



NW Seaport Alliance Puget Sound
Zero-Emission Truck Collaborative

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South Harbor Truck Driver Listening Session – February 3, 2024

Overview

Purpose

The Puget Sound Zero-Emission Truck Collaborative is developing a plan to transition the diesel-fueled drayage trucks – vehicles that transport freight from an ocean port to a destination – serving the ports of Seattle and Tacoma to zero-emission vehicles by 2050 or sooner. With incentives from the federal and state governments on the rise, the ports of Seattle and Tacoma see this as an ideal time to shift from diesel to zero-emission drayage trucks. Zero-emission trucks such as electric/battery, will reduce a significant source of air pollution that contributes to public health risks and environmental health disparities — especially in communities living near the harbors and along major freight corridors.

Drayage truck drivers that service the Port of Seattle and/or the Port of Tacoma were invited to attend one of two in-person sessions to learn about the Decarbonizing Drayage Roadmap project to share their ideas on how to make this transition to zero-emission trucks equitable for everyone. At this listening session, the Zero Emission Truck Collaborative outreach team asked participants a series of questions to better understand the opportunities and challenges of switching to zero-emission technologies.

Goals

- Understand truck drivers' ideas and opinions on transitioning to zero-emission technologies and what matters most to them.
- Learn preferred ways to reach truck drivers.
- Create a safe space for participants.
- Listen to participants' voices.
- Have a conversation with both independent owners & operators and fleet operators.

Format

The listening session was designed to be informal and small in scale. Each participant signed in and received a copy of the overview PowerPoint slides and the agenda, which included the questions the facilitator planned to ask. Light breakfast food and coffee were available.

Nine participants attended the two-hour listening session on February 3, 2024. Participants sat around a table arranged in a circle with chairs. The facilitator and truck collaborative staff sat among the participants. This promoted direct group conversations where each person was at the same level. Event outreach staff did not receive requests for interpretation for attendees, although these services were pre-arranged.

The facilitator introduced themselves and everyone around the room introduced themselves (including listeners and attendees). Next, a representative from the Northwest Seaport Alliance (NWSA) provided a 10-minute overview of the need for a zero-emission strategy for the drayage trucks that service the ports of Tacoma and Seattle, the state of the industry, challenges and opportunities, and the formation of the Puget Sound Zero Emission Truck Collaborative. Next, the facilitator began asking pre-determined questions of the attendees.

This document summarizes the themes, questions, and comments that arose during the conversation with truck drivers. It does not attribute their names to maintain a sense of anonymity.

Participants

Nine participants attended the listening session on February 3. Of these, seven attendees worked as independent owner-operators, and two attendees worked for a large trucking company. Each participant introduced themselves, how long they've been in the trucking industry, and something interesting about their truck.

Number of years in the trucking industry:

- 2 years
- 10 years
- 11 years
- 16 years
- 16 years
- 18 years
- 20 years
- 30 years
- 30 years

About their vehicles:

- Many attendees drive Volvo trucks.
- A few said they drive Kenworth trucks.
- The model years of the trucks ranged from 2010 – 2020.
- Several attendees said they generally work locally but sometimes make long-range trips to eastern Washington, Idaho, or Montana.
- Several drivers indicated that business is “hard” or currently “running slow”.

When asked (in the registration form) how often attendees visit NWSA marine terminals:

- Five attendees said three times a day.
- Two attendees said two times a day.
- Two attendees said one to three times a week.

Next steps

The feedback from this event will be shared with the Zero-Emission Truck Collaborative as they work together to define the Decarbonizing Drayage Roadmap. The summary will be shared with listening session attendees. Later in 2024, the Zero-Emission Truck Collaborative will share the draft Roadmap with interested audiences.

Key Themes

Several priorities, challenges, and possible solutions emerged as key themes through the conversation with truck drivers. This information is qualitative and based on conversations (i.e., not based on statistically valid polling).

Maintenance is a big concern

Drivers noted concern over the weight of the zero-emission battery and the wear-and-tear of extra weight on trucks and tires. They expressed concern about how long batteries would last until they needed to be replaced. Drivers also expressed a strong need for skilled mechanics who are trained with the newer technologies and an increase of available mechanics. Additionally, drivers are worried about the cost of updating, replacing, or maintaining newer truck technologies. Lastly, drivers wondered if emergency services would be feasible for electric trucks, especially considering their weight and insurance policies.

Affordability and cost are deal breakers

Above all, the transition to a zero-emission vehicle will only be feasible with substantial cost relief or funding mechanisms. Drivers noted that the transition is especially detrimental to independent owners and operators, as the anticipated costs of a zero-emission vehicle currently aren't feasible.

The drivers note that there are several categories of costs to consider as part of this transition: first, the up-front cost of purchasing a zero-emission vehicle. Second, the ongoing costs of insurance, maintenance, permits, tonnage fees, and the cost of charging. Drivers consider the costs over time when thinking about zero-emission vehicles (not just the up-front purchase cost).

Infrastructure and parking are paramount to making the system work

Drivers noted that charging infrastructure is a critical component to making zero-emissions trucking work for them. First, several drivers make longer-range truck trips, in addition to the local, shorter-range trips. Without infrastructure in place for charging beyond the areas of Puget Sound ports, they have concerns about how they would recharge.

Secondly, if recharging takes significant time (more than drivers experience today, 20 – 30 mins), this cuts into their available service time and can impact their business, creating a challenge. Lastly, drivers expressed the desire to establish charging lots that are both managed and secure. Lastly, they prefer chargers near port terminals in Seattle and Tacoma rather than chargers located between terminals.

Leasing, funding mechanisms, and legislative changes could help make the transition feasible

In general, the truck drivers were open to the idea of a leasing program (or similar arrangement that didn't involve ownership) to help obtain a newer zero-emission truck. They were open to the idea of receiving funding to obtain a zero-emission vehicle, however, it would need to be a relatively substantial amount to reach parity with used diesel trucks they would normally drive (drivers currently are faced with \$40,000-\$50,000 price tags).

Low interest rates and other funding incentives, like tax write-offs, are noted as mechanisms to be explored. Lastly, drivers noted legislative changes that are needed to improve costs like insurance, permits, and tonnage fees.

Truck drivers need solid examples to trust the technology

Attendees mentioned that there should be a pilot program and/or ways for truck drivers to hear about how zero-emission vehicles operate. They want to know directly from people who have driven them on a daily basis (rather than from the corporations that make them). This plays a big part in building comfort and trust in the transition.

Detailed Summary

A NWSA representative provided an overview and background before the discussion began. During this overview, participants asked a few clarifying questions, including:

- Is there a short-term goal with the zero-emission roadmap?
- Are you exploring options like natural gas trucks like Amazon is doing?
- What is your focus on infrastructure in this effort?
- A few participants emphasized the need for secure and managed parking lots for independent owner-operators.

The listening session facilitator had seven questions they intended to ask during this session. The facilitator navigated the conversation in a way that followed the natural flow of the conversation while still obtaining answers to most of the pre-determined questions. Below is a summary of the questions and answers.

What have you heard about zero-emissions trucks so far and from where?

- A majority of the attendees felt they had a good understanding of zero-emission technologies.
- Attendees noted they've learned about zero-emission technologies by reading, through YouTube, personal research, and blogs (unspecified).
- The group noted an understanding that batteries, weight of the vehicle, and range are important issues regarding zero-emission drayage trucking.

The conversation shifted towards a discussion about zero-emission vehicle batteries:

- Several attendees expressed concern about what happens to the batteries when they get cold.
- One attendee noted that during the Clean Truck Program, they purchased a 2012 diesel Volvo and ran into significant technology issues. This cost them tens of thousands of dollars. Technology is a factor that needs to be considered about maintenance.

- It was mentioned that Washington state is home to one of the largest battery-producing companies (Group 14), and that is a positive factor.
- A few people expressed concern about how much batteries cost when they need to be replaced.
- Lastly, the conversation shifted towards the range (in miles) of zero-emission vehicle batteries.
 - Electric batteries have a much shorter mile range than a tank of diesel. Some of the drayage drivers also take longer-range trips to eastern Washington, Idaho, and Montana.
 - A few people asked, “Why make this fully electric? Why not a hybrid vehicle to accommodate short and long-term ranges?”

How many of you operate locally, but also run your trucks farther distances?

- About four attendees indicated they operate on farther-distance trips at times and during certain seasons.

What would it mean if you had a zero-emission vehicle with a 200-mile range, but then once in a while, you made longer trips?

- It would be a loss of revenue.
- The weight of the truck is a factor. The truck weight, as we understand it, is like 26,000 lbs. Right now, trucks weigh about 18,000 lbs.
- Weight regulations are going to need to change. To limit truck drivers to a 200–300-mile range truck is a loss of revenue.
- Additionally, drivers need to stop and recharge. That means impacts to hours of service. One of the biggest challenges is how fast the battery recharges. Charging stations are needed AND they also need to be quick to recharge.
- One attendee said they think the ports would need a drop yard. Or perhaps hook trucks into trolley lines in the city (like in Germany).
- In a hypothetical situation where a driver had two trucks, one electric for local and one diesel for long-range trips, drivers would be doubling their insurance, encountering parking challenges, and double tonnage costs. This would double their costs.
- For zero-emission trucks to work for independent owners and operators, they need a charging station that charges swiftly. They could do a 10-hour reset overnight for a full charge -- that might be doable. But if the recharge takes two days, that’s not doable. The infrastructure needs to be viable for an independent operator. Larger companies also likely won’t go fully electric if it takes two days to recharge.

“Drivers need to stop and recharge. That means impacts to hours of service. One of the biggest challenges is how fast the battery recharges.”

How would it affect you if you had available charging infrastructure along the major highways? Does that change the outlook?

- Generally, yes, it would change the outlook.
- However, depending on the weight of a truck and how much they are hauling, they have to pay for it with tonnage fees.
- It was also noted that the Collaborative should think about the road damage that heavy vehicles may create.

What hardships do you see in the transition to zero-emissions?

- One attendee noted that they work 15-16 days a month. When they factor in the costs of tonnage, insurance, medical, permits, etc., it's really like making \$5 an hour. They can work a 12-hour day and not make anything. Any increase in costs is detrimental to independent owner-operators.
- One attendee works for a corporation and noted that having electric trucks would be okay for them. They primarily serve locally. If there were charging stations where they park their trucks, it would work. This attendee noted it'd be beneficial to have quieter ports.

If there was accessible infrastructure off major highways, like I-5, and it took six to seven hours to recharge, would that work?

- One individual said that would work because they drive only locally.
- Another expressed concern over the cost of charging infrastructure and what is realistic and what grid is going to supply that energy? Especially with climate change impacts and rolling blackouts. We need a reliable energy grid.
- One individual said that their company leases land from the Port of Tacoma. There is always the chance of the port asking for their land back for other reasons. This provides less incentive for investing in charging infrastructure on the property.
- Lastly, one attendee asked about other port customers that are polluting the air. What about trains, cargo vessels, and other port equipment polluting the air?
 - NWSA responded that the agency has committed to shore power at terminal 25. Cargo handling equipment is on the same timeline as the drayage trucks, and they are having similar conversations with that industry.

How do you deal with maintenance for diesel trucks? What concerns might you have for zero-emissions truck maintenance?

- One independent owner-operator driver does his own maintenance and has concerns about the price of an electric battery and how long it would last before needing to be replaced.
- Another attendee noted that a lot of their costs are related to maintenance. One thing to note is that when there are newer technologies with the vehicle, it can take the mechanics longer to complete work, because it's new to them, too. This means that drivers get billed for more of the mechanic's time and the truck is out of service for longer.
- One attendee said newer trucks are better. The parts are cheaper.
- One attendee noted they have a 2020 truck. The engine runs differently than older models. They have not had any issues, but they are not getting more mileage.
- Another attendee noted that diesel trucks between 2008-2011 models are the worst. It used to take two months to fix trucks.
- One attendee asked if the new zero-emission trucks can be towed.
- Another noted that training mechanics and more maintenance shops established to help drivers should be part of the roadmap. Emergency services are important, too.
- An attendee mentioned that there should be a pilot program and/or ways for truck drivers to hear about how the zero-emission vehicles operate. They want to know directly from people that have driven them (rather than from the corporations that make them). This plays a big part in building comfort and trust in the transition.

- An attendee expressed concern over the safety of the newer technologies, citing a Tesla fire in California. Do batteries have a higher risk of overheating and fire?
- One concern noted was insurance rates. Would tow trucks be able to tow the electric trucks? Some towing companies are refusing to tow electric vehicles due to safety issues and the weight. For example, Geico and State Farm won't insure Teslas.
- The group reiterated concern about the cost of changing the battery or updating the electric system, which they understand can be pricey.

What would you need to transition to a zero-emission truck? What would help overcome the challenges you've brought up today? What would it take for you to say, "I want to drive that."?

- The group discussed the costs and ideas to overcome hurdles:
 - Instead of a \$25,000 grant, provide a \$500,000 grant.
 - Structure it so truckers don't have to pay income tax or can write off costs on their taxes (similar to Tesla, which did tax write-offs over a 5-6-year period).
 - Provide free charging during a certain time period.
 - Provide up-front cost relief but also address costs over time (like taxes, maintenance, charging, registration, cost of tonnage, etc.)
- One attendee noted that they would likely have to shift from being an independent owner-operator driver to working with a company to make a new zero-emission truck work for them. They felt they would not be able to stay in the business. They felt that this transition would eliminate independent owner-operator drivers because they cannot afford it.
- The group brainstormed about what it would take to keep independent owner-operators in business while transitioning to zero-emission trucks:
 - Substantial money/funding with the cost of the vehicle.
 - Assistance with the yearly costs, like quarterly taxes, registration, tonnage, maintenance fees, and wear and tear of tires.
 - A change to some regulations to make it cost-effective to stay with the vehicle (like insurance).
 - Attractive financing, where the interest rates are low.
 - Lease options. For example, the government could lease the vehicle and set up a pay schedule in such a way that you'd pay regularly. The leasing organization would cover the cost of fixing and maintaining it.
- One driver noted that driving a zero-emission vehicle is something they've wanted to do. But the upfront and ongoing costs make it impractical.
- Overall, leasing seems appealing, but remember that people don't like change. If it's feasible and drivers aren't losing money, it may work.
- The attendees would like to hear from other companies and other drivers to see how zero-emission technologies have been working for them on a daily basis.

"If you can make it affordable and effective, then you also need to change some regulations, so it's cost effective for me to stay with the vehicle (e.g., insurance, tonnage fees)."

Would you be comfortable leasing a zero-emission vehicle?

- The bottom line is that truck drivers need to make money, and whether you own the truck or not is immaterial.
- One person mentioned if they could lease it, it's still their truck, just like if you lease a car. They would have the same opportunity to make money as if they owned it.
- Another attendee added that leasing does have an advantage. They can deduct leasing on their taxes.
- One person noted they would hate the idea of driving for a company. They like the flexibility [of being an independent owner-operator]. Their truck is fully paid for.
- Another driver said they like the idea of warranties with leasing options. If something breaks, they take it back to the leasing company. And the leasing company ideally should provide a backup vehicle to drive while the other is fixed.
- Overall, the group said it all comes down to money. As long as they are making money, that is the most important.
- Lastly, one attendee asked about inflation. How is that considered? What is within the government's control? What influence can they have on our loans?

“The bottom line is that truck drivers need to make money, and whether you own the truck or not is immaterial.”

When you think about truck charging infrastructure, does it make sense to have a centralized charging place in the middle between Tacoma and Seattle (like Federal Way or Renton)? Or closer to the seaport terminals?

- Everyone agreed near the terminals is best.
- They also suggested planning for overnight parking areas, so they could recharge it close to the terminals.
- Truck drivers noted they generally live close to one of the ports.

Do you have any suggestions for how best to connect with you and other drayage truck drivers?

- Everyone has an app called Peer Trucker. It has a feature where you can sign in and look at cameras at terminals.
- Truck drivers don't want to go to meetings.
- Driver-to-driver sharing of information is the best. Many noted informal email lists.