

Airport Maintenance Operations

electric vehicles are the preferred alternative



Are electric utility trucks a good fit for non-stop airport operations?

Client: [Metropolitan Airports Commission](#)

Site: MSP International Airport

Vehicle: EXV2 Patriot

Executive Summary

Reducing emissions and pioneering electric vehicles has been at the core of Metropolitan Airports Commission (MAC) for nearly 10 years. MAC needed 100% electric light duty vehicles that could move staff, tools and other larger equipment across the contained facility's hangars, terminals and other structures. After 7 years and continued review of all alternative fuel options, e-ride emerged as a stand out success story that has positively changed the purchasing strategy for the MAC and fleet operations.

- 2000+ Gallons of petroleum saved.
- 6000 miles – all season operations
- Over 8500 lbs of carbon dioxide emissions reduced

"We were pleased to find an electric vehicle that met operational needs and has outlived our traditional fuel vehicles."

- Mark Wacek
Environmental Manager

Emissions Challenge

The MAC is the regional governing body that coordinates the Twin Cities Metro area aviation services. The MAC manages the 3,400 acre Minneapolis – St. Paul (MSP) International Airport's two terminals and is responsible for all operations and mandated emissions reporting. The MSP airport services over 33 million visitors, which makes it the 16th largest airport by takeoffs and landings in North America.

MAC began its hunt for alternative fuel vehicles first with E-85 and other alternative fuel vehicles, but after operational analysis, **electric became a priority due to overall fuel use and emissions reduction.** The process for vehicle acquisition determines the most fuel efficient and cost effective vehicle that meets the specific operation need. Electric vehicles were reviewed that would fit with the continued movement of electricians and construction workers across over 50 facilities.



“Electric vehicles will continue to be pursued for all maintenance operations as they are the best fit for many functions.”

- Lee Spanrud, Fleet Manager

Airport Operations Results

E-Ride's EXV2 was chosen because of the weatherproof cab, payload capacity, 35hp motor and overall performance as a USA made vehicle. The MAC facility has used e-ride vehicles since March or 2009 and logged 6000+ miles per year with great environmental results.

Over a logged 7 year period the e-ride electric utility vehicle has been in service for the MAC, it is estimated that each vehicle has reduced over 2000 gallons of fuel and has furthered the MAC's efforts to reach petroleum fuel reduction goals set State Government Agencies. Minnesota Pollution Control Agency, who tracks and verifies petroleum reduction for the State of Minnesota, helped verify that e-ride has saved nearly 8,500 lbs of CO2 emissions per vehicle as compared to a traditional pickup truck use.

Future Operations

The MAC continues to push to find the best in class and has recently committed to complete fleet review for use of e-ride vehicles for all departments. Electric vehicles manufactured by e-ride Industries are one example of how airports are transitioning to alternative fuel fleet vehicle options. Studies by Lockheed Martin in partnership with United States Postal Service confirm that e-ride has an operational cost of \$0.05 per mile. Reduced operational costs help provide a greater return compared to larger gas powered trucks. According to a Texas A&M study, the cost of a ¾ ton pickup can cost \$0.30 – \$1.50 per mile if used daily for operational tasks and maintenance.

For over 10 years, the MAC has led by example in pushing forward examples of the function and savings of alternative fuel vehicles, **they are one to watch on what electric vehicle advancements will be happening in the future.**