

ACUA's Electric Vehicle Technology

Fact Sheet



ACUA is aggressively working to green its fleet and to encourage the development of infrastructure that will support the clean vehicles that are becoming available. ACUA has been using alternative fuel vehicles for many years, from propane vehicles to biodiesel and now compressed natural gas (CNG) for its collection fleet, as well as electric vehicles used onsite at the Wastewater Treatment Facility in Atlantic City.

ACUA has installed electric charging stations at its Atlantic City and Egg Harbor Township sites and continues to add to its zero emission fleet. Electric vehicles offer a cleaner alternative to gasoline and diesel vehicles, especially when charged with electricity generated from renewable sources like wind, solar and landfill gas. Electric vehicles have a history of successful use and are seen as a viable alternative to cars and trucks powered by fossil fuels. Thousands of these clean vehicles, many of them zero-emission, are available at auto dealerships throughout the U.S.

Ford Fusion Plug In Hybrids

Two Ford Fusions were added to ACUA's Electric Vehicle Fleet in December 2014. Two more were added in 2018. Each vehicle has a combined city and highway mileage rating of 88 mpg using a combination of electricity and gasoline. The Fusion can travel up to 19 miles using the electric motor before seamlessly switching to the hybrid gasoline engine. For those with a short commute, this midsize sedan will essentially run as an all-electric vehicle. The Fusion can be charged with a 120 volt electrical outlet in 7 hours, or in 2.5 hours using a 220 volt outlet or at stations such as ACUA's AeroVironment chargers. The sedan batteries will partially recharge through regenerative braking.



ACUA's 2012 Nissan Leaf can travel up to 100 miles on a full-charge.

Nissan Leaf

The 2012 Nissan Leaf arrived in March 2012 to help start to update the ACUA's fleet. The Nissan Leaf is 100% electric, with the capacity to fit five people, and can travel at highway speeds. The Nissan Leaf uses a lithium-ion battery to store electricity to run the vehicle and is built to travel up to 100 miles on a full charge. A 2019 Nissan Leaf has a range of 150-226 miles. The Leaf can be charged with a common household outlet, using the cord provided, which takes between 18 and 20 hours to charge from empty to full. With a 220 volt outlet or using ACUA's Level 2 charging stations, the charge will take 6 to 8 hours from empty to full.

Toyota Prius Plug-In Hybrid

ACUA's Toyota Prius Plug-In Hybrid arrived in May 2012. The Prius is engineered for dedicated electric driving capability, and allows you to completely charge its lithium-ion battery using a common household outlet in about three hours. In EV2 mode, the Prius Plug-In Hybrid is rated to drive up to 11 miles and has the capability of traveling up to 62 mph using electric power alone. The EV2 mode refers to the blended options of electricity and gas. In EV2 mode, the Prius Plug-In is rated at a 95 mpg equivalent.



In electric vehicle mode, ACUA's 2012 Toyota Prius Plug-In Hybrid travels 11 miles on a charge.



Toyota Rav4 Hybrid

Toyota's first RAV4 EV was introduced in 1998, alongside the General Motors EV1, Honda EV Plus, and Nissan Altra EV. When Toyota introduced the new 2016 RAV4, the lineup included the first-ever hybrid variant. The RAV4 Hybrid has the Camry's 2.5 liter Hybrid Synergy Drive up front and an electric motor driving the rear axle—and no mechanical connection front-to-rear. The Rav4 Hybrid gets 34.3 MPG in town and 39.0 on the highway.

ACUA purchased two Rav4 Hybrids in early 2016 and added two more in 2018.



ACUA added Toyota Rav4 Hybrids to its fleet.

Solar Powered Electric Vehicles



ACUA uses solar and wind energy to power "Sunny" at the Wastewater Treatment Facility.

In 2008, the ACUA purchased its first electric vehicle, "Sunny." The vehicle is also known as a GEM, which stands for Global Electric Motors, a Chrysler company. "Sunny" was retired in 2017, and two newer models have replaced this vehicle.

The ACUA has recently added two new GEM eL-XD work vehicles, one at each facility, to be used for work on site. These low-speed or "neighborhood electric vehicles" can be legal street vehicles on nearly all public roads that have a 35 mile-per-hour speed limit or less. New Jersey requires a local permit to operate the vehicle on public streets. It has a top speed of 25 mph and can travel up to 40 miles in distance on a single charge.

emit any toxic or greenhouse gases. The new vehicles are two-passenger vehicles with a long back bed. Other models include a two-passenger GEM with a shortback bed, and four-passenger and six-passenger GEM cars. Each GEM model meets and exceeds all federal safety regulations for low-speed vehicles and are thoroughly tested at the Chrysler Automotive Proving Grounds for quality and endurance.

ACUA is recharging the vehicle with energy produced by its 500-kilowatt solar energy facility and the 7.5 megawatt Jersey Atlantic Wind Farm. The power used to recharge the battery is clean and renewable and the vehicles do not

Electric Charging Stations

ACUA has installed eight electric vehicle ports at the Atlantic City Wastewater Treatment Facility and the Haneman Environmental Park in Egg Harbor Township. Each location has four ports. Each port can charge two vehicles simultaneously.

All of ACUA's charging stations are fed by the Authority's two microgrids and each station is powered by clean, 100% renewable energy sources and are available to visitors during business hours. The Haneman Environmental Park's microgrid is powered by ACUA's landfill gas to electric project while the Wastewater Treatment Plant's microgrid is powered by wind and solar energy. ACUA hopes this project will jumpstart the use of electric cars and the development of charging stations, ultimately reducing pollution and its effects.



ACUA's AeroVironment Level 2 charging stations at the Haneman Environmental Park.

