



Electric Vehicles at SWS

Fast Facts:

- Two 520 fully electric garbage trucks and one 220 fully electric box truck.
- Installed charging infrastructure: Heliox Level-3 fast charger.
- Funded by a grant provided by the Department of Energy.

In 2021 SWS was awarded a DOE grant to purchase and integrate electric vehicles into our collection operations. The grant also funded the installation of charging infrastructure and a Battery Energy Storage System (BESS).

These were a first-of-a-kind deployment in Alaska. The road to the trucks' deployment has been rocky with many lessons learned around manufacturing and design, operations, maintenance, charging infrastructure and more. SWS now operates all three vehicles and is gathering information about their performance and maintenance to share with manufacturers and fleet operators.

Project Goals

1. Demonstrate three heavy-duty EV's to support municipal solid waste collection.
2. Install and test a battery-tied direct-current fast charging station to shave peak demand charges.
3. Assess performance of medium and heavy-duty EVs in cold climates.
4. Develop EV workforce skills within Alaska.

Lessons and Takeaways

- Outside of battery performance, cold weather and snowy conditions can impact the designed drivability of heavy duty EVs.
- Manufacturing and supply chain issues in the current economic climate can cause uncontrollable delays.
- Labor restrictions on working on high-voltage systems in the fleet context is a barrier.

