# Washington's clean truck regulations

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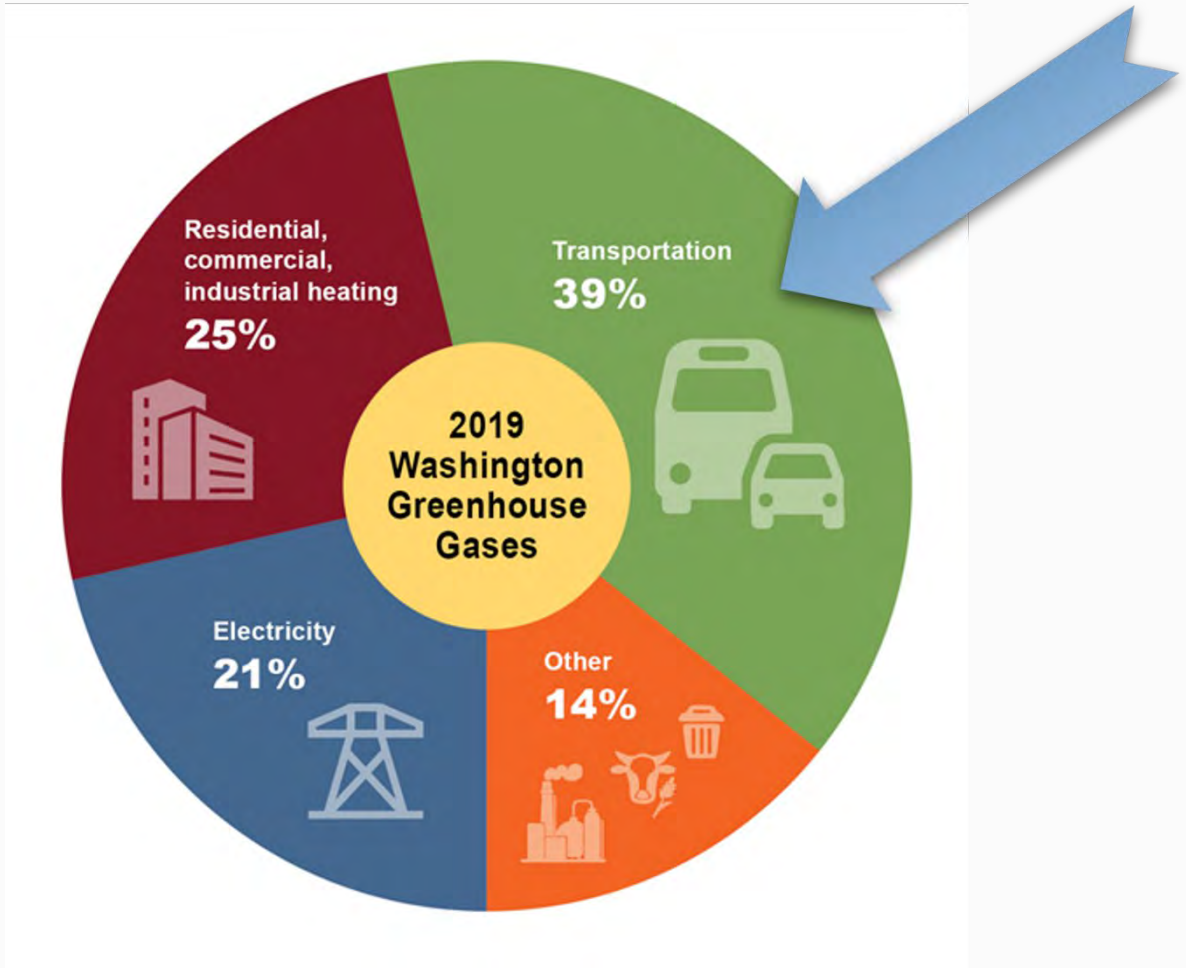
# Driving to a cleaner future

**Transportation is Washington's greatest single source of greenhouse gas emissions.**

- Transportation also is a major source of air pollutants.
- Reducing these emissions is crucial to addressing the climate crisis.

**Medium- and heavy-duty trucks are critical to Washington's economy.**

- Washington's emission standards increase clean truck availability.
- The state is committed to partnering with the private sector to transition to clean vehicles.



# Clean truck regulations

## Advanced Clean Trucks

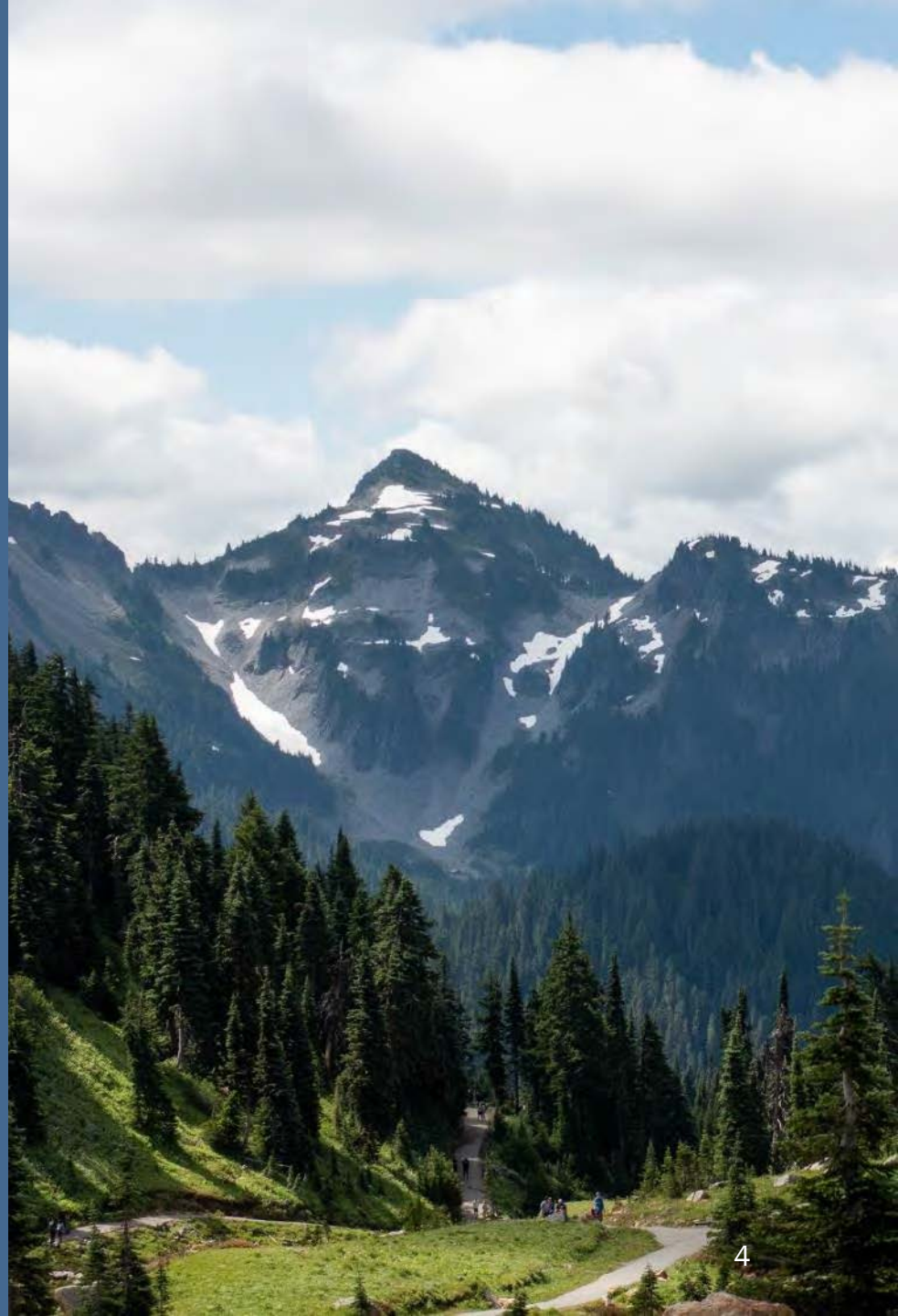
Adopted in 2021

## Heavy-Duty Low-NOx Omnibus

Adopted in 2022

# Advanced Clean Trucks

(ACT)

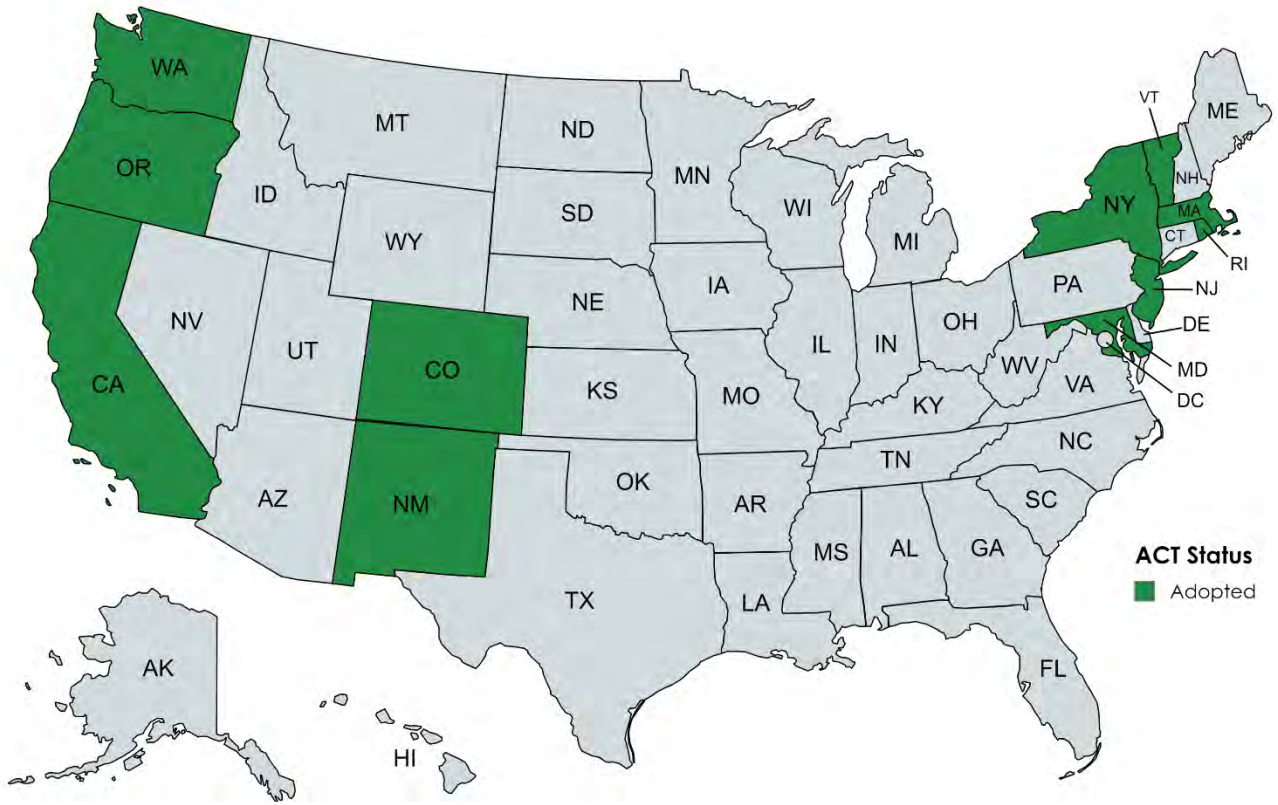


# Common ACT misconceptions

| Myth | Fact |
|---|---|
| Manufacturers must sell a certain number of zero-emission vehicles before being allowed to sell diesel or gas-vehicles | Manufacturers have multiple compliance options |
| Fleets must purchase zero-emission vehicles starting next year | ACT only regulates manufacturers |
| ACT is banning the sale of [insert vehicle here] | ACT does not ban the sale of any kind of vehicle |
| There is not enough public charging to transition to EVs | ACT was designed to be feasible even without public charging, and public and depot charging are both being rapidly built out in Washington |
| There are not very many zero-emission vehicles out now | Over 190 Class 2b-8 zero-emission vehicles available for sale in the US |

# How ACT works

- Adopted in Washington in 2021
- Includes annual zero-emission vehicle (ZEV) **sales** mandate for applicable Class 2b-8 trucks and buses
- ACT regulatory compliance applies to **manufacturers**, not fleets or purchasers
- Starts with model year 2025 in Washington
- Original Equipment Manufacturer (OEM) exemption: Emergency vehicles, transit buses, motor coaches
- Rule language: [WAC 173-423-075 (2)]
  - Also here: [ACT Title 13]



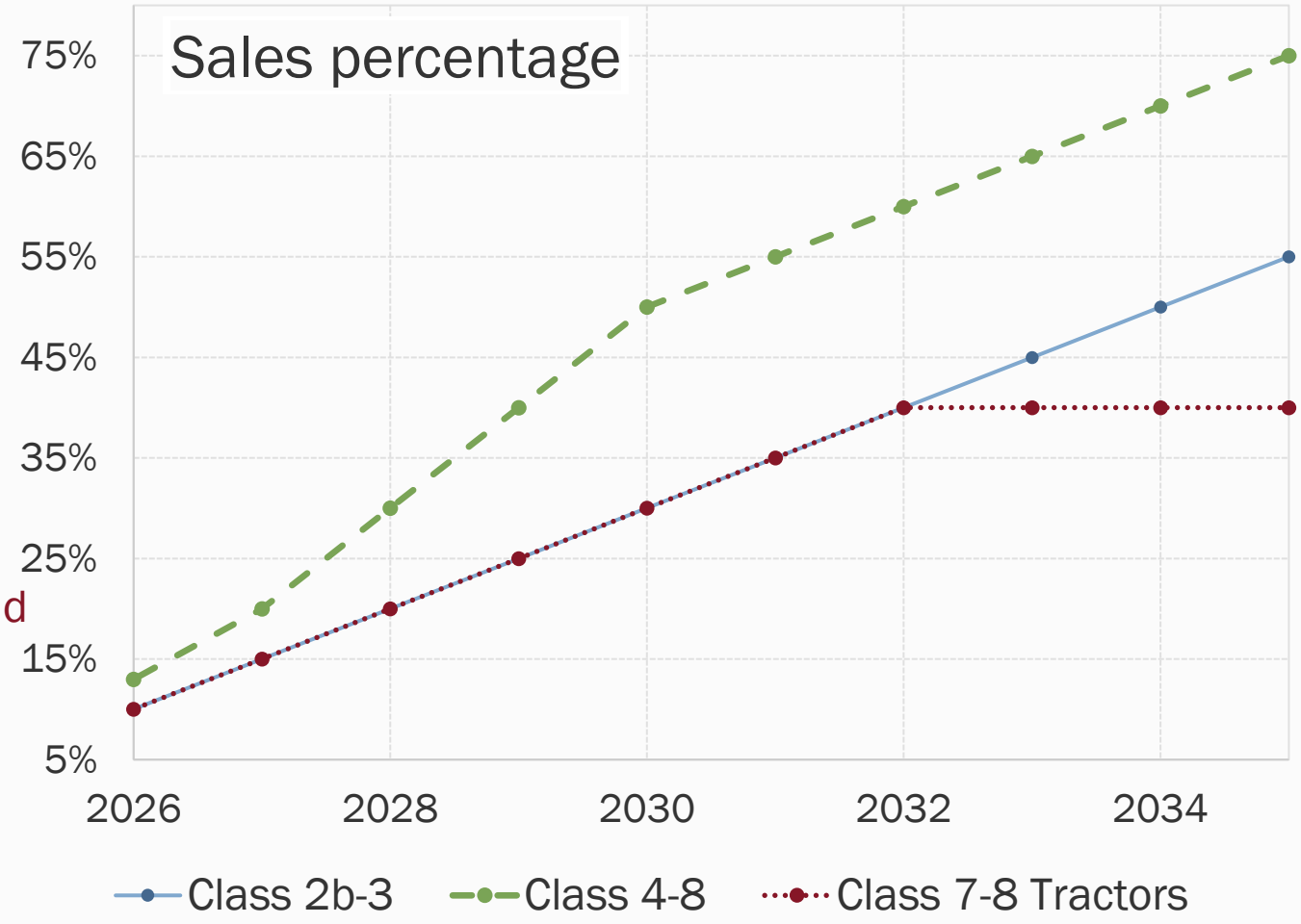
# ACT implementation dates in other states

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 |

# ACT sales percentages

- **Class 2b-3** (8,501 - 14,000 pounds)
  - MY 2025: 7%
  - MY 2035: 55%
- **Class 4-8** (14,001 pounds and up)
  - MY 2025: 11%
  - MY 2035: 75%
- **Class 7-8 tractors** (26,001 pounds and up)
  - MY 2025: 7%
  - MY 2032: 40%
    - Plateaus at 40%



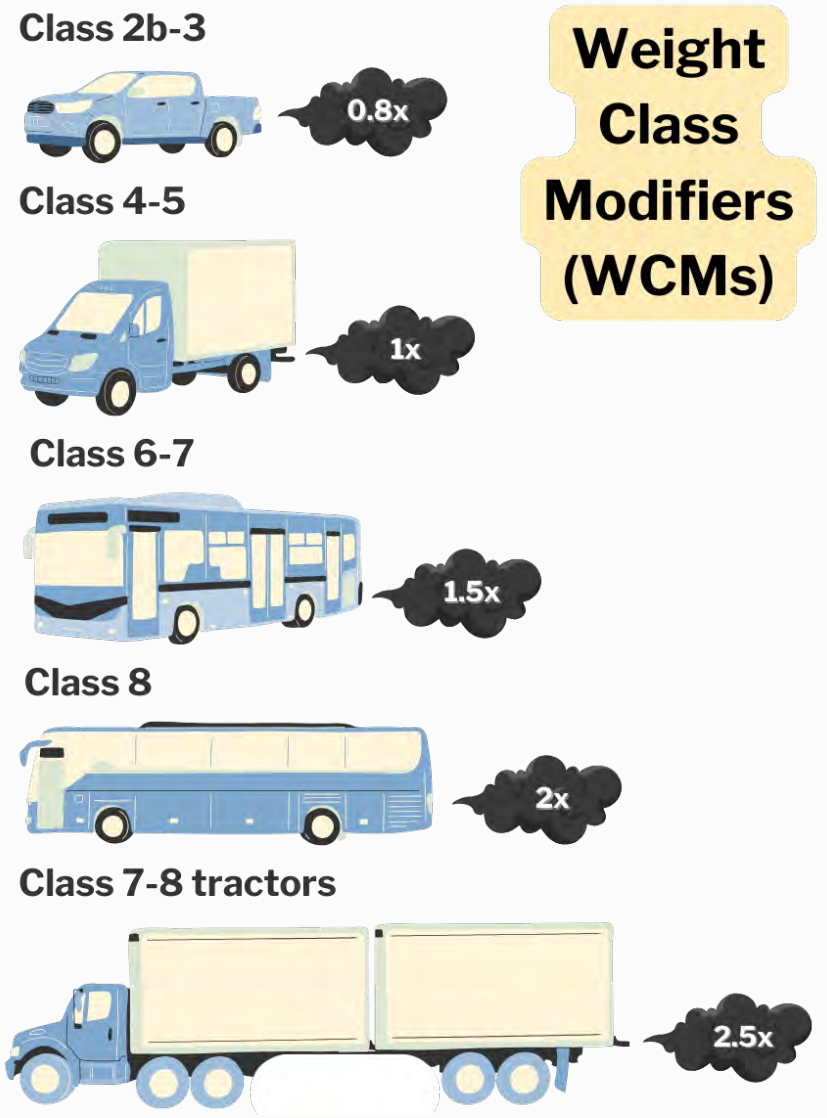
# Deficit & credit generation

**Deficits** = total sales x

ZEV% requirement x WCM*

**Credits** = number of ZEV sales x WCM*

**Weight Class Modifiers (WCMs) are applied to account for heavier vehicles generating more emissions.*



# Manufacturer compliance options

- Increase zero-emission vehicle and plug-in hybrid sales
  - Plug-in hybrids can meet up to 50% of the requirement each year
- Purchase credits from manufacturers that *exceed* the sales requirements
  - Manufacturers were able to earn early action credits for 2021-2024 sales
- Move credits between weight class categories
  - Credits earned for Class 2b-3 vehicles can be used to meet Class 4-8 vehicle requirements
  - Class 7-8 tractors are separate

# Additional compliance flexibilities include…

Small manufacturers (<500 annual on-road vehicle sales) are exempt from many ACT requirements.

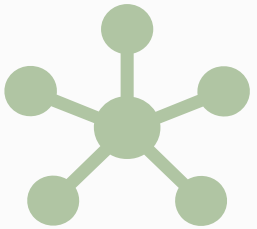
Manufacturers have a year to make up any shortfall.

# Future flexibilities

## Upcoming flexibilities

CARB-approved amendments:

- Up to three model years to make up shortfalls
- Compliance based on vehicles delivered for sale (rather than sold to ultimate purchaser)
- Allow secondary manufacturers to buy and sell credits to increase credit usage
- Exempt Omnibus-compliant engines in Class 7-8 vehicles from deficit calculation in model year 2026



## Potential future flexibilities

CARB agreed through the “Clean Trucks Partnership” to consider:

- Credit pooling: allowing manufacturers to transfer credits earned in one ACT state to another, with some limitations
- Align some Omnibus standards with federal standards starting  in model year 2027

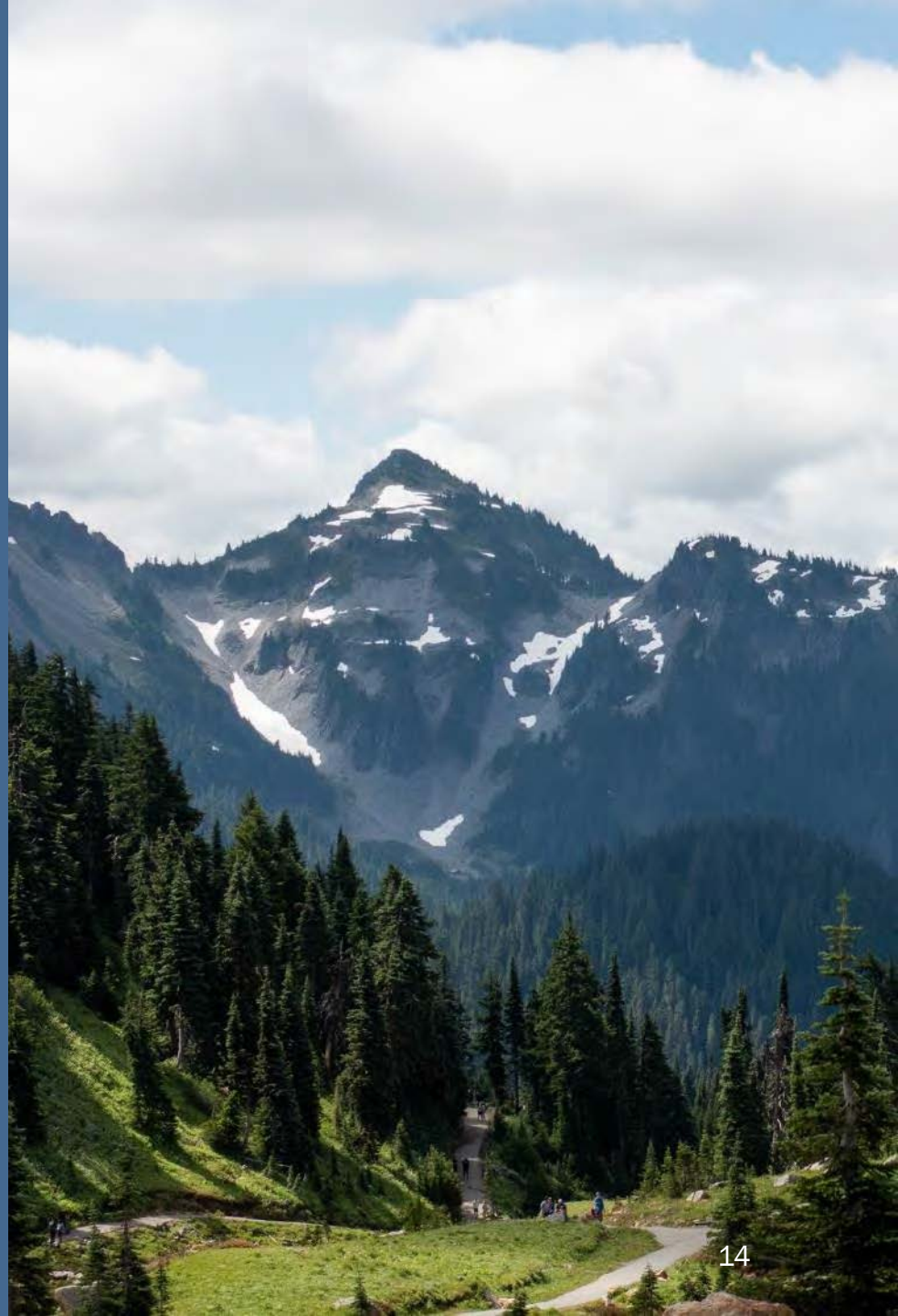
# ACT benefits

- 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

(Omnibus)



# Omnibus

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

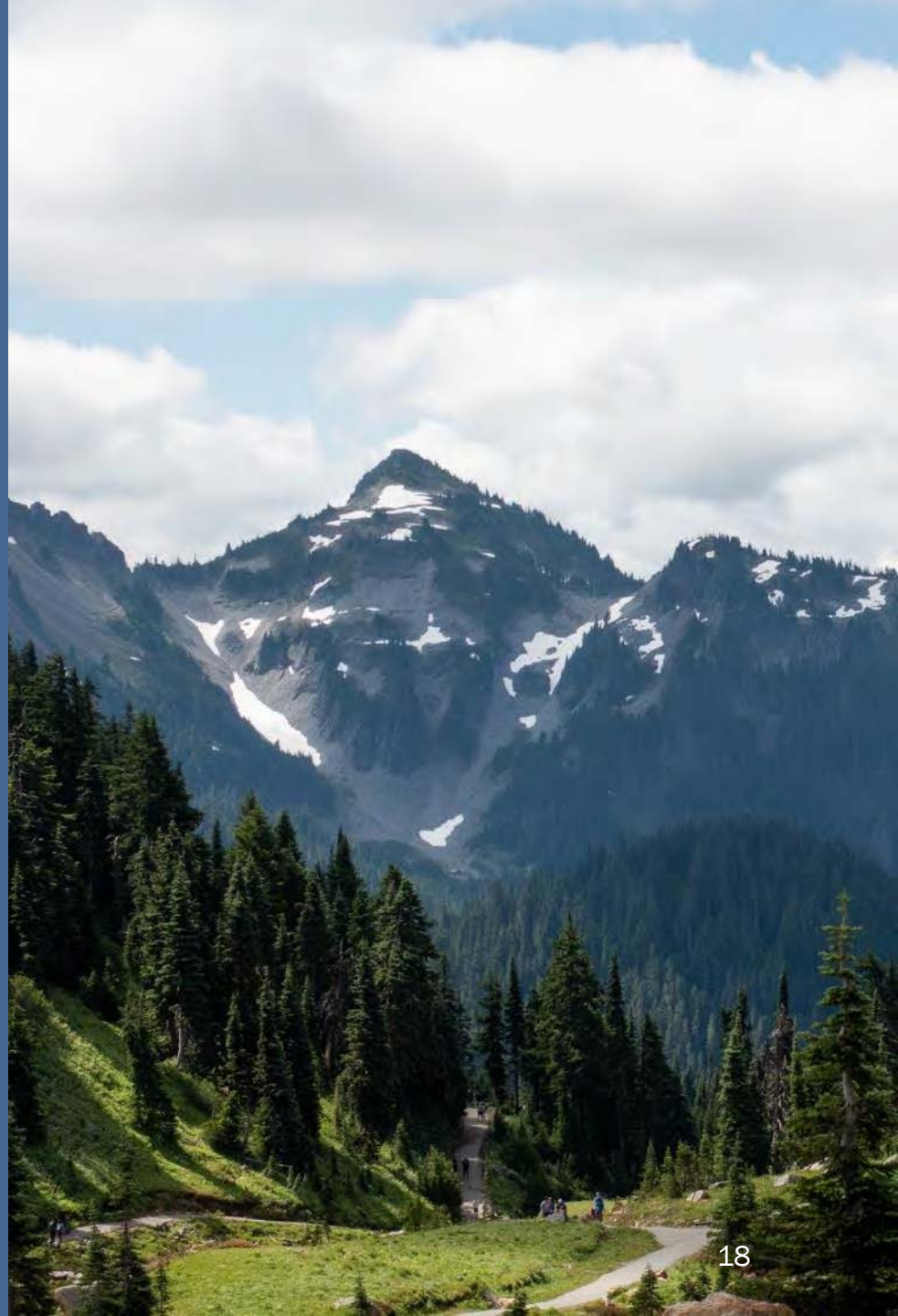
# Omnibus requirements

- 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-hr
- PM emission standards:
  - 50% reduction from current standards in 2026 and beyond
    - 0.005 g/bhp-hr
- Reductions achieved mostly through improved after-treatment technologies
- Improved Warranty, Useful Life, and Emissions Warranty requirements
- Implements CARB Phase 2 greenhouse gas standards

# 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

# Incentives & rulemaking



# Current & upcoming incentives for medium- and heavy-duty vehicles

| Funding source | Amount | Timeframe | Description |
|---|---|---|---|
| Commercial Alternative Fuel Vehicle (AFV) & Fueling Infrastructure Sales Tax Credit | 75% of the incremental cost up to $100,000 | Ongoing | For new, used, or converted MHD vehicles and infrastructure. Eligible alternative fuels are natural gas, propane, hydrogen, dimethyl ether, and electricity |
| Ecology's Clean Diesel and Zero-Emission School Bus Grants | Variable | No currently open funds, but potential future rounds | Funding for zero-emission school and transit buses, yard trucks, port equipment, and more |
| MHD Vehicle and Infrastructure Grant | $130 Million | On hold | Funded by Climate Commitment Act, provides point-of-sale vehicle incentives and infrastructure funding. |
| Zero-Emission Drayage Incentive Grant | $55 Million | Opened Fall 2024 at Northwest Seaport Alliance | State & federal funding to electrify drayage trucks in and around ports |
| Federal Commercial Electric Vehicle Tax Credit | Up to $40,000 per vehicle | Ongoing | Can be claimed at point-of-sale |
| Federal Charging & Fueling Infrastructure Grant | ~$103 Million | 2025 | MHD charging and hydrogen refueling stations along the entirety of I-5 |

# Rulemaking

- Ecology plans to adopt:
  - Technical amendments to California's ACT
  - Technical amendments to California's Omnibus
- These will give greater flexibility to manufacturers and address known concerns.
- First public meeting was held Dec. 10.
- Online public comment is open.

**Visit the rulemaking webpage**

**November 2024**

Rule announced

**December 2024-Summer 2025**

Public engagement

**Summer 2025**

Propose rule

**Winter 2025**

Adopt rule

# 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 by a minimum of 90% for model year 2026

# 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
  - Allows for sale of legacy engines before they receive approval for an Omnibus-compliant engine family


# Thank you

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