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January 27, 2025

Oregon State Legislature

House Committee on Climate, Energy, and Environment

900 Court St. NE

Salem, Oregon 97301

RE: Comment in Opposition to House Bill 3119 (2025)

Chair Lively and Committee Members,

On behalf of The Union of Concerned Scientists (UCS) and our nearly 8,000 supporters and Science Network members in Oregon, we write to you with serious concerns related to HB 3119 (2025), which would delay adoption of the Advanced Clean Trucks (ACT) rule in Oregon until 2027. Such a delay would leave significant economic, public health, and environmental benefits on the table and diminish Oregon's status as a leader in clean technologies among states.

The ACT is a technically and economically feasible and flexible rule that **expands access to clean medium- and heavy-duty vehicles (MHDVs)** for Oregon fleets and consumers, resulting in meaningful savings to Oregon businesses, cleaner air for Oregonians, and a more stable climate for future generations. **Reducing emissions from MHDVs is vital, given that these vehicles are responsible for around two-thirds of lung-damaging and ozone-forming pollution from all vehicles on Oregon's roads**. Our comments highlight several key aspects of the ACT and electric truck adoption in Oregon, underscoring the necessity of the rule to improve public health and benefit Oregon fleet owners. Additionally, while today's zero-emission trucks are suitable for most commercial duty cycles, the ACT will deliver further innovations and accelerate the availability of additional models in the state.

ACT Allows for Feasible and Flexible Compliance

Adopted by the Oregon Department of Environmental Quality (DEQ) in 2021, the ACT requires manufacturers to gradually increase the share of zero-emission MHDVs sold in Oregon over the next decade (See Table 1). **The rule does not ban the sale of combustion vehicles at any time or create requirements for fleet turnover to zero-emission vehicles.** As written, the rule provides key flexibilities that strengthen compliance feasibility among MHDV manufacturers selling trucks in Oregon.

Compliance under the ACT is measured through credit generation and trading among covered parties. This allows manufacturers to comply with its gradual zero-emission sales requirements in a flexible manner. Recent amendments to the rule adopted by DEQ provide manufacturers with an additional two years of flexibility (for a total of three) in credit deficits, affording even more time in addition to the nearly four years covered parties have already had to prepare since the ACT's adoption. **This effectively means that manufacturers have until 2028 to demonstrate compliance for model years 2025 through 2027.** In 2025, the California Air Resources Board plans to consider adopting further flexibilities under ACT, allowing covered parties to pool and trade credits across all states that have adopted the rule.

Table 1: ACT ZEV Sales Percentage Schedule[1]

Model Year	Class 2b-3	Class 4-8	Class 7-8 Tractors
2024	5%	9%	5%
2025	7%	11%	7%
2026	10%	13%	10%
2027	15%	20%	15%
2028	20%	30%	20%
2029	25%	40%	25%
2030	30%	50%	30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035 & beyond	55%	75%	40%

Zero-Emission MHDVs are Key to Reducing Air and Climate Pollution

Delaying the adoption of the ACT in Oregon would prolong the negative health impacts Oregonians experience from exposure to MHDV pollution. A 2021 analysis of ACT impacts in Oregon estimated that the increased availability of zero-emission MHDVs from Oregon's adoption of ACT would result in significant reductions of nitrogen oxides and fine particulate matter emitted from these vehicles statewide, resulting in tens of thousands of avoided sicknesses, nearly 80 avoided premature deaths, and around $1 billion in health savings to Oregonians.[2]

Although Class 2b-8 trucks and buses account for just over 1 in 10 of the vehicles on Oregon's roads and highways, they are responsible for around **two-thirds of lung-damaging fine particulate matter and ozone-forming nitrogen oxides from on-road vehicles in the state.**[3] Additionally, Oregon's MHDV fleet emits just under half of all climate-warming emissions from the state's on-road vehicles.

Air pollution from MHDVs in Oregon has meaningful consequences for public health and particularly for the most vulnerable Oregonians. **Electric MHDVs, however, significantly reduce well-to-wheel emissions of dangerous pollution**. UCS analysis of well-to-wheel emissions estimates that a model year 2023 battery-electric tractor truck operating a

[1] See Table A-1, California Air Resources Board. 2020. *Advanced Clean Trucks Regulation*, California Code of Regulations, title 13, §§ 1963–1963.5

[2] Lowell et al. 2021. *Oregon Clean Trucks Program: An Analysis of the Impacts of Zero-Emission Medium- and Heavy-Duty Trucks on the Environment, Public Health, Industry, and the Economy*. Developed for the Union of Concerned Scientists and Natural Resources Defense Council https://www.ucsusa.org/sites/default/files/2021-09/or-clean-trucks-report_0.pdf.

[3] Ibid.

drayage duty cycle on today's electricity grid in Oregon reduces negative health impacts and climate-warming emissions by around 90 percent compared to an average diesel drayage truck.[4] In fact, battery-electric trucks of all types can reduce negative health impacts compared to analogous diesel-powered truck types on the road today (Table 2). These reductions in health impacts occur even when considering the pollution associated with today's electricity grid (averaged nationally).

Table 2. Lifetime Health and Climate Emission Reductions of MY23 Battery-Electric vs. Combustion Trucks (Nationally Averaged, Well-to-Wheel)[5]

Vehicle Type	Health Impact Reduction	GHGs Reduction
Delivery truck	73%–78%	77%
Delivery van	74%–79%	77%
Refuse truck	89%–91%	85%
School bus	92%–93%	86%
Tractor (Drayage)	86%–89%	82%
Tractor (Line-haul)	64%–71%	64%
Tractor (Regional)	70%–76%	69%
Transit bus	89%–91%	81%

ACT Delivers Significant Savings to Oregon Fleets

Delaying adoption of the ACT will not only suspend the vital health benefits of the rule but also reduce opportunities for Oregon businesses to take advantage of the meaningful operational savings delivered by electric trucks. An analysis of ACT adoption in Oregon estimated that the average zero-emission MHDV operating in Oregon would result in **over $76,000 in discounted fuel and maintenance savings over its lifetime, driving over $1 billion in net incremental savings to Oregon fleets** through 2050 (See Figure 1).[6]

Although many zero-emission MHDV models remain higher off the lot today, an increasing amount of zero-emission trucks show a preferable total-cost of ownership today compared to combustion models. This is largely due to increased efficiencies among battery-electric vehicles and resulting reductions in fuel and maintenance expenditures. Battery-electric trucks, for example, are estimated to cost *over one-third less per mile* for operation and maintenance than trucks powered by diesel or natural gas.[7]

[4] Cooke, Dave. 2024a. *Mapping Heavy-Duty Truck Alternatives: Comparing the Future Impacts of Different Fuels*. Cambridge, MA: Union of Concerned Scientists. https://www.ucsusa.org/sites/default/files/2024-09/ucs-mapping-heavy-duty-truck-alternatives-methodology.pdf.

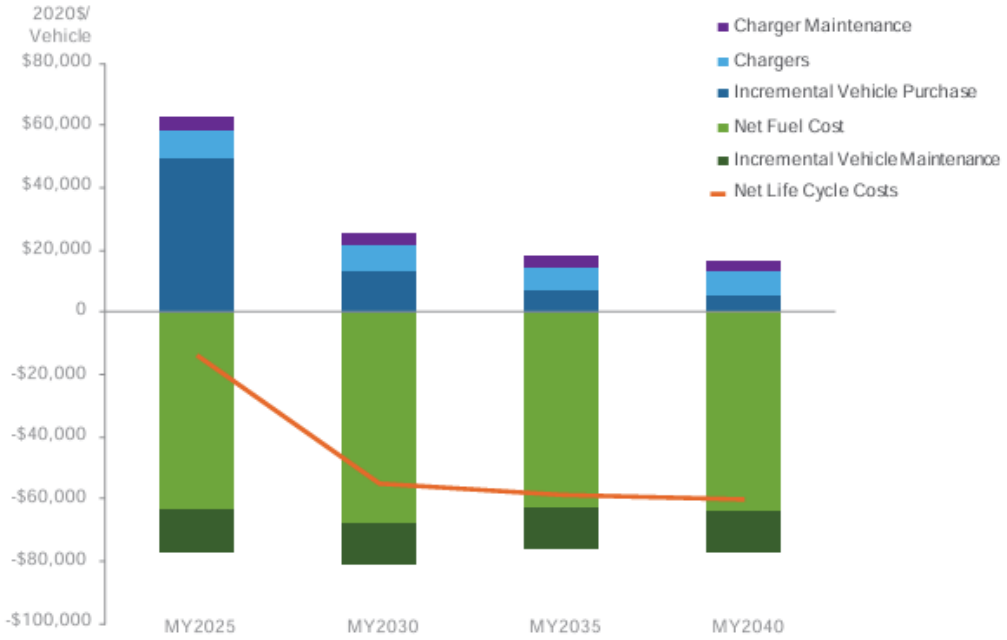
[5] Ibid.

[6] Lowell et al. 2021. *Oregon Clean Trucks Program: An Analysis of the Impacts of Zero-Emission Medium- and Heavy-Duty Trucks on the Environment, Public Health, Industry, and the Economy*. Developed for the Union of Concerned Scientists and Natural Resources Defense Council https://www.ucsusa.org/sites/default/files/2021-09/or-clean-trucks-report_0.pdf.

[7] Hunter, Chad, Michael Penev, Evan Reznicek, Jason Lustbader, Alicia Birky, and Chen Zhang. 2021. *Spatial and Temporal Analysis of the Total Cost of Ownership for Class 8 Tractors and Class 4 Parcel Delivery Trucks*. NREL/TP-5400-71796. Golden, CO: National Renewable Energy Laboratory. https://doi.org/10.2172/1821615.

By accelerating the availability and uptake of electric trucks, the ACT influences downward pressure on up-front MHDV prices and accelerates total-cost savings for fleets. Inversely, **delaying ACT adoption will delay movement toward upfront price parity among zero-emission and combustion truck models.**

Figure 1: Projected Lifetime Incremental Costs for Oregon ZEVs Compared with Combustion Vehicles[8]



Zero-Emission Trucks are Ready for Work

Today, zero-emission MHDV models from over 15 manufacturers are operating on Oregon's roads and highways. The zero-emission models currently available for purchase can meet the needs of many fleets and most common duty cycles. While the national market is decidedly moving towards zero-emission MHDVs, the ACT is key to both accelerating the availability of these vehicles in Oregon and providing certainty to public agencies, utilities, and businesses currently developing and planning for charging infrastructure.

Duty Cycle

Range is often seen as a limiting factor for fleets considering electric vehicles. However, data from the US Census Bureau's Vehicle Inventory and Use Survey show that over **85 percent of MHDVs travel fewer than 100 miles per day**, and around 70 percent travel fewer than 50 miles daily (See Figure 2).[9] Additionally, around two-thirds of tractor trucks are shown to travel less than 200 miles per day, putting many fleets within the range capabilities of zero-emission tractor truck models available today.

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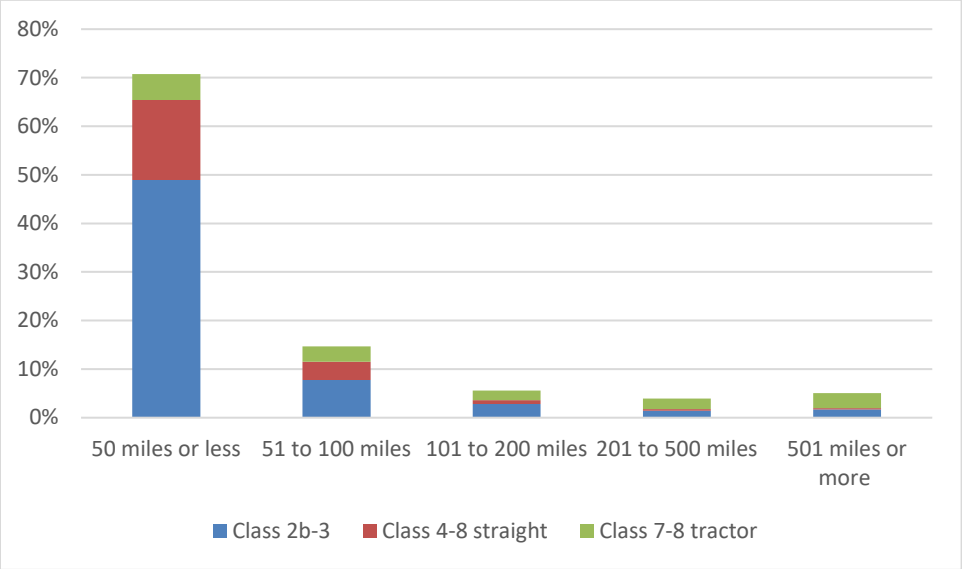
[8] Lowell et al. 2021. *Oregon Clean Trucks Program: An Analysis of the Impacts of Zero-Emission Medium- and Heavy-Duty Trucks on the Environment, Public Health, Industry, and the Economy*. Developed for the Union of Concerned Scientists and Natural Resources Defense Council https://www.ucsusa.org/sites/default/files/2021-09/or-clean-trucks-report_0.pdf.

[9] US Census Bureau, BTS, FHWA, and DOE (Bureau of Transportation Statistics, Federal Highway Administration, and US Department of Energy). 2023. 2021 Vehicle Inventory and Use Survey (VIUS). Accessed January 29, 2024. https://www.census.gov/programs-surveys/vius.html.

Figure 2: National Population of MHDVs by Common Daily Operating Range[10]



Infrastructure

To date, well over $40 million has been invested in Oregon toward developing MHDV charging infrastructure.[11] Federal, state, and local agencies, as well as Oregon businesses and utilities have already begun to build out necessary infrastructure. **Postponing the ACT will curtail this momentum and cause disruptions in planning efforts underway both inside the state and along interstate freight corridors.**

Today, most commercial vehicles return to their home base each night, allowing for electrified fleets to recharge during downtime. However, a small share of the state's MHDVs operating long-range duty cycles may utilize on-route charging. Public agencies and various utilities in Oregon, California, and Washington, have collaborated over several years to develop the West Coast Zero-Emission Truck Corridor to boost clean freight movement and in August of 2024, the project was awarded over $100 million through the federal Charging and Fueling Infrastructure Discretionary Grant Program.[12] Delaying the ACT may disrupt and devalue these vital planning efforts in Oregon as both Washington and California proceed with ACT implementation and the resulting development of charging infrastructure along key western freight corridors.

Weight and Payload Perceptions

Similar to range, real-world data and analysis suggest that negative perceptions around the weight and payload capacity of zero-emission MHDVs are often overstated. Studies of local-, regional-, and long-haul tractor truck transits show that

[10] US Census Bureau, BTS, FHWA, and DOE (Bureau of Transportation Statistics, Federal Highway Administration, and US Department of Energy). 2023. 2021 Vehicle Inventory and Use Survey (VIUS). Accessed January 29, 2024. https://www.census.gov/programs-surveys/vius.html.

[11] Atlas Public Policy. 2024. "MDHD Charging Investment Dashboard." https://www.atlasevhub.com/market-data/mdhd-charging-investment-dashboard/

[12] Mason, Greg. 2024. Feds Award $135M for West Cast Zero-Emission Freight Corridor, EV Charging." https://www.newsdata.com/california_energy_markets/regional_roundup/feds-award-135m-for-west-coast-zero-emission-freight-corridor-ev-charging/article_144fc9be-6c6b-11ef-a5bc-cb65244ad008.html

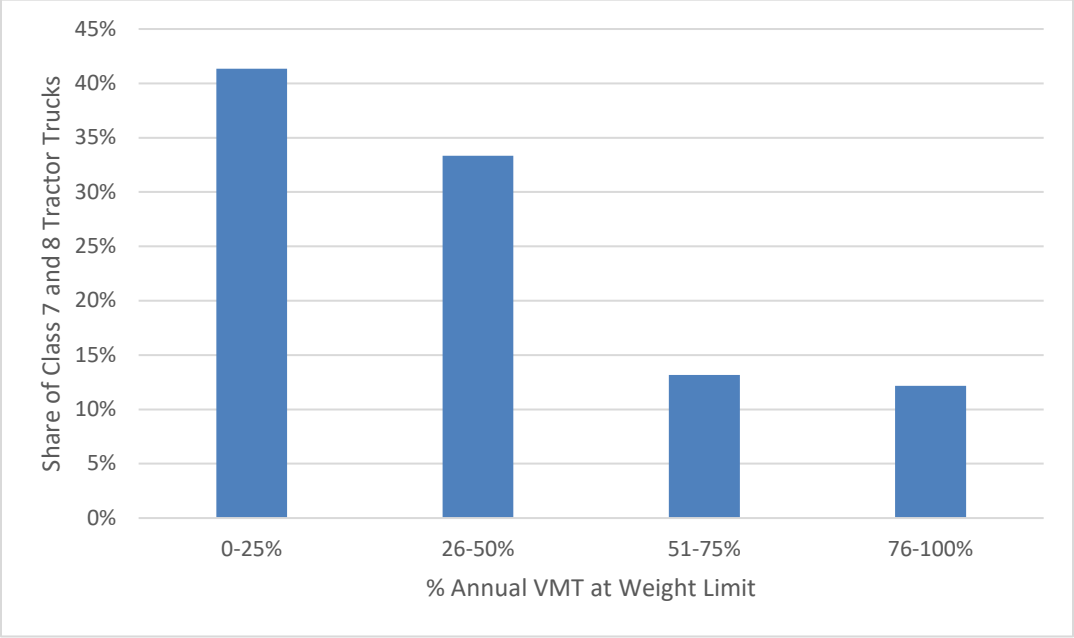
payloads are typically limited by space rather than weight.[13, 14] Recent data from the US Census Bureau's Vehicle Inventory and Use Survey show that only 3 percent of tractors operate at the federal weight limit for more than 90 percent of their annual mileage. Indeed, the vast majority of miles driven by tractor trucks are at weights well below the federal limits (see Figure 3).

Given that ACT's zero-emission requirements for new tractor truck sales plateau at 40 percent, it would be unreasonable to assert that the rule has wide-scale negative impacts on payload.

Although today's electric trucks are heavier than their diesel counterparts, data suggest that current potential payload losses are small and will likely decline in the future for two reasons: the common loads transported by tractor trucks and the anticipated advancements in battery and vehicle designs leading to reduced weight. By 2035, battery technology improvements are expected to significantly reduce weight, narrowing the payload capacity gap between diesel and electric tractor models to around 2 percent.[15]

By advancing the market for MHDVs, ACT will drive technological developments that reduce weight among battery-electric tractor trucks and further reduce instances where payload capacity is a barrier to the adoption of clean trucks.

Figure 3: Distribution of 2021 Annual Vehicle Miles Traveled at Federal Weight Limit, Class 7 and 8 Tractor Trucks[16]



[13] Federal Highway Administration. 2015. Modal Shift Comparative Analysis Technical Report: Comprehensive Truck Size and Weight Limits Study. Washington, DC: US Department of Transportation. https://ops.fhwa.dot.gov/freight/sw/map21tswstudy/technical_rpts/mscanalysis/modal_shift_comp.pdf.

[14] Transportation Research Board and National Research Council. 2010. Technologies and Approaches to Reducing the Fuel Consumption of Medium-and Heavy-Duty Vehicles. Washington, DC: National Academies Press. https://doi.org/10.17226/12845.

[15] Basma, Hussein, Claire Buysse, Yuanrong Zhou, and Felipe Rodríguez. 2023. Total Cost of Ownership of Alternative Powertrain Technologies for Class 8 Long-Haul Trucks in the United States. Washington, DC: International Council on Clean Transportation. https://theicct.org/publication/tco-alt-powertrain-long-haul-trucks-us-apr23/.

[16] US Census Bureau, BTS, FHWA, and DOE (Bureau of Transportation Statistics, Federal Highway Administration, and US Department of Energy). 2023. 2021 Vehicle Inventory and Use Survey (VIUS). Accessed January 29, 2024. https://www.census.gov/programs-surveys/vius.html.

Conclusion

To be clear, the ACT does not limit consumer choice or prohibit the purchase or use of combustion-powered vehicles but rather accelerates the availability of zero-emission truck and bus models. This regulation is key to accelerating the availability of zero-emission MHDV models in Oregon, allowing fleets to take advantage of significant operational cost savings, providing Oregonians with access to healthier air, and working towards a more stable climate for future generations.

Recently passed amendments to the rule provide additional compliance flexibilities to covered parties, showing that both CARB and DEQ have been proactively responsive to industry concerns. Given the existing flexibilities within the regulation, we believe that HB 3119 is unnecessary at best and, at worst, a harmful messaging bill for polluters that sets a bad precedent for the public process.

Oregon adopted the ACT following a robust public process that included numerous workshops, public comment periods, and outreach to interested and affected parties. Regulated entities have had nearly four years to prepare for its implementation. Further delaying the significant public health, economic, and environmental benefits of this rule—at the behest of noncompliant industries—would undermine the integrity of this open and lawful process.

For these reasons and those listed above, we request a no vote on HB 3119.

Sincerely,

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Union of Concerned Scientists | Clean Transportation Program