

Clean Fuel Advanced Technology Success Story: Great Smoky Mountains National Park

NC STATE UNIVERSITY



Project

A total of \$2M in funding was provided to the NC Solar Center at NC State University by the NC Department of Transportation, State Energy Office and Division of Air Quality. Funds were used for the Clean Fuel Advanced Technology (CFAT) Project to reduce transportation-related emission in NC counties that do not meet national air quality standards. Great Smoky Mountains National Park received \$31,922 to purchase 2 E-Ride Neighborhood Electric Vehicles (NEVs) for use by the Park's Elk Bugle Corps and general park maintenance. NEVs can be recharged using 110-volt outlets and are legal on roads up to 35 mph.

CFAT Impact by the numbers

Emissions Reductions per year:

4604 kg CO₂
6 kg NO_x
10 kg VOC
190 kg CO

On the Road to Success:

- In 1994, Great Smoky Mountain National Park was identified as the National Park with the worst air quality. However, even before this study was released, the Park has been making efforts to reduce air pollution in and around the Smoky Mountains for decades. The Smokies has made air quality improvements a major part of its 2007-2011 strategic plan.
- The Elk Bugle Corp is a volunteer group that shuttles up and down the Cataloochee valley to interact with visitors that are drawn there to see the park's elk. The E-Ride EXV-4 NEV replaced a gasoline-powered utility vehicle that did not meet highway emission standards.
- The E-Ride EXV-2 vehicle used for maintenance travels around campgrounds and facilities picking up litter, cleaning grills and restrooms, and answering visitor questions. This involves a significant amount of idling and low-gear driving, making it ideal for the use of an NEV.
- E-Ride vehicles run on a 72-volt 16.5 horsepower motor with a max speed of 25 mph, a max range of 55 miles, and zero tailpipe emissions.



Additional Accomplishments:

- The park owns 9 Toyota Priuses, seven of which were donated by Toyota. These hybrid vehicles are used by Volunteer Visitor Assistance Teams, Rangers for off-site education programs, and the Parks-as-Classroom Educational Rangers.

Contact

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For more information about Clean Transportation projects at the North Carolina Solar Center visit
www.cleantransportation.org

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