

Hybrid/Electric Bus

General Description:

A hybrid electric bus is a form of bus that uses hybrid electric vehicle technology for propulsion, instead of the conventional diesel engine. They are typically larger bus-sized vehicles and create significantly less pollution than other forms of transit.

At low speed the hybrid/electric bus is largely electrically driven while, at medium speeds it is a blend of mechanical and electric, and at high speeds it is mostly mechanical. Electric power is provided by the battery pack, and this is charged by the hybrid drive motors acting as generators while the bus is decelerating or braking. Use of the hybrid drive improves fuel economy compared to straight diesel, and reduces emissions because the electric drive is taking over part of the propulsion duties of the diesel engine.

Effects of Solution:

- Increase Passenger Mobility
- Increase Roadway Capacity
- Manage System Efficiency
- Reduce Local Demand (reduces vehicular demand)

Costs/Financial Information:

Costs will vary depending upon the size of vehicle.

- Hybrid/Electric Bus - \$500,000

Additional Resources:

- United States Department of Energy Clean Cities Program
www.eere.energy.gov/cleancities
- Design Guidelines for Bus Transit Systems Using Electric and Hybrid Electric Propulsion
transit-safety.volpe.dot.gov/publications/cleanair/DesignGuidelines/HTML/designguidelines.htm

