# Campus Fleet Conversion

## a smart approach to electric utility vehicle savings


## How can utility vehicles save money, energy and cut emissions?

Client: Elon University
Site: 620 acres, 30 Buildings
Vehicles: 25, EXV2 Patriots

*"After careful review of all EV's in its class we found that e-ride could meet all applications for medium to heavy duty operations by purchasing vehicles with cargo beds, tool boxes and ladder tracks."*

- *Keith Dimont,*
  *Campus Fleet Manager*

### Executive Summary

Elon University, a mid-sized private University in North Carolina, began their research in Alternative Fuel Vehicles (AFVs) with specific interest in electric and biodiesel. They identified possible implementation for these technologies with the goal of saving money and reducing their carbon footprint. Now 25 e-ride vehicles are used across the campus in a diversity of applications daily.

- Average annual miles traveled per vehicle is 2,500 miles.
- EXV2 fleet saves over 400 gallons of petroleum per month.
- Vehicles are equipped with solar charging capabilities.

*"Are still using the first EXV2 Utility Trucks purchased in 2006 with 17,000 miles and counting"*

- Keith Dimont, Elon University

## Campus Challenge

Elon University began their search for Alternative Fuels Vehicles (AFV's) program 2006. After review of vehicles available leadership decided that they had applications for AFV vehicles in 3 categories; Biodiesel, Hybrid and 100% Electric Vehicles (EV).

A campus plan was developed to replace the aging fleet of gas and diesel Utility Vehicles with electric powered and B20 Diesel options. They had applications for light duty (electric), medium duty (electric) and heavy duty (B20 and electric). The challenge was to find one vehicle that could fit the most of these needs.

## Competitive Review

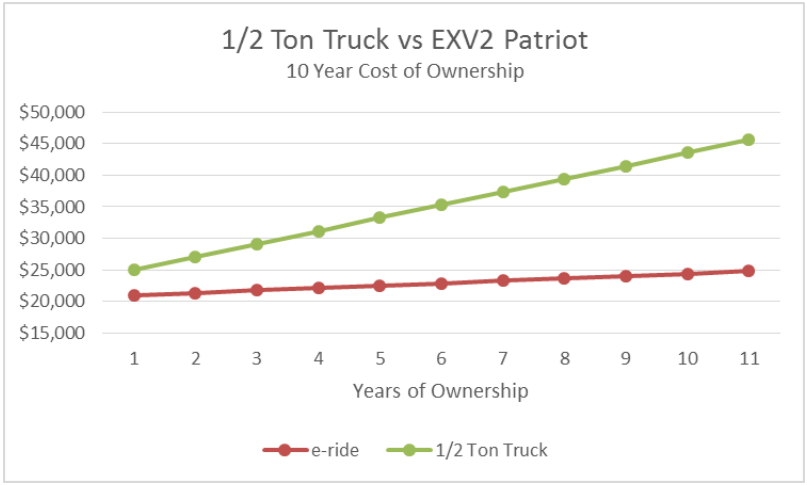
Campus operations staff tested all applicable EV and B20 trucks loaded with cargo on daily applications to assess vehicle capabilities.

Through feedback from employee review of EV and B20 manufacture brands and review of market durability - Elon found the EXV2 is a great fit for light and medium applications. B20 trucks were selected where heavy trailers are pulled daily.

The University decided e-ride's EXV2 could meet all applications in both stock models and by building electric utility vehicles with cargo beds, ladder racks and tool boxes.

## Fleet Conversion Results

Since their AFV program implementation, Elon University has significantly reduced operational costs of the fleet as well as the overall carbon footprint. The previous gas fleet of vehicles was averaging 16 gallons of fuel per month and each e-ride replacement eliminated this entirely. The 25 e-ride vehicles purchased over a 10 year spanhas reduced their usage by 400 gallons of fuel and the resulting 7,080 lbs. of carbon dioxide emissions each month. Fleet managers prepared a 7 year cost comparison study on total cost of ownership of gasoline trucks verses their e-ride vehicles. It was found that overall operations spent 65% less on the e-ride electric utility vehicles when compared to the gas powered utility vehicles.




## Future Operations

Elon currently operates a fleet of 36 electric vehicles. They have a mix of models and configurations depending on the application. They have recently been using vehicles with the e-ride solar panel option and seeing extended driving range in specific applications where that is a benefit. They have future plans of implementing more solar panels on their existing vehicles. This will allow them to save even further carbon emissions and operation cost while powering their e-rides with truly 100% renewable energy.