



Greater Long Island Clean Cities Coalition 15th Annual Advancing the Choice Conference

“Alternative Fuels Today – For a Greener Tomorrow”

October 14, 2011

ADVANCED ENERGY

RESEARCH AND TECHNOLOGY CENTER



Stony Brook University Division of Facilities & Services Department of Transportation & Parking Operations



- **SBU Transit**
- **Parking Operations (including Garages)**
- **Vehicle Fleet Management**
- **University Signage**
- **Central Stores Warehouse Operations**
- **Recycling & Resource Management**



ADVANCED ENERGY

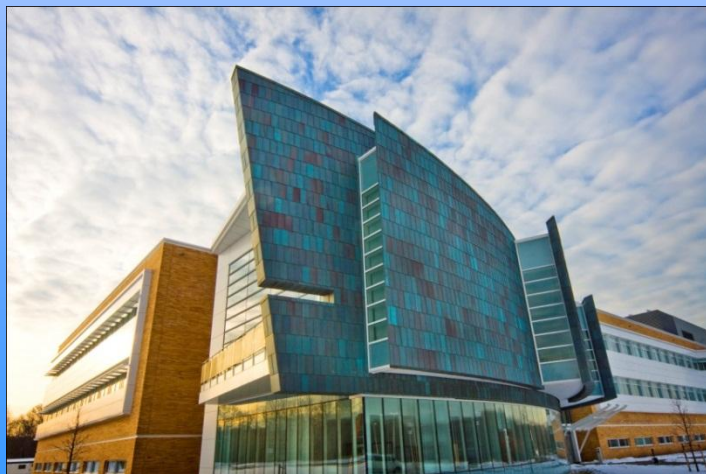
RESEARCH AND TECHNOLOGY CENTER



Advanced Energy Research & Technology Center



Center of Excellence in Wireless & Information Technology





Petroleum Consumption Reduction Initiatives Clean Air Hybrid Vehicles

(1) Plug-In Hybrid Electric Bus

Odyne / GLICCC Vehicle, Serviced by ElectroMotive Designs



(1) Gasoline Hybrid Shuttle

Ford E450, Hybrid Conversion by ElectroMotive Designs





SBU TRANSIT

TRAVEL WITH THE PACK

Petroleum Consumption Reduction Initiatives Clean Air Hybrid Vehicles

(1) Diesel Hybrid Shuttle

Freightliner M2 Diesel Hybrid by Eaton Power Systems



(1) Alternative Fuel Vehicle – Vegetable Oil Powered “The Kernel” In Warm Months, Powered By Used Oil From SBU Dining Halls





Petroleum Consumption Reduction Initiatives Clean Air Hybrid Vehicles

(10) 2010-11 Clean Diesel EPA 2010 Emissions Buses New Buses = 5-9% Improved Fuel Economy



(2) 2011 Gasoline Hybrid Sedans (Toyota Prius)





Petroleum Consumption Reduction Initiatives Clean Air Electric / Hybrid Vehicles

(10) Global Electric Motorcars (GEM) & Miles Electric Cars



(2) Gasoline Hybrid SUV (Toyota Highlander)

(1) Gasoline Hybrid Sedan (Honda Accord)

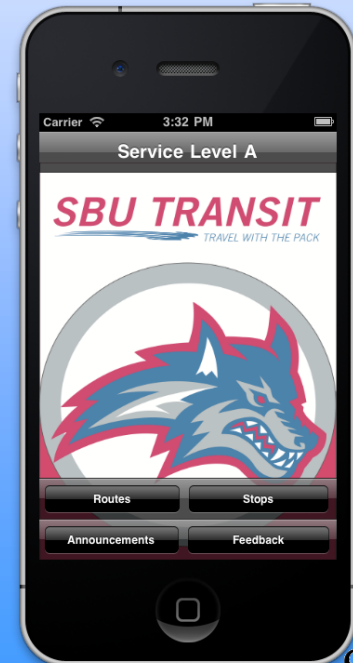
SBU Transit Fleet – Uses Ultra Low Sulfur (ULSD) Biodiesel B5



Petroleum Consumption Reduction Initiatives Student / Faculty / Staff Collaboration Projects



- Transportation Demand Management – Increase Route Efficiency
- Goal to Limit / Decrease Petroleum Consumption & Increase Communication

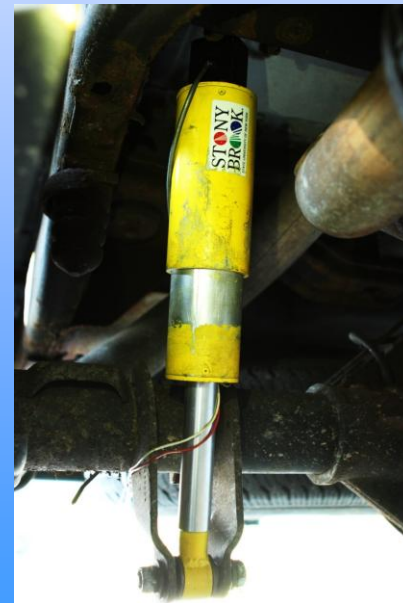




Petroleum Consumption Reduction Initiatives Student / Faculty / Staff Collaboration Projects

Energy Harvesting Shock Absorber

- Electricity Generating Shock Absorber
- Trials Tested on SBU Vehicles
- Testing Yielded 2-8% Increase in Fuel Efficiency





Petroleum Consumption Reduction Initiatives Student / Faculty / Staff Collaboration Projects

Campus Bike Share Program

- Improving Accessibility to SBU's Bike Network
- Goal to Reduce Need for Vehicles On Campus
- Program Helps Minimize Carbon Footprint & Increase Sustainability





Petroleum Consumption Reduction Initiatives

Future Projects

- **Clean Air Hybrid Vehicles**

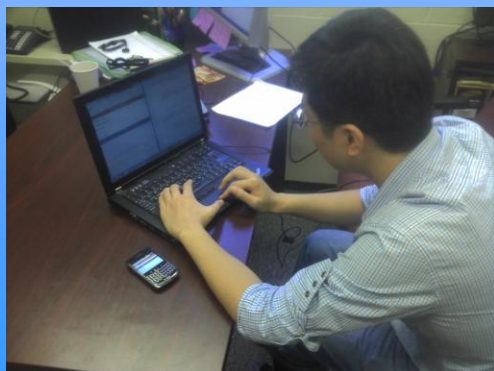
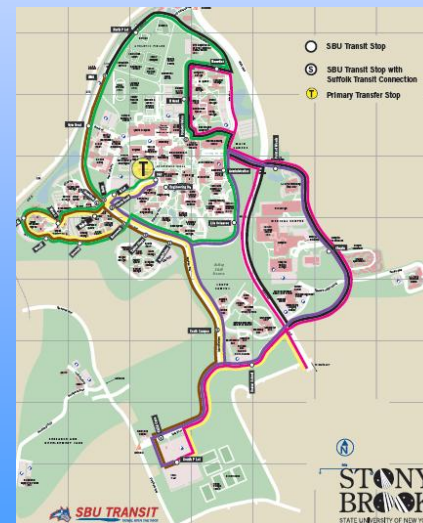
- (1) Gasoline Hybrid Shuttle
- (1) Diesel Hybrid Bus
- Additional Gasoline and/or Plug-In Hybrid Sedans (Toyota Prius)
- Hybridize and/or Electrify Additional SBU Fleet Vehicles (425 Vehicles In Total)



Petroleum Consumption Reduction Initiatives

Future Projects

- Further Deployment of Electric Vehicle Charging Stations
 - 16,000+ Parking Spaces on East / West Campuses
 - AERTC Currently Equipped w/Stations
- Continued Petroleum Reduction Initiatives
 - SBU Transit
 - Parking Operations
 - Recycling & Resource Management
- Student / Faculty / Staff Collaborations
 - Alternative Fuel Vehicle(s)



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Greater Long Island



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- **Commitment to Reduce Petroleum Consumption**
- **Economic Climate Requires Unique Approaches**

www.aertc.org

www.stonybrook.edu/transportation