



ELECTRIC UTILITY VEHICLES PROVIDE **GREENER ONSITE** TRANSPORTATION

In a commitment to reduce the Laboratory's environmental impact and improve mobility, Argonne rolled out a new pilot program to test all-electric utility vehicles in FY 2018.

Argonne's cutting-edge facilities are nestled among hundreds of acres of wilderness and connected by winding, low-speed roads. Employees are spread across buildings in several different areas of the 3 square mile campus. Throughout the year, employees and visitors alike can be seen walking, running, and cycling around campus for leisure and transportation. These factors make the laboratory an ideal location for a new generation of all-electric utility vehicles.

Argonne added two Polaris Global Electric Motorcars (GEM) utility vehicles to the intra-Lab fleet. GEM cars are multipurpose, 100% all-electric transportation and utility vehicles manufactured in Anaheim, California. GEM is an established brand in the low-speed vehicle market, and the vehicles are street legal in 47 states. Worldwide, GEM utility vehicles have been driven more than 450 million miles and, as a result, have saved almost 20 million gallons of gasoline.

In the pilot program, the GEM utility vehicles are being used and tested by the Project Management Organization and Maintenance Planning Group of Argonne's Facilities Organization. Users leverage the GEM utility vehicles for trips across Argonne's campus and make notes on key factors including durability, handling in snow and rain, ability to recharge between uses, and maintenance needs.

Two new zero-emission vehicles are now cruising the campus, helping to improve air quality and supporting Argonne's daily operations.



Sustainability team members test drive the Polaris GEM utility vehicle. Left to right: Scott Thomas (FAC), Catherine Hurley (PMO), Arnoldo Diaz (FAC), and Monica Pazdziora (PMO)

The GEM cars are a more environmentally friendly alternative to replace Argonne's fleet of diesel-fueled Kubota Rugged Terrain Vehicles (RTVs). In FY 2018, Argonne's 30 diesel-fueled Kubota RTVs consumed 3,440 gallons of diesel fuel. If they prove to be rugged and durable enough, the GEM utility vehicles could reduce or eliminate that fossil fuel consumption.

Argonne's pilot program includes two models: a two-door, two-seat model and a four-door, four-seat model. GEM utility vehicles can be outfitted with flatbeds, toolboxes, ladder racks, and other accessories to assist with operations. Engineering features such as heated windshields, road-worthy suspension, and a well-sealed cab make the GEM utility vehicles better suited to the Chicago climate than other electric utility vehicles Argonne utilized in the past.

A key aspect of the pilot program is testing the number of miles the GEM utility vehicles can be driven at Argonne before they need to be plugged in. This distance is referred to as the "range" of the vehicle, and it is greatly dependent on the weather, the number of passengers, and the terrain covered. Argonne has an extensive network of 120-volt outlets that were installed to support an early generation of all-electric, low-speed vehicles, and these outlets are available for the GEM utility vehicles.

Argonne's pilot program is intended to thoroughly evaluate the GEM utility vehicles to determine their future at the Laboratory. If successful, the GEM utility vehicles would provide Argonne with a zero-emission travel option that would complement ongoing fleet-share and fleet right-sizing efforts.

**FOR MORE INFORMATION
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