'Green fleet' growing: The wheels on the electric bus don't pollute

City of Tallahassee and Florida State University Special to the Tallahassee Democrat
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The City of Tallahassee has long been a pioneer in incorporating state-of-the-art, environmentally friendly technologies into its infrastructure and operations. Nowhere is this more apparent than in its extensive vehicle fleet, which includes everything from light-duty hybrid vehicles to StarMetro’s all-electric buses.

Committed to sustainability in transportation operations, the city made history in 2013 when it deployed five all-electric, zero-emission, fast-charging buses into its StarMetro bus fleet. At the time, this was the largest all-electric bus fleet in the southeast. The all-electric buses and their sustainable counterparts, including 12 compressed natural gas (CNG) buses and 19 CNG paratransit vehicles that were already in operation, helped bring the city’s goal of having a truly “green” fleet closer to reality.

Building upon StarMetro’s 40-year history of providing transportation services to Florida State University, in 2018 the city and FSU set out to create the campus’s first all-electric fleet, effectively marrying the city’s and university’s sustainability goals.

In 2019, StarMetro’s all-electric buses began servicing the campus, making FSU one of the first universities in the nation to use all-electric buses to transport students, staff, and teachers on campus and between the campus and popular off campus housing locations.

Similar to the city’s goals, FSU aims to take on climate action by reducing greenhouse gas emissions and energy use through increased conservation and efficiency efforts, optimizing the use of green building technologies, and increasing sustainable transportation options like the all-electric bus fleet. To these ends, the all-electric bus fleet is an important step toward sustainability for the city and FSU.

In 2019, while StarMetro worked on the infrastructure and processes for purchasing and supporting 15 additional all-electric buses, the Tallahassee City Commission approved the
Clean Energy Resolution, No. 19-R-04, which was a bold and visionary step toward a 100 percent net clean, renewable energy future by 2050 for the city and community. This resolution includes transitioning the city’s light-duty vehicles and StarMetro’s fixed route bus fleet to all-electric by 2035.

The 15 newer buses, the 35-foot Proterra Catalyst XR+ Series, seat 28 people, release zero greenhouse gas emissions, use no liquid fuels, require no oil changes and operate with 30 percent fewer parts than a traditional bus. Annually, the bus fleet is expected to eliminate more than 5 million pounds of carbon emissions. Over the fleet’s lifespan, it is projected to save about $10 million in fuel and maintenance costs.

The buses are charged using the 6 depot chargers built at StarMetro’s administrative offices on Appleyard Drive. Currently, buses take six hours to fully charge, and each bus travels about 100 miles per charge. FSU’s buses are designed to operate up to 18 hours a day with recharging throughout the day.

Just this fall, two new electric overhead charging stations were completed on FSU’s campus, augmenting the existing overhead charging station located at C.K. Steele Plaza. Overhead chargers are used to “top off” the electric batteries during scheduled route layovers. Each recharge takes about 10 minutes and gives the bus another 15-18 miles of travel.

StarMetro owns, maintains, and operates 19 all-electric buses, purchased in part using Federal Transit Administration grant funding; four all-electric light duty vehicles; and three hybrid vehicles, in addition to the CNG paratransit vehicles.

As gas-powered light-duty vehicles rotate out of service, all newly purchased vehicles will be hybrid/electric. As buses rotate out of service, new buses will be CNG or all-electric, and plans for charging stations and solar panels are being discussed for StarMetro’s facilities.

These milestones toward a fully sustainable public transportation fleet are already making a difference by saving carbon emissions from entering our atmosphere. Moreover, the city was recently recognized for having one of the Top 50 Green Fleets in North America; the all-electric buses and hybrid vehicles no doubt contributed to that recognition.

With healthy, vibrant living being a hallmark of our community, the city is working to protect Tallahassee’s natural environment. Transitioning to a fully functional green fleet, made up of vehicles and buses, is just one way the City is creating a brighter, cleaner community for generations to come.
This article is jointly written by the City of Tallahassee’s Star Metro program and FSU’s Department of Transportation & Parking Services. This is a “Greening Our Community” article, an initiative of Sustainable Tallahassee. Learn more at www.SustainableTallahassee.org.

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