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May 19, 2008

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CLEAN FUEL ADVANCED TECHNOLOGY PROJECTS ANNOUNCED Over \$600,000 Awarded to Reduce Transportation Emissions

Raleigh, N.C. - A total of \$631,393 has been awarded by the North Carolina Solar Center at NC State University to reduce mobile emissions through the Clean Fuel & Advanced Technology (CFAT) Project. The funds will be used for eleven projects to reduce transportation related emissions in North Carolina counties that do not meet national ambient air quality standards. The CFAT Project is funded by the N.C. Department of Transportation, State Energy Office, and Division of Air Quality to directly reduce harmful emissions and provide related educational outreach. "The Solar Center is grateful to the CFAT program sponsors for making this highly successful program possible with their funding support," said program manager Anne Tazewell. In 2006 and 2007 over \$810,000 was awarded for nineteen projects that are expected to reduce over 1.6 million kilograms of harmful emissions annually. The 2008 awards mark the last round of funding for the three year project and include a wide range of technologies such as Segway personal transporters and a truck stop electrification project. Collectively the 2008 projects will reduce over one million kilograms of pollutants annually that contribute to ground level ozone, increased respiratory problems and global climate change. "We are pleased with the exciting diversity of projects selected by our evaluation committee from the more than 30 projects submitted for consideration in this round and hope to identify sponsors in the near future to be able to continue this important emission reduction work in the future", added NC Solar Center director, Steve Kalland.

Three CFAT awards involve the use of neighborhood electric vehicles (NEVs). These all electric vehicles have no tail pipe emissions, can be operated on streets with speed limits of up to 35 miles per hour and are charged through ordinary 110-volt outlets. **NC Central University** is purchasing three NEVs that will replace vans currently used by the Facilities Department. **Mecklenburg County Parks and Recreation** will use funds to purchase three NEVs to replace current gasoline-powered vehicles at nature preserves and the **Town of Stallings** will also purchase their first alternative fuel vehicle, a NEV, to provide maintenance to the town park and downtown areas. The **City of Monroe** will purchase two Segways, all electric two wheeled personal transporters, to replace police cruisers at special events, downtown and city parks.

Two CFAT funded projects will expand the use of E85 (85% ethanol, 15% gasoline), a cleaner burning renewable based fuel produced from plant material such as corn. **Cary Oil Company** will be using CFAT funds to install an E85 tank and dispenser at an existing station on U.S. Rt. 64 West in Apex. The station is near auto dealers that sell E85 capable flex fuel

vehicles (FFVs). FFVs can operate on E85 or gasoline and are available at no extra cost to the purchaser. **NC State University's Facilities Department** will install an E85 dispenser and 10,000 gallon storage tank to provide E85 to the over 250 FFVs operated by the University.

A number of technologies are available to reduce harmful emissions from existing diesel engines. With CFAT funding assistance, The **Rowan- Salisbury School System** will retrofit 24 buses with diesel particulate filters (DPFs). DPFs are ceramic devices that reduce particulate matter and other harmful emissions up to 85% as compared to a typical school bus. DPFs require annual maintenance to remove the soot buildup and as part of their contribution to the project the school system is purchasing a cleaning unit to service the filters. **Union County Schools** are installing 20 diesel multi- stage filters (DMFs) and crank case ventilation systems (CCVs) that will reduce particulate matter pollution 55% and require no maintenance.

CFAT funds will also go towards the purchase of a compressed natural gas (CNG) truck and refueling infrastructure. **Piedmont Natural Gas** will utilize a CNG engine manufactured in Rocky Mount, NC for use in a new dump truck. The Cummins Westport engine already meets more stringent 2010 federal emission standards, reducing pollutants up to 90% as compared to typical diesel truck today. **Progress Energy** will utilize CFAT funds for another first by a North Carolina utility - the purchase of plug-in hybrid truck with an aerial device.

Plug-in hybrids are essentially a hybrid vehicle with a much larger battery and the ability to charge the battery through the electric grid by plugging it in. The larger battery helps to greatly reduce the load requirement on the internal combustion engine and can even provide all electric range in some cases. It is anticipated that up to 90% of the idling typically seen with these utility vehicles will be eliminated by the plug-in hybrid feature.

Shorepower Technologies, based in Rome, NY, with support from **Advanced Energy**, **Progress Energy**, and the **New York State Energy Research and Development Authority** (NYSERDA), is partnering with Big Boys Truck Stop on I-95 in Kenly, NC to build a truck stop electrification (TSE) project. This project will install power pedestals at 24 parking spaces that will allow truckers to plug into electricity for creature comforts and shut off their engines during overnight stays, thereby reducing toxic air pollution, carbon dioxide emissions, and fuel costs. The Shorepower TSE project will be the first of its kind in the southeast.

Grant recipients will contribute over \$400,000 in cost share, providing 41 percent of total project costs.

"We are committed to reducing mobile emissions and protecting the environment," Transportation Secretary Lyndo Tippett said. "For three years, this initiative has helped fund innovative projects aimed at improving air quality and educating our citizens about the importance of limiting emissions-related pollutants."

***About the Clean Fuel Advanced Technology Project:** A three year, \$2 million dollar initiative of the Clean Transportation Program at the NC Solar Center (NCSC) funded by the State Energy Office, Division of Air Quality and federal Congestion Mitigation Air Quality (CMAQ) funds administered by NCDOT to provide educational outreach and emission reductions in 24 NC counties that do not meet national ambient air quality standards. The NCSC has partnered with the Triangle Clean Cities and Centralina Clean Fuels Coalitions to conduct outreach in the Triangle and Charlotte Regions.*

***About the NC Solar Center:** a division of the College of Engineering at N.C. State University, operating since 1988 as a clearinghouse for information, demonstration, research, and training related to renewable and advanced technologies.*