DEUSA Fleet Success Stories: Derby Distribution, Inc.

Location: Maryville, Tennessee
Fleet type: Heavy-duty Electric Terminal Tractor

Narrative: Jonathan Overly of the East Tennessee Clean Fuels Coalition (ETCF) began working with TLD Logistics Services in 2013 as they became more interested in CNG class-8 tractors for over-the-road services. We came to know TLD President David Jones, driver Tim Hendricks, and some other staff over the years. In the late 2010's, Jones retired from TLD. However, he had also been supporting a family trucking services business company – Derby Distribution, Inc. – for some years, which provides onsite terminal trucking operations to industrial sites in Tennessee and other states. In 2022, Jones reached back out to Overly to discuss electric terminal tractors.

Terminal tractors can also be called yard dogs, spotter trucks, hostlers, mules, or jockeys. These day cab-type class 8 tractors can move on the order of 50,000 plus pounds of materials, components, and finished products around a manufacturing or load-transferring facility or "yard" where a company operates. In many cases, they almost never leave the yard, but it depends on the services that are needed at a site as to whether that is the case.

Since 2016, ETCF has managed Tennessee's "state DERA" (EPA's "Diesel Emissions Reduction Act") funding in partnership with the Tennessee Department of Environment and Conservation's Office of Energy Policy (TDEC-OEP). ETCF created the "Reducing Diesel Emissions for a Healthier Tennessee" (RDE4HT) funding program in concert with TDEC-OEP, and it offers funding to Tennessee-based fleets at a rate of roughly $350,000 per year.

Overly and Jones discussed a couple of different funding opportunities, but the RDE4HT funding would likely be one of the best choices to pursue based on a) ease of application, b) odds of winning funding, and c) speed of receiving the funding. After multiple discussions about the RDE4HT funding, Derby Distribution applied for funding in the 2022-23 funding round. They were selected as a final recipient in late 2022, and contracts were signed in early 2023.

Derby and Jones have done a lot of homework looking at different terminal tractors that are on the market today, including testing tractors at their facility in Maryville as well as visiting other locations to see and operate terminal tractors. An example of an electric terminal tractor made by TICO is shown at right. As of mid-2023, they are awaiting delivery of the tractor in late 2023 and after onsite testing and charging, plan to put it into service for a customer in East Tennessee.

Outputs & Outcomes: While there are other electric terminal tractors already in use in Tennessee in several locations, Derby's tractor and the other tractors operator fleets will have their stories developed and shared to other class 8 trucking and terminal operators in Tennessee to tell their emissions reductions stories. Outputs include the complete elimination of the tailpipes from the area by way of the new electric tractors, which eliminates harmful criteria pollutants – like fine particulate matter and nitrogen oxides which directly impact human health – from an area where diesel emissions are frequently concentrated (the industrial facility). Outputs also include what is expected to be a 50-70% reduction in greenhouse gas (GHG) emissions as compared to the former diesel tractor. Other outputs include a large reduction in the noise generated by the tractors when in use, and reduced hearing impacts for the operators of the tractors.

On the outcomes side, we hope and expect to see the following.

1. A greater acceptance by drivers of – and the employees of the business operating the – electric heavy-duty tractors.
2. Improved health of the tractor operators and other staff that work onsite.
3. A growing contribution of reductions in GHG contributed by the heavy-duty sector in Tennessee, which can add to the volume of stories of reductions that larger work trucks can provide in situations where they work right now based on heavy-duty vehicle costs.

Best Practices & Lessons Learned: As the electric tractor has not yet been received, we will plan to update this story with lessons learned on its implementation and use in 2024.