



Community Outreach

Tennessee: Reducing Greenhouse Gases 1kWh at a Time

Source: [Thomas M. Tripp](#)
Big Frog Mountain, Corp.
Chattanooga, TN

Tennessee may seem like an unlikely place for solar to thrive, but with an active NABCEP-certified installer, a professor who has spent 26 years researching alternative fuels, including four with battery/electric and hydrogen in the school of agribusiness and agriscience at Middle Tennessee State University (MTSU/Murfreesboro), and clean energy technology grants from the Tennessee Dept. of Economic and Community Development, Tennessee is, in the words of Tom Tripp, reducing green house gases 1kWh at a time

[Dr. Cliff Ricketts](#), who has spent 26 years researching alternative fuels, including four with battery/electric and hydrogen, has traversed U.S. Highway 231 in his alternative fuel electric hybrid 5-speed Nissan pickup truck powered by the sun.

"A 10-kilowatt solar array produces the power," he says. Large solar panels collect energy, which is uploaded to the grid and then returned to the charging station for the truck to use. "It takes approximately one kilowatt to go one mile," says Ricketts.

Earlier this Spring, Dr. Ricketts presented testimony before the 109th Congress, Committee on Science, Subcommittee on Energy, describing MTSU's research into plug-in hybrid technologies. "The lifetime goal of the MTSU research is to run engines off sun and water (hydrogen from water). This is presently happening at Middle Tennessee State University. An electric/hydrogen hybrid truck is presently being developed. The electric component (plug-in) is complete, and the internal hydrogen combustion engine generator set is complete. The range and on-board charging system is in the process of being tested," said Ricketts in his testimony.

"Dr. Rickett's 10KW solar PV system is currently making hydrogen for vehicles and charging electric vehicles at MTSU, and is looking promising for help with air quality issues in Tennessee, global warming and energy security," said Tripp.

To further enhance the proliferation of installed solar systems, the [Economic and Community Development's Energy Division](#) is now offering a pilot grant program for businesses to install renewable energy systems at their facilities. To qualify, the facility where the system will be installed must undergo an energy audit. The grant amounts are 40% of the installed cost for solar photovoltaic (PV) systems, wind, solar water heating, hydrogen fuel cells and solar hybrid lighting up to a maximum of \$75,000. The minimum grant amount is \$5,000. A copy of the marketing flyer advertising the program is attached below.

NABCEP contractor training courses are going well at Cleveland State Community College in Cleveland, TN. Their 1.4 kW grid-tied PV system is being monitored and posting data. You can see current [statistics and live power production](#) reports.

"We now have over 2 MW installed," said Tripp.

Photo of Dr. Ricketts: Appeared in the 7/26/04 issue of The Record (V 13.02), by Ken Robinson
Photo of Cleveland State Community College PV System: Tom Tripp

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