

Stark Area Regional Transit Authority (SARTA)  
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**\*\*\* For Immediate Release \*\*\***

**CONGRESSMAN JOHN BOCCIERI ANNOUNCES A JOINT RESEARCH AND DEVELOPMENT PARTNERSHIP BETWEEN STARK STATE COLLEGE OF TECHNOLOGY, AKRON UNIVERSITY AND SARTA**

**Research Focuses on SARTA's Hybrid Buses Purchased with Federal Funds**

Canton, Ohio – October 19, 2009 Congressman John Boccieri announced a joint research and development partnership between Stark State College of Technology, Akron University and SARTA to evaluate SARTA's new hybrid bus technology for fuel efficiency, particulate matter reduction, customer satisfaction, and cost comparison to biodiesel.

The joint research and development partnership seeks to:

- Develop a baseline emissions inventory for the entire SARTA fleet (CO<sub>2</sub>, PM, CH<sub>4</sub>, N<sub>2</sub>O).
- Identify SARTA fleet vehicles to use as comparison vehicles.
- Develop a baseline emissions inventory for the new hybrid vehicles.
- Analyze emissions and fuel efficiency by route, passenger load, and bus configuration.
- Determine the change in efficiency between hybrid and conventional fleet vehicles.
- Measure maintenance costs of conventional comparison vehicles and hybrid fleet vehicles.
- Determine overall cost effectiveness of the hybrid fleet vehicles versus the conventional comparison vehicles.

The results from the evaluation will allow SARTA to assess the fuel efficiency and cost-effectiveness of the technology. These results will be published in conjunction with the University of Akron and the Ohio Transportation Consortium.

SARTA's new hybrid diesel-electric buses combine diesel engines with battery-operated electric motors. The hybrid system uses regenerative braking to recoup energy lost during stopping; the energy is stored in a battery, and can be used later to power the electric motor. The electric motors on the vehicles put the buses in motion, and power them through lower speeds until the diesel engines engage. Then, every time a bus slows down to stop, the braking system recharges the battery packs.

**Benefits of using diesel-electric hybrid buses are a reduction of greenhouse gas (GHG), reducing particulate matter emissions, and improving fuel economy.**

**Reduction of greenhouse gas**

The batteries cut down on the pollutants emitted from tailpipes. Generally, diesel-electric hybrids buses produce about 90% less soot.

**Reducing particulate matter emissions**

Hybrids buses lower levels of nitrogen oxide, particulate, hydrocarbon, and carbon monoxide emissions.

**Improving fuel economy**

The buses are estimated to provide a 25% to 30% reduction in fuel based on the efficiencies of the electric motor.

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