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New Hydrogen Hybrid Bus Coming to Columbia *State-of-the-Art Dual Drive Battery Dominant Bus Appears at National Hydrogen Association Conference—Preview of Things to Come*

COLUMBIA, SC—(March 25, 2009) A brand new hydrogen-powered bus will be a star attraction at the National Hydrogen Association's *Conference and Hydrogen Expo* at Columbia's Metropolitan Visitors and Convention Center later this month. The bus and its state-of-the-art propulsion system will help bring Columbia to the forefront of the future fuels/alternative energy research.

The bus arrives in time for the conference and will be a showpiece at the Hydrogen Fueling Station Ribbon Cutting on Williams St. on Monday, March 30 at 1 pm.

Built with durable, lightweight carbon fiber, the 35-foot, 37-passenger "Hydrogen Hybrid Bus," uses new technology lithium titanate batteries to power an electric motor for propulsion. The batteries are recharged during operation by two onboard hydrogen fuel cells and a concept known as regenerative braking. Regenerative braking captures energy from deceleration that is typically lost as heat during braking and uses it to recharge the batteries when the bus is decelerating. The bus will be charged at the Central Midlands Regional Transit Authority (CMRTA) bus barn and refilled at the city's hydrogen refueling station.

While it will be appearing this month in Columbia, the new hybrid-electric bus will be put into commission later this summer here for further testing. Ultimately, the bus will service routes for CMRTA and the University of South Carolina (USC) bus fleets starting in fall of 2009. CMRTA will operate the bus on several routes in order to evaluate performance, reliability, and cost. USC's transit system will similarly employ the bus on its routes, shuttling students and faculty around campus. Part of a future fuels outreach and education program, the bus will also have a robust public events schedule where Midlands' residents can see the bus up close and ask questions about the science behind the ride.

Scientists and city planners hope to use the yearlong bus visit for validation, testing, and demonstration. They expect their research to significantly advance national goals for affordable, clean transit vehicles that are less dependent on foreign resources. The University's College of Engineering and Computing will assist the National Renewable Energy Laboratory (NREL) in collecting and analyzing data. The teams will be studying the bus performance as it pertains to power output, fuel cell life, fuel efficiency, and many other factors.

"We are grateful for the opportunity to have a rolling fuel cell power plant here in the hydrogen bus," said Dr. Tom Davis of the University's College of Chemical Engineering and leader of the Columbia Team. "We expect to learn a lot that will help us now, and into the future, as we discover, test, and prove out new and beneficial ways to improve fuel cell efficiency, interoperability, and other performance-related factors."

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The entire project is part of the National Fuel Cell Bus Technology Development Program (NFCBP) sponsored and funded by the Federal Transit Administration (FTA) and administered in the Southeast by Atlanta's Center for Transportation and the Environment (CTE).

“CTE is proud to work with these team members and is looking forward to setting a new national standard for fuel cell bus performance,” said CTE's Executive Director, Dan Raudebaugh. “We believe we can ultimately create a robust market for these technologies in the Southeastern United States and elsewhere.”

The Hydrogen Hybrid Bus is the first purpose-built, electric drive bus of its kind to be offered for mass transit use in the country, according to Dale Hill, Chairman and Chief Technical Officer of Proterra, the Colorado-based company that is building the bus.

A collaboration between USC, the city of Columbia, the S.C. Research Authority, and EngenuitySC, a regional economic development leadership group, is responsible for assembling the funds necessary to install a permanent hydrogen fueling station to support the bus as well as any future vehicles the teams are hoping to attract to Columbia. The fueling station was completed and commissioned at the end of February 2009. A ribbon cutting at the station will be part of the festivities opening up the National Hydrogen Association Conference.

The FTA Fuel Cell Bus Project represents a major element in the region's efforts to create a “Fuel Cell District” in downtown Columbia, where a wide array of hydrogen and fuel cell vehicles will be deployed with a vision of establishing Columbia as a world leader in developing viable, economic, and clean technologies to meet future energy demands and the national desire for greater energy independence.

After its year long run in the Capital City, the Hydrogen Hybrid Bus will move to more harsh conditions to test the fuel cell's viability in a variety of climates. It will either face cold, Northern winters in New Haven, Connecticut, or hot, Southwestern summers in Austin Texas it becomes part of another fleet for year two of the demonstration.

The NHA's *Conference and Hydrogen Expo* will be open to the public for one day, Wednesday, 1 April from 10 am to 5 pm. A full schedule of events can be found at www.hydrogenconference.org. For more information on the bus, visit www.hydrogenhybridbus.com or contact Jeff Ranta (803) 600-3091 or (803) 777-4614 or e-mail: jeff@mustardnrelish.com.

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