



Dallas-Fort Worth
CLEAN CITIES



North Central Texas
Council of Governments

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ONCOR ELECTRIC DELIVERY

They continue to innovate and electrify

Oncor Electric Delivery is the largest energy delivery company in Texas, serving 98 counties and over 400 communities, according to their website. They obtained four electric power take-off (ePTO) bucket trucks in 2016, and after a successful pilot assessment period, they have decided to start buying more, said Randy Boys, Strategy and Technology Manager.

An ePTO is an additional unit that is placed on a vehicle to perform various tasks, said Fleet Manager Derek Hoopman. An ePTO is battery powered, unlike conventional bucket trucks that use a pneumatic system which requires the engine to be running to be operated. Boys has worked for Oncor for six years and said the linemen and technicians who piloted the first four vehicles came back with positive accolades.

“Things are quiet, they’re more controllable, the customers like them better,” said Boys. “The precision of operation is higher than what you get with a pneumatic system.”

Boys said through the duration of the pilot, one of the things they liked most was the operational availability of the ePTO. They often had issues with the hydraulic systems in regular bucket trucks, which would prevent them from being scheduled. However, with the ePTO bucket truck, the hydraulic

systems are replaced with electric drive motors, meaning they are always ready to go.

Operational availability translates into cost as well, said Boys. When discussing cost, most people think of the cost of maintenance, but that is not the larger cost. The larger cost is not having a vehicle ready to perform a function because it is out of service being repaired. The ePTO also

THE PRECISION OF OPERATION IS HIGHER THAN WHAT YOU GET WITH A PNEUMATIC SYSTEM

reduces idling and emissions, as regular bucket trucks require the truck engine to idle to operate the power take-off. However, the ePTO is powered by a separate battery on the back of the truck, said Boys.

“Our emissions are lower because of that ePTO technology than they would be if we converted to a natural gas engine,” said Boys “It’s emissions

free for the preponderance of the time that it's in operation."

In addition to lower emissions, the coordination between the ground and bucket crew is much safer due to the ease of operations and the ePTO being quieter than regular bucket trucks, said Boys.

"The fact that the ground crew could work with the crew in the bucket with no auditory interference was a big surprise to them," said Boys.

Hoopman said the ePTOs are used daily to perform numerous services, making them one of the most highly utilized electric vehicle technologies in their

DID YOU KNOW?

ePTO trucks cost approximately 20-25% more than a regular PTO, however the fuel and maintenance savings are expected to offset the increase in cost.

fleet. "Four units are operational, we have 20 currently on order," said Hoopman.

In addition to their ePTO trucks, Oncor has 14 electric and plug-in hybrid vehicles as well. Though their fleet is not fully electric, they are planning to obtain more plug-in hybrids and electric vehicles soon. One of their biggest obstacles has been the lack of electric heavy-duty vehicles, said Boys.

They have around 700 pickup trucks, however, until recently, there have not been any electric pickup trucks that they could purchase to replace those.

"The Ford Lightning is shipping now and the Chevy E-Silverado will start shipping early next year and I have high hopes for those," said Boys

Sarah Fischer, a Program Manager for the Electrification Coalition who supports many electric vehicle fleet projects, including the Climate Mayors EV Purchasing Collaborative, said lack of electric heavy-duty vehicle options is one of the biggest obstacles to fleets fully electrifying.

There are a variety of light-duty options for electric vehicles, including sedans, SUVs, and light-duty pickup trucks, said Fischer. However, for heavy-duty vehicles like dump trucks and construction equipment, there are few electric vehicle options on the market. The few available may not work for a fleet's needs.

"The heavy-duty space is definitely growing, but it's still kind of in its early stages," said Fischer



An Oncor ePTO Bucket Truck
Photo source: Oncor, 2018

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MINUTES OF IDLING IS
REDUCED PER DAY ON
AVERAGE

337

GASOLINE GALLON
EQUIVALENTS (GGE)
REDUCED ANNUALLY

4

TONS OF GREEN HOUSE
GASES (GHG) REDUCED
ANNUALLY