State of Oregon
Department of Environmental Quality Memorandum

Date: May 5, 2025

To: Environmental Quality Commission

From: Leah Feldon, Director

Subject: Agenda item D, Informational item: Clean Truck Rules 2025
May 8-9, 2025, EQC meeting

Why this is important

The Oregon Department of Environmental Quality will provide an update on the Clean Truck Rules 2025 Updates Rulemaking, share data and information on both the Advanced Clean Trucks and Heavy-Duty Omnibus regulations and discuss key issues surrounding the medium- and heavy-duty zero-emission vehicle (ZEV) and internal combustion engine (ICE) vehicle markets.

In Oregon, transportation accounts for approximately 35% of all greenhouse gas emissions in the state. Oregon's fleet of medium- and heavy-duty vehicles is currently responsible for an estimated 9.3 million metric tons of greenhouse gas emissions annually. Emissions from trucks are one of the fastest growing sources of greenhouse gas emissions, and the number of truck miles traveled on the nation's roads is projected to continue to grow significantly in the coming decades. This fleet also contributes the largest share of fine particulate matter and oxides of nitrogen pollution. Communities that are exposed to these emissions suffer disproportionately from, or are at higher risk of, a variety of health conditions, including lung, heart, nervous system and developmental diseases. The Clean Truck Rules will reduce exposure to vehicle pollution in communities throughout Oregon, including in low-income and disadvantaged communities. With truck freight mileage projected to grow over the next decade due to rapid growth in e-commerce and home delivery of consumer goods, pollution from trucks presents an increasingly greater public health risk, especially to the frontline and overburdened disadvantaged communities.

Prior EQC involvement

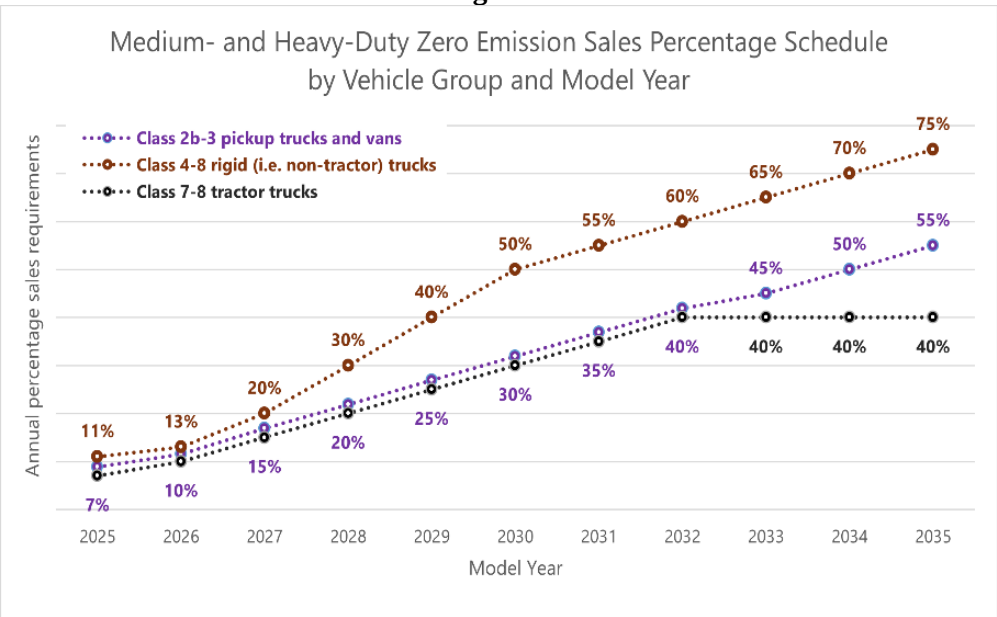
The Clean Truck Rules have been before the commission in 2021, 2023 and 2024. The upcoming proposed changes include recent California amendments, additional manufacturer flexibilities and an implementation delay for a portion of the rules. The commission previously acted to modify the rules to include prior California amendments and delay a portion of the rules.

Background

The EQC first adopted the Clean Truck Rules, which established more stringent emission standards for medium- and heavy-duty vehicle manufacturers in late 2021. These rules reduce emissions from new medium- and heavy-duty trucks sold in the state. The adoption of the California Air Resources Board (CARB) Advanced Clean Trucks (ACT) and Heavy-Duty Engine and Vehicle Omnibus rules (HD Omnibus) were two of the rules adopted under that rulemaking.

<u>Advanced Clean Trucks Rule</u>
The ACT rule requires medium- and heavy-duty vehicle manufacturers to sell zero-emission vehicles or near zero-emission vehicles (NZEV) as a certain percentage of sales, beginning with the 2025 vehicle model year in Oregon (Figure 1). It applies to vehicles over 8,500 lbs and manufacturers must increase their percentage of zero-emission truck sales each year depending upon the class size of the truck.

Figure 1



The sales numbers are based on vehicles produced and delivered for sale in Oregon. It establishes a credit and deficit system, like the existing framework for zero-emission passenger cars and light-duty trucks, where manufacturers accrue deficits based on their total truck sales and generate credits through the sale of ZEVs or NZEVs.

The rules include several flexibilities for manufacturers to comply with the rule. In addition to earning credit for delivering a ZEV or NZEV for sale in Oregon, manufacturers can also:

- Purchase credits from other manufacturers.
- Use credits earned from their own early ZEV truck sales since 2022.
- Trade credits among most vehicle classes. A manufacturer can focus on producing Class 2b-3 ZEV delivery vans and earn credits from these vehicles. These credits can be used to meet the ZEV requirements for Class 2b-3 or Class 4-8 vehicles. However, they cannot be used to meet Class 7-8 tractor requirements.

Recently, California adopted changes to its Advanced Clean Trucks program to incorporate commitments made between the California Air Resources Board and the truck manufacturers in the Clean Truck Partnership.[1] The changes build in additional compliance flexibilities for manufacturers including:

- Increasing the deficit makeup period. This is the period that allows a manufacturer to make up for any shortfall in meeting their required zero-emission vehicle (ZEV) sales targets. If a manufacturer doesn't sell enough ZEVs each year to meet the regulation, they can carry over up to 30% of the deficit balance each year for up to 3 years to make up the shortfall.
- Using NZEV credits to satisfy up to 50% of the ZEV sales requirements.
- Clarifying how manufacturers can earn credits, which will now be based on ZEVs

[1] CARB and the Truck and Engine Manufacturers Association Agreement (Clean Truck Partnership), July 2023, accessed on 2/5/2025. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-07/Final%20Agreement%20between%20CARB%20and%20EMA%202023_06_27.pdf

delivered for sale. Previously, ZEVs had to be delivered to the final purchaser for a manufacturer to claim the ZEV credit.

- Allowing sales of vehicles powered by the cleanest heavy heavy-duty CARB certified internal combustion engines to not generate deficits in 2026 under the ACT Rule. This will ease compliance for engine and vehicle manufacturers in this sector.

The EQC recently adopted these changes as temporary rules in November 2024, to ensure these compliance flexibilities were incorporated early enough for manufacturers to take advantage of them with the implementation of the rules for the 2025 vehicle model year. The adoption of the temporary rules also ensured Oregon's program maintained identicality with California's rules, as required under Section 177 of the federal Clean Air Act.

Heavy-Duty Engine and Vehicle Low NOx Omnibus Rule

The HD Omnibus rule requires manufacturers to deliver lower emitting, conventionally fuelled (e.g., gasoline, diesel, natural gas) new engines for sale in Oregon. For engines sold during 2024-2026, certified compliant engines would be required to reduce oxides of nitrogen, or NOx, emissions by 75% and to reduce particulate matter emissions by 50%. Further reductions in emissions from medium- and heavy-duty engines will be required in 2027. The rules also include longer warranty periods and updated engine and vehicle testing procedures.

The HD Omnibus Rule was initially intended to be implemented beginning with engine model year 2024. However, a one-year delay was adopted under a temporary rule by the EQC in November 2023 due to significant amendments adopted by California in 2023. The delay allowed DEQ to incorporate those amendments in a subsequent rulemaking in July 2024 to maintain identicality. Additionally, uncertainty over when compliant engines would be available from manufacturers in 2024 would have created significant restrictions to the supply of new medium- and heavy-duty vehicles. Continued discussions with manufacturers in 2024 indicated ongoing challenges with the availability of Omnibus-compliant engines and DEQ recommended temporary rules to the EQC to further delay implementation until 2026. These temporary rules were adopted in November 2024.

2025 rulemaking progress

Proposed Clean Truck Rule

On March 28, 2025, DEQ issued notice of the proposed Clean Truck Rules – 2025 Updates for public comment. The proposed rule would make permanent temporary changes adopted by the commission in 2024 including:

Advanced Clean Trucks Rule amendments

DEQ's proposed rules adopt California's Advanced Clean Trucks Rule 2024 amendments identically, by reference. Additionally, Oregon also proposed the Oregon Optional Credit Program to provide optional credits to truck manufacturers that agree to allow the unrestricted sale of internal combustion engines without first requiring a zero-emissions truck sale.

For vehicle manufacturers that agree to participate, DEQ would:

- Provide optional credits to satisfy 100% of a manufacturer's Class 7-8 tractor truck deficits in 2025 and 2026.
- Provide optional credits to satisfy 50% of a manufacturer's Class 2b-3 and Class 4-8 straight truck deficits in 2025 and 2026.
- Consider additional optional credit allocations in 2027 and beyond, based on emissions, public health and truck market conditions.

The Oregon Optional Credit Program supports Oregon's implementation of these rules by providing an optional compliance pathway to satisfy the credit requirements to vehicle manufacturers. The proposal maintains the Advanced Clean Trucks Rule requirements for increasing the percentage of zero-emissions vehicles for sale in Oregon starting in 2025 through 2035, and the new Optional Credit Program will provide flexibility in the first two years of the program to help manufacturers, dealers and fleets with this transition.

Heavy-Duty Low NOx Omnibus Rule
DEQ's proposed rule would delay implementation of the HD Omnibus rule to 2026.

Leading up to the proposal, DEQ held three advisory committee meetings to discuss issues. These issues shaped the proposed rule currently out for public comment.

Advisory committee discussions
DEQ held three advisory committee meetings to discuss the rules. The following topics were discussed in more detail:

- The importance of the ACT and HD Omnibus rules for improving air quality and reducing the public health impact of pollution from the transportation sector
- Availability and sales of new conventionally fueled and ZEV medium- and heavy-duty vehicles in Oregon
- Suitability of new medium- and heavy-duty ZEVs for different end uses
- Availability of ZEV credits
- Rule identicality, pursuant to Section 177 of the federal Clean Air Act
- Exemption of additional specific vehicles sectors

In addition, committee members provided their perspective on the anticipated impact of the existing rules and proposed amendments. Their input ranged from support for maintaining the current rule implementation schedule to support for delaying implementation for both the ACT and HD Omnibus rules until 2027, as well as a handful of opinions that Oregon DEQ pursue options in between these two opposing benchmarks.

ACT Amendments
The committee discussed the proposal to adopt CARB's recent amendments to the ACT rule as well as Oregon's Optional Credit Program , providing an additional compliance pathway for manufacturers who choose to participate. Committee members shared a wide variety of comments on these proposals. Some members had questions about the applicability of California rules in various states of review and adoption as they pertain to Oregon. Others understood Oregon's proposed rules as directly in unison with California's current ACT rule and amendments.

Committee members pointed out acute needs for truck availability across the Oregon medium- and heavy-duty market. They largely disagreed with each other on the best and most effective strategies to achieve this goal. Some argued that increased delivery of zero-emissions vehicles from manufacturers was the most appropriate next step. Others said that the new flexibilities and optional credits should be sufficient to meet the need. Another group pushed back at the notion that Oregon DEQ support the truck market by providing optional credits to manufacturers, preferring delayed implementation.

The Rulemaking Advisory Committee spent a lot of time talking about the anticipated air quality and climate emissions impacts of the proposed rules. Committee members stated with equal

confidence that emissions benefits would occur only if ACT rules were delayed and that they would only occur if ACT rules were fully implemented. Advocates for delay said new diesel vehicles are cleaner and would improve air quality outcomes. Advocates for zero-emissions vehicles said that only zero-emissions vehicles can address the air quality concerns in question. DEQ staff participated and listened to these divergent views and prepared a draft rule package accordingly.

HD Omnibus Amendments

The committee discussed the HD Omnibus proposed draft rules to delay rule implementation by one year (codifying the previously adopted temporary rule). Some committee members expressed concern that further postponement of these rules would delay needed diesel emission reductions for front line communities that experience disproportionate harm. Some committee members expressed concern about a lack of available 2026 HD Omnibus compliant engines and vehicles. Those committee members noted that this could be especially true for sectors that rely on medium-duty diesel engines which could lead to temporary new diesel vehicle sales stoppages within those sectors. Concerns were also raised about the increased vehicle costs associated with the improved technology that is required for HD Omnibus-certified compliant engines.

Key issues

The commission has raised questions surrounding the requirements for new medium- and heavy-duty (MHD) engines and vehicles. DEQ provides data, context and analysis for these questions below.

Are Oregon's fleets ready to electrify, and how will we know?

DEQ analysed medium- and heavy-duty vehicle registrations from 2017 through 2024 to understand total sales per year in Oregon. This data comes from the Oregon Department of Transportation, Department of Motor Vehicles and Commerce and Compliance Division, and includes all the vehicle registrations relevant to the Advanced Clean Trucks rule.

Using this information DEQ can estimate a range of potential zero-emission vehicle delivery requirements manufacturers will face in the early years of the program. It is important to note that the actual sales each year will determine the actual ZEV delivery requirements. Nothing in this staff report should be construed to represent actual vehicle delivery requirements; this is an illustration for discussion purposes.

To illustrate the scale of Oregon's overall truck market, Figure 2 provides a selection of the largest categories of medium- and heavy-duty vehicle registrations over the previous eight years. These totals represent new vehicle registrations in Oregon per year. This data contributes to the baseline DEQ used to estimate potential ZEV delivery requirements over the next three years.

Figure 2: New Medium- and Heavy-duty Vehicle Registrations (2017-2024)

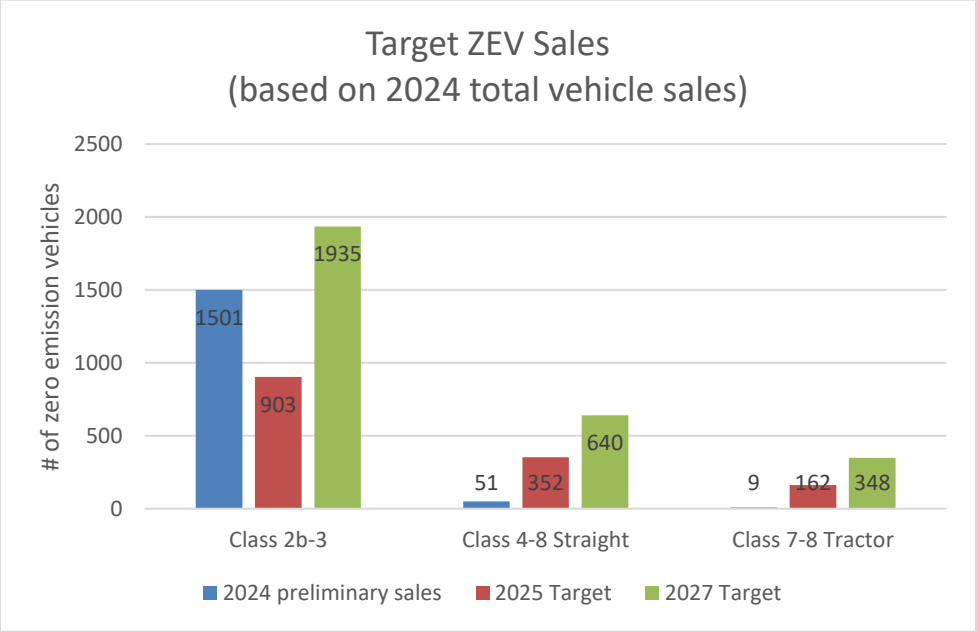
Truck Type	Class	2017	2018	2019	2020	2021	2022	2023	2024
Pickup	2b-3	10,555	10,004	9,824	8,586	7,313	11,976	5,540	9,979
Van Cargo	2b-3	2,657	2,759	3,049	3,600	3,728	4,036	5,180	1,644
Van Passenger	2b-3	717	642	1,313	447	412	166	348	258
Cab Chassis	4-8	1,648	1,030	1,917	1,531	1,283	1,966	1,155	1,031
Straight Truck	4-8	812	1,738	1,886	2,068	1,275	1,447	1,802	1,913

Cut Away	4-8	1,217	679	1,043	309	712	649	657	490
Tractor Truck	7-8	478	1,565	1,871	1,973	1,420	2,112	2,990	2,320

Over the years Oregon's fleet registrations are primarily Class 2b-3 pickup trucks, passenger vans, and cargo vans. These vehicles comprise well over half of the total medium- and heavy-duty vehicle registrations statewide in each of the years 2017 through 2024. Since the Advanced Clean Trucks rule establishes different percentages of ZEV delivery requirements for different classes of vehicles, these total registrations by vehicle class are important to understand in order to estimate future compliance requirements.

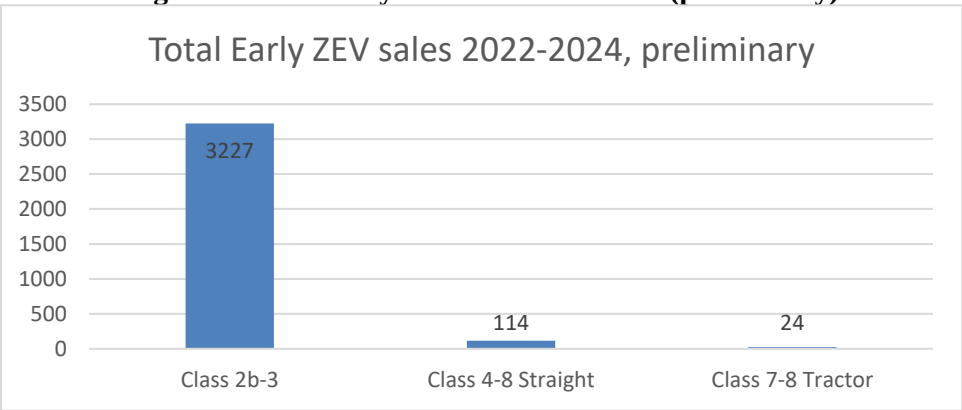
DEQ used Oregon's statewide medium- and heavy-duty vehicle registration data from 2024 to estimate how the sales targets may translate into absolute numbers in the next few years. Again, these estimates are not a prediction of what will happen in Oregon's truck market, they are a policy making tool designed to help understand the potential scale of the Advanced Clean Trucks rule relative to Oregon's fleet.

Figure 3: Target ZEV Sales



The illustration in Figure 3 shows key information that helps us understand how many zero-emissions vehicles are being sold currently and estimates how many zero-emissions vehicles will need to be delivered to Oregon's truck market over the next few years. The blue bar on the left-hand side of each vehicle class indicates 2024 preliminary sales of zero-emissions vehicles. There are 1,501 in Class 2b-3, 51 in Class 4-8 straight trucks, and 9 in Class 7-8 tractors.

Figure 4: Total Early ZEV sales 2022-2024 (preliminary)



When these zero-emissions vehicle sales are added to the 2023 and 2022 sales data, represented in Figure 4, we have a snapshot of the amount of current early action credits in Oregon's truck market. These credits can be used to comply with future years' ZEV delivery requirements.

The orange bars in Figure 3 that are in the center of each vehicle class estimates 2025 ZEV delivery requirements based on total 2024 sales. When viewed next to the blue bar of actual 2024 ZEV deliveries, you can see how Oregon's current ZEV deliveries compare to upcoming requirements.

In the case of Class 2b-3, DEQ expects the state as a whole to easily over-comply based on current market dynamics. The status of each OEMs compliance depends on their compliance strategy (i.e. generating their own credits through sale of ZEVs, versus acquiring excess credits from other OEMs). For straight trucks and tractor trucks, the gap between 2024 ZEV deliveries 2025 ZEV delivery requirements provides an estimate of the scale of growth required. Similarly, the green bars in Figure 3 that are on the right-hand side of each vehicle class estimates 2027 ZEV delivery requirements based on total 2024 sales. DEQ is proposing to address this gap in 2025 and 2026 with the Oregon Optional Credit Program.

What are the charging infrastructure needs for Oregon's fleets?
Oregon's shift to electric trucks in the early years of the Advanced Clean Trucks (ACT) program does not depend on widespread public charging along highways.[2] The data below demonstrate that for the majority of vehicle types, the average daily mileage needs can be accommodated by existing battery capacity technology.

Most of Oregon's medium- and heavy-duty trucks travel approximately 100 miles per day and return each night to the same location. Average mileage patterns of delivery trucks, garbage trucks, school buses, and local freight vehicles demonstrate they can perform their business in a day without relying on public chargers.

[2] See page 44 of CARB's ACT Standardized Regulatory Impact Assessment (2019), pages I-10 and IX-24 of CARB's Staff Report: Initial Statement of Reasons (2019) and page 124 of CARB's ACT Final Statement of Reasons in the agency response to comments.

Figure 5 – Average Daily Mileage, Battery Electric Range and Electrification Readiness for Medium- and Heavy-Duty Vehicles

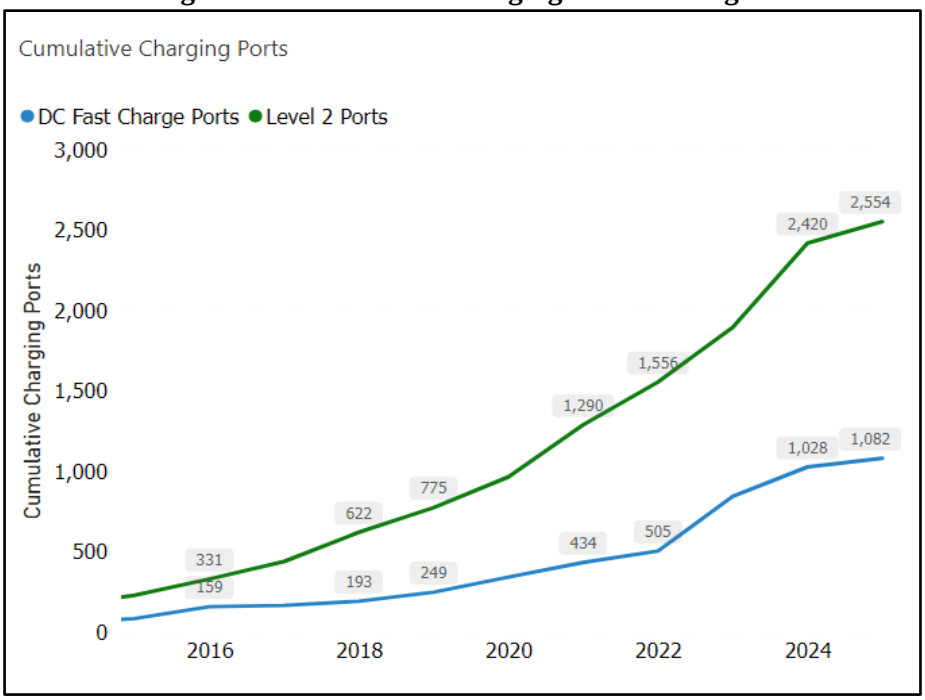
Vehicle Type	Estimated Miles Per Day (5 days per week)	Median Battery Electric Vehicle Technology Range	Sector Ready to Electrify Today
Other Buses	153.3	184	Yes
Transit Bus	209	195	Some
School Bus	73.2	125	Yes
Refuse Truck	135.6	125	Some
Single Unit Short-haul Truck	78.9	150	Yes
Single Unit Long-haul Truck	120.5	150	Yes
Motor Home	26	n/a	n/a
Combination Short-haul Truck	118.3	150	Yes
Combination Long-haul Truck	331.5	150	Not yet

Based on the Environmental Protection Agency's National Emissions Inventory data in 2023, DEQ has the annual mileage driven by Oregon's existing fleet of medium- and heavy-duty vehicles. Using this data, characterized as vehicle miles travelled, we are able to estimate of the daily duty cycle of these vehicles. Assuming they are driven 5 days a week for 52 weeks of the year, Figure 5 shows average daily mileage for most vehicles. This estimate is displayed next to the current range of existing battery electric vehicle technology based on EPA's December 2024, "Report on Actions for Medium- and Heavy-Duty Vehicle Energy and Emissions Innovation".

These real-world mileage estimates from Oregon's fleet paired with current battery electric vehicle technology ranges indicate that broad scale ZEV deployment is feasible in the short term and will improve over time as technology advances and fleets adjust their operations to match. Oregon fleets will need to continue to invest in home base, or depot, charging infrastructure in order to support these deployments.

DEQ analyzed data from Atlas Public Policy and the National Renewable Energy Laboratory estimating the total electric vehicle charging network in Oregon for light-, medium- and heavy-duty vehicles. Based on these sources Oregon has approximately 3,628 to 4,090 total charging ports, with roughly 3,000 Level 2 chargers and 1,000 DC fast chargers. This network includes a combination of public and private ports. Not all of this charging infrastructure is designed specifically to meet medium- and heavy-duty truck charging needs. Figure 6 shows this network being built over time in a chart provided by Atlas Public Policy's EValuateOR tool available online: https://atlaspolicy.com/evaluateor/.

Figure 6 – Cumulative Charging Ports in Oregon



Oregon's charging network is growing and will be able to support current light-, medium- and heavy-duty zero-emissions vehicle deployments. As the Advanced Clean Trucks rule requires additional zero-emissions vehicle deployments, Oregon fleets will need to install depot charging facilities at their vehicles' base of operations in order to ensure the new fleet can perform it required roles in Oregon's overall economy, freight delivery, and vocational operations. Oregon DEQ is supporting this deployment through incentive programs focused on zero-emission fueling infrastructure.

Figure 7 shows a range of medium- and heavy-duty vehicle types by their optimal charging needs based on research from M.J. Bradley & Associates titled Medium- & Heavy-Duty Vehicles Market structure, Environmental Impact, and EV Readiness. This summary helps independently verify DEQ's understanding of the viability of current zero-emissions vehicle technology to meet the needs of Oregon's fleets with primarily home base charging.

Figure 7 – Charging Types for Medium- and Heavy-Duty Vehicles

Home Base, Level 2	**Home Base, Level 3 (DC Fast Charge)**	**Public, En Route**
Pickup and Van	Pickup	Heavy-Duty, Long-Haul Tractor
School Bus	Regional Haul Tractor	Regional Haul Tractor
Delivery Van	Transit Bus	Box Truck (Class 6-7)
Service Van	Shuttle Bus	Box Truck (Class 8)
Box Truck (Class 3-5)	Box Truck (Class 6-7)	
Flatbed Truck (Class 3-5)	Box Truck (Class 8)	
Flatbed Truck (Class 6-7)	Dump Truck	

Based on the fact that Oregon's fleet is primarily Class 2b-3 vehicles, with average usage that can be met by current zero-emissions vehicle technology and will charge with home base infrastructure DEQ finds that the lack of publicly available charging infrastructure is not a barrier to ZEV deployment consistent with the early years sales target required by the Advanced Clean Truck regulation.

Additionally, concerns about the market readiness of the heaviest heavy-duty trucks, those that perform over the road long haul trucking service are well founded. DEQ is proposing the Oregon Optional Credit Program as an interim measure to ease the transition in this space and recognizes the need for a more robust and publicly available fast charging network along transportation corridors to meet the needs of current Class 7 and 8 tractor trucks.

Price of zero-emissions vehicles relative to internal combustion engine vehicles.
The initial price of battery electric trucks, in the heaviest class of vehicles, can be as much as 2.5 times the price of a conventionally fueled diesel vehicle. This price is a barrier to adoption and, for some unknown reason, generally higher in the United States than equivalent technology costs in other countries. DEQ has some access to price data through our extensive grant and incentive programs. This information as well as price data from California and international nonprofits currently researching this issue are used to inform the discussion. Accurate and complete lifecycle costs based on the initial zero-emissions fleets currently operating in Oregon is not currently available.

According to recent research conducted by the California Air Resources Board the average incremental cost of a heavy-duty zero-emissions truck relative to the price of an equivalent diesel fueled truck is $279,937 in upfront costs.

- 2024 Battery Electric (Class 8 truck – day cab): $435,839
- 2021-22 Battery Electric (Class 8 truck – day cab): $349,328
- Diesel Truck Prices (Class 8 truck - day cab): $155,902

Adding to this cost is the need for depot-based charging infrastructure to support electric vehicle fleet deployments. Based on the information compiled in this staff report it is important to note for fleets that can charge at their home base, overnight, they will be able to rely on Level 2 chargers at an average cost of $10,000 per installation, with variability based on specific site conditions. For those heavier duty applications and longer-range vehicles that require DC Fast Chargers the average cost is $100,000 per installation. Both of these charger price estimates are based on DEQ's experience supporting these projects with the Oregon Zero-Emissions Fueling grant program.

DEQ is continuing to support Oregon fleets as they electrify with multiple grant and incentive programs. Beginning June 2, 2025, DEQ is offering a total of approximately $33 million in funding to accelerate the transition to zero-emission transportation technologies and reduce diesel emissions statewide. Designed to target medium- and heavy-duty (MHD) diesel vehicles and infrastructure, these grant and rebate programs provide vital resources to businesses, local governments, and organizations committed to advancing Oregon's clean air and climate goals.

Initial deployments indicate that the total cost of ownership for electric vehicles over time is lower due to the reduction in expenses for vehicle maintenance and fuel. Fleets can save up to 50% or more on fuel costs by switching to electric based on initial reports from Oregon fleets working with DEQ. Electric trucks also have fewer moving parts, resulting in lower maintenance costs over

the lifespan of the vehicle. They don't require oil changes or other engine maintenance. It is these longer-term cost savings, and the expectation that the costs will continue to come down over time as manufacturers ramp up to scale while improving the underlying technology, that provides clear economic benefits to Oregon fleets that choose to go electric.

HD Omnibus Amendments

Will HD Omnibus compliant internal combustion engine-powered vehicles be available for purchase in Oregon in 2026?

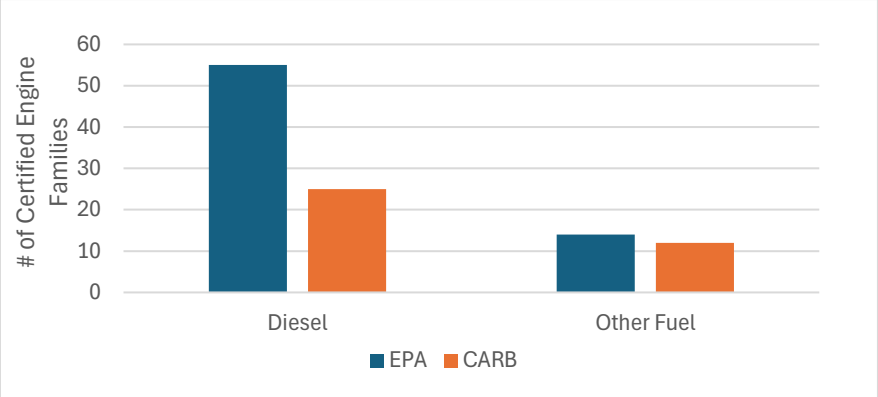
In brief, there will be compliant internal combustion engines available in 2026, however it is unclear if that availability will extend across all market segments.

Rationale for DEQ staff determination:

Predicting vehicle and engine market dynamics is challenging as manufacturers make business decisions and adjust product roll-out based on a variety of factors that can change abruptly. In addition, engine production schedule information is not shared widely by manufacturers which makes it difficult to know exactly when new engine products will reach Oregon fleets. DEQ staff determined that there will be some availability of HD Omnibus compliant engines in 2026 based on the following factors:

1) Engine certifications[3]
   Before a manufacturer can sell vehicles and engines, they must certify those vehicles and engines with EPA and/or CARB. Engine certifications indicate that a manufacturer is planning to make those engines available for sale into those respective markets. DEQ assumed that engines and vehicles certified and available in the California market would also be available in the Oregon market.
   - Figure 8 compares total 2025 medium- and heavy-duty diesel and non-diesel engine certifications from EPA and California. The figure shows that a greater percentage of federally certified non-diesel engines are also certified by CARB (86%) compared with diesel engines (45%).

Figure 8: Total 2025 Medium- and Heavy-duty Engine Manufacturer Certifications comparison between EPA and CARB

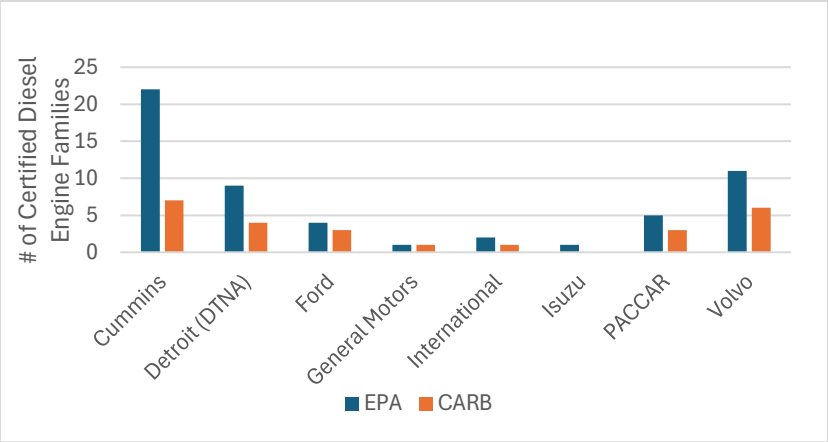


   - Figure 9 shows specific manufacturer certification detail for diesel engines and again compares data from EPA and CARB. The figure shows that some manufacturers will be better positioned to deliver CARB certified engines as they certified a greater proportion of their total engine products in California. For

[3] Medium- and heavy-duty engine certification information used in this analysis was retrieved from EPA and CARB.

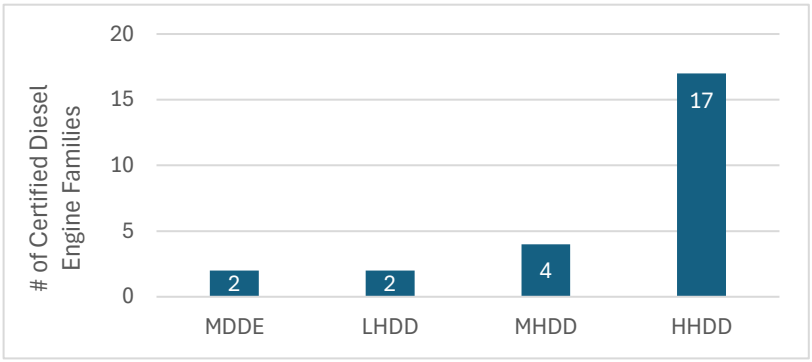
example, Ford, GM and PACCAR appear to have a higher percentage of their products certified in California than Cummins, Detroit or Isuzu.

Figure 9: 2025 Medium- and Heavy-duty Diesel Engine Manufacturer Certifications comparison between EPA and CARB



- Figure 10 shows CARB certified diesel engines by size class and suggests that compliance challenges will likely be greater in the smaller engine size classes since there will be fewer CARB Omnibus compliant engines available. It should be noted that it is normal for there to be a smaller number of engines certified in the medium-duty diesel and light heavy-duty diesel size classes. However, some manufacturers will likely not have a compliant medium-duty diesel engine product available at all which could create a hardship for dealerships that do business exclusively with those manufacturers. Heavy heavy-duty diesel engines and vehicles powered by them are expected to be available. Figure 10 shows a much larger total number of CARB certified engines in this size class. In addition, there are a variety of manufacturers that are planning to deliver certified products in this size class. DEQ has heard from some manufacturers that not all vehicles in their product line would be able to be equipped with CARB certified heavy heavy-duty engine products. Reasons for this are not clear but could include problems associated with new engine design configurations that could be incompatible with specialty vehicle upfit manufacturer designs.

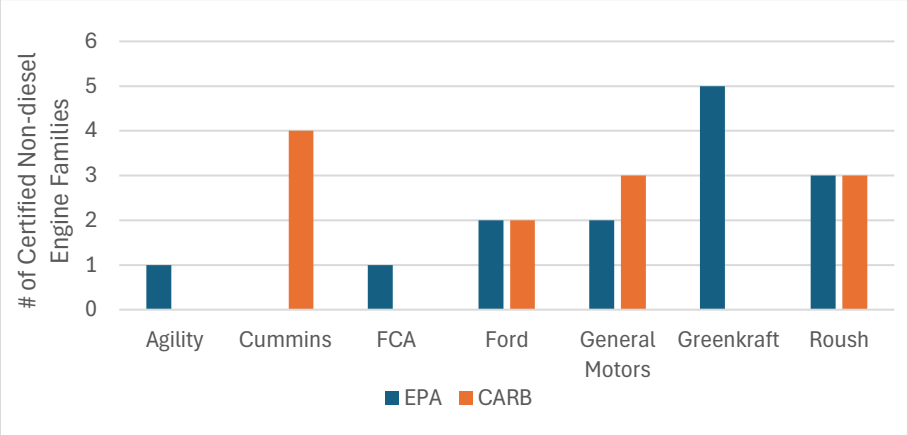
Figure 10: 2025 Medium- and Heavy-duty CARB Certified Diesel Engines by Size Class



NOTE: MDDE – Medium-duty diesel engine; LHDD – Light heavy-duty diesel engine; MHDD – Medium heavy-duty diesel engine; HHDD – Heavy heavy-duty diesel engine

- Finally, figure 11 shows specific manufacturer certification detail for non-diesel engines again comparing EPA and CARB data. While there are fewer total CARB certified non-diesel engines than EPA certified engines, it appears that products should be widely available to meet the demand in this vehicle category.

Figure 11: 2025 Medium- and Heavy-duty Non-diesel Engine Manufacturer Certifications comparison between EPA and CARB



2) Manufacturer marketing materials
Vehicle and engine manufacturers have put out press releases or otherwise advertised Omnibus compliant engine and vehicle products.[4] These manufacturer announcements do not necessarily describe production schedules or specific product availability dates but several clearly state that Omnibus compliant engines are currently available for ordering or will be at some point in 2025.

3) Manufacturer internal communications
DEQ has heard from dealers and manufacturers that currently planned HD Omnibus compliant engine products are not likely to meet the entire scope of medium- and heavy-duty fleet market demand in 2026. This may be especially pronounced in the medium-duty diesel engine sector. For example, a dealer communicated to DEQ during rulemaking advisory committee discussions that Isuzu is not planning on delivering a compliant diesel engine powered vehicle product in 2026. The engine manufacturer Cummins has also communicated that it does not plan to deliver a compliant medium-duty diesel engine product in 2026.

In the heavy-duty diesel engine sector, a dealer in Southern Oregon shared during the advisory committee discussion that Omnibus compliant engines could meet about 50% of their typical annual customer product demand. The majority of manufacturers would also be able to sell legacy engines (federally certified engines) at up to 10% of their total engine sales as long as those excess emissions are offset. Therefore, in the case of this dealer in Southern Oregon they would likely be able to meet 60% or more of typical customer demand with HD Omnibus compliant engines, legacy engines and their ability to sell federally certified high horsepower engines (525-hp and above).

[4] Some examples are the Cummins X15, Freightliner Detroit DD13, PACCAR MX-13 and Volvo D13.

4) Industry media coverage
Media focused on the trucking industry has reported on the availability of HD Omnibus compliant engines.[5] Industry media has also reported that for some manufacturers orders are currently open.[6]

Based on the factors described above DEQ determined that vehicles powered by HD Omnibus compliant engines would be available, but not in all sectors, in 2026. DEQ also determined that available vehicles are not likely to meet the total market demand especially in the medium-duty diesel engine market segment. While it is possible that some non-diesel fueled vehicle products (natural gas) exist, it's unclear if those technologies can meet the needs of Oregon fleets.

Federal updates

Under the Congressional Review Act, federal agencies are required to report rules to Congress, and Congress is provided with the authority to rescind rules upon a simple majority vote in both chambers.

Neither the Advanced Clean Truck nor the Heavy-Duty Omnibus regulations are rules issued by a federal agency. The waiver authorizing CARB to adopt those rules is issued by US EPA. EPA did not submit those waivers for congressional review at the time they were issued, with the understanding that a waiver is not a rule. In recent months both the US Government Accountability Office and the Senate Parliamentarian issued positions that waivers are not agency rules subject to the Congressional Review Act.

Nevertheless, on February 14, 2025, US EPA announced it would transmit both waivers to Congress for review. Upon doing so, companion House Joint Resolutions disapproving issuance of the waivers were introduced.

- HJR 87 disapproves US EPA's issuance of the Advanced Clean Truck waiver to CARB
- HJR 89 disapproves US EPA's issuance of the Heavy-Duty Omnibus waiver to CARB

As of May 2, 2025, both measures were adopted by the House of Representatives and await consideration in the Senate.

EQC involvement

At this time, no action is required by EQC. DEQ is in the final stages of a rulemaking to propose permanent rules that would replace the temporary rules adopted by the commission in November 2024. Proposed rule revisions will be brought before the commission for consideration during the July commission meeting.

Next steps

DEQ staff will bring proposed rules for the commission's consideration at its July 2025 meeting.

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[5] See examples of general trends, manufacturer progress toward meeting upcoming rule requirements and product announcements found at online publications such as fleetequipmentmag.com, fleetowner.com.
[6] See examples of product specific articles on PACCAR's MX-13 at the online magazine Transport Topics and on Volvo's D13 at Commercial Carrier Journal.

Translation or other formats

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