Professor Drives Coast to Coast on Fewer Than 10 Gallons of Gas
By Lisa Barbella
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Alternative energy expert Cliff Ricketts and a team of Middle Tennessee State University students will drive 2,532 miles using hydrogen, electric, ethanol and solar power.

An alternative-fuels expert is attempting to drive coast-to-coast this week using 10 gallons of gas or less.

Cliff Ricketts, an agriscience professor at Middle Tennessee State University, and his team of student technicians will make the 2,532 mile journey from Tybee Island, Ga., to Long Beach, Calif., using mostly solar, hydrogen, ethanol and electric power.

"We are showing the world that the research we are doing is real stuff," said Ricketts, 63.

Ricketts and his team began the trip March 3. They will use a 2005 Toyota Prius and a 1994 Toyota Tercel, both fueled by solar power and hydrogen from water, to complete the first 916 miles of the trip.

The team will switch from two cars to one, a plug-in hybrid 2007 Toyota Prius, in Fort Smith, Ark. They will use E95, a mixture of 95 percent ethanol and 5 percent gas, and electricity to drive the final 1,615 miles to Long Beach.

They planned to switch to the 2007 Prius because mobile hydrogen fuel cells were not available to refuel the 2005 Prius and the Tercel.

“The advantage of using multiple vehicles is that you can compare the fuel efficiency,” observed Robert Whittier, director of sustainability at Northwestern University, who was not involved in the road trip.

Although Ricketts’ stated objective is to use less than 10 gallons of gas, he has a more ambitious goal in mind.

“I wanted to try for 10 gallons so there would be less pressure,” said Ricketts. “But we are going to do it in under five gallons.”

Ricketts said testing alternative fuels over long distances is important because petroleum-based gas prices can be volatile.

“It is one of the most important things in the world, because if we had a crisis and gas went up to $10 a gallon we would shut down as a country,” he said.

The road trip may also ease drivers’ worries about alternative fuels performing over long distances, which is one of the barriers to consumers adopting the technology.

“One of the big issues is range-anxiety,” Whittier said. “There is all sorts of negative news about those challenges, but if the infrastructure of charging stations is put in place you can take care of those issues.”
It is important to differentiate between the types of alternative fuels being used and their overall impact on the environment, said Zachary Waickman, biodiesel lab manager at Loyola University Chicago.

“Understand that not all alternative fuels are created equal,” he said. “Electric cars are great but where is the electricity coming from? Coal plants.”

Corn ethanol doesn’t produce much energy compared with the energy needed to produce it and it uses a tremendous amount of water, he said.

“The water table throughout the Midwest, where this is produced, is dropping at record rates,” he said. “This is where we get our drinking water and we are using it at an unsustainable rate.”

Although the main purpose of the trip is to test alternative fuels and vehicles, Ricketts hopes it will also increase awareness about substitutes for petroleum-based gas in case of a shortage or price spike.

“I want to show America that there is a guy in Tennessee that has a system in place so we don’t have to panic,” he said.