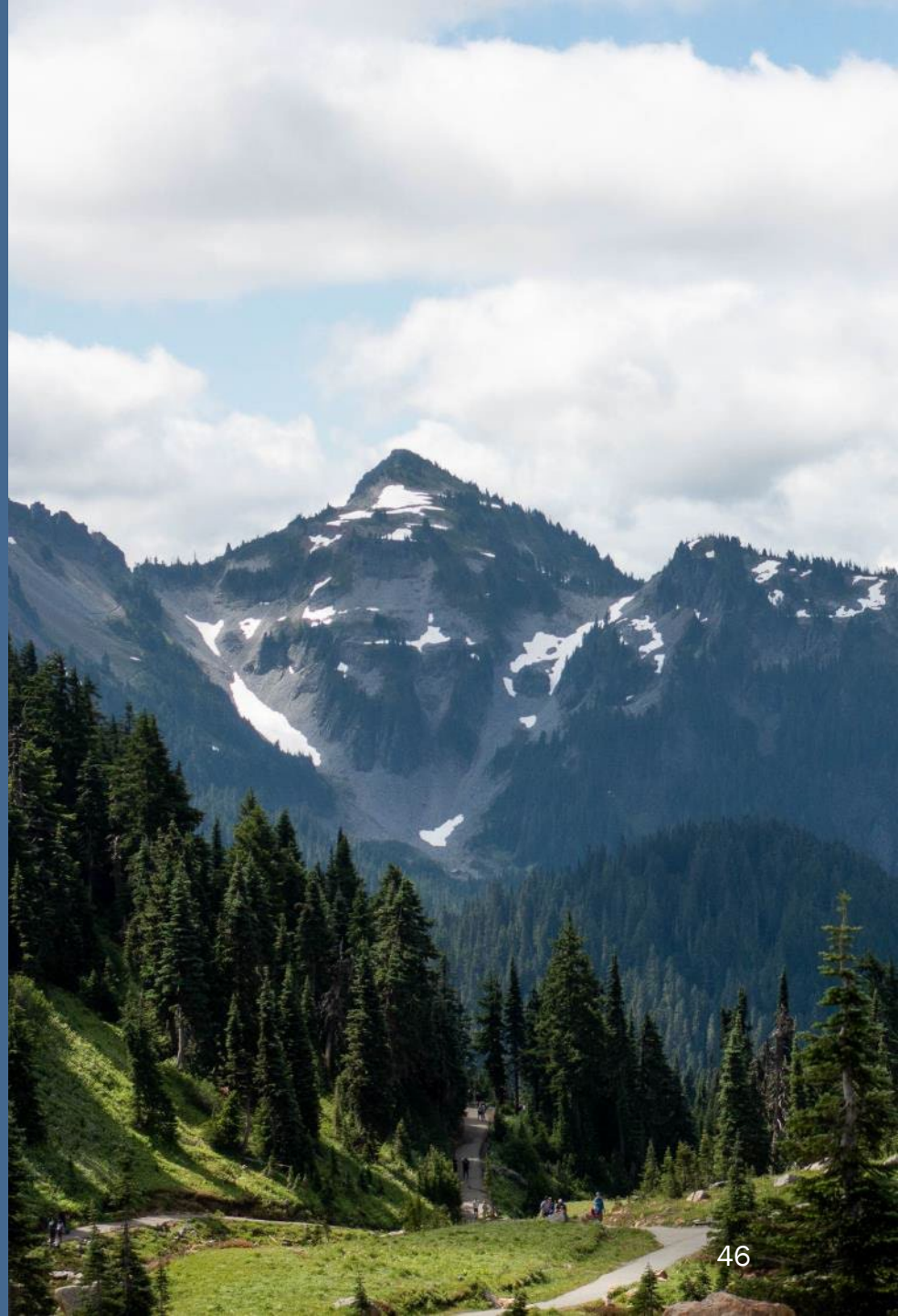
Late 2025

Next steps

Comment online:

- Collecting input on the draft rule language
- Our comment period is live, and it ends **Feb. 10, 2025, at 11:59 p.m.**
- Comment online: https://ecology.commentinput.com?id=AM4HrPuda

Questions & comments



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Compliance/Technical Assistance

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Rulemaking

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