

Propane & Biodiesel
Pupil Transportation Workshop

Prince George's Sports &
Learning Complex
Landover, MD

May 25, 2017

Ira H. Dorfman

Executive Director

**Greater Washington Region
Clean Cities Coalition**



One of approximately 100 Clean Cities Coalitions designated by the US Department of Energy

Jurisdiction includes Northern Virginia, the District of Columbia and Maryland

Primary objective is to promote the use of domestic, clean transportation fuels other than gasoline and diesel fuel



Key Stakeholders include:

- ★ Metropolitan Washington Council of Governments
- ★ DC Department of Public Works ★ Natural Gas Vehicles of America
- ★ Propane Education and Research Council
- ★ Electric Drive Transportation Association ★ National Biodiesel Board
- ★ Washington Gas ★ PEPCO ★ DC Water & Sewer Authority
- ★ Washington Area New Automobile Dealers Association
- ★ County & Local Governments ★ Public and Private Companies
- ★ Individual Activists

Why Clean Pupil Transportation Technology is Important



Operation of dirty, noisy school buses adversely affect the enjoyment of open spaces



Concern for the environment



Safe, healthy surroundings at school as well as home for our children



Saving money

Propane, Natural Gas, Electric
and Biodiesel School Buses
to Reduce Both Emissions and
Noise and Save in Fuel Costs



The Long Road to Safer School Buses

A landmark NRDC study showed that standard-issue ***diesel-spewing school buses could put kids at risk of cancer***—and drove a national effort to clean the vehicles up.

Other studies confirmed that diesel exhaust was not just a problem at the tailpipe – that the concentration of fumes was higher *inside* the bus than outside of it.



Propane School Buses



Propane School Buses Gaining Broader Acceptance

- OEMs now offer propane school buses
- State incentives available to reduce initial cost of ownership
- Affordable infrastructure
- Cost savings in maintenance and fuel relative to diesel
- Environmental benefits including reduction in fine particulate matter and significantly quieter operation

Resources:

<http://www.propane.com/on-road-fleets/case-studies-and-fact-sheets/case-studies/school-transportation/>

<http://www.afdc.energy.gov/uploads/publication/case-study-propane-school-bus-fleets.pdf>



Natural Gas School Buses



Natural Gas School Buses Widely Utilized

- OEM availability including the new near-zero NOx reduction engine
- State incentives available to reduce initial cost of ownership
- Infrastructure often the biggest challenge to adoption
- Cost savings in maintenance, low fuel cost and price stability relative to diesel
- Significant environmental benefits, quieter operation

Resources:

<http://www.afdc.energy.gov/case>



Electric School Buses



Electric School Buses Now Part of the Conversation

- Lion Bus has officially unveiled the eLion electric school bus, developed in partnership with the government of Québec and the California Governor's Office of Business and Economic Development
- Blue Bird has been awarded \$4.4 million by the US Department of Energy to develop an electric school bus featuring vehicle-to-grid (V2G) technology.
- Challenge is cost – currently \$225,000 each

Resources:

<http://stnonline.com/news/latest-news/item/8613-largest-us-electric-school-bus-pilot-comes-to-california>



Biodiesel School Buses



Biodiesel School Buses Easiest to Implement

- Easiest strategy to implement – requires no vehicle modifications or special fueling equipment
- Provides significant reduced emissions of carbon monoxide, particulate matter and unburned hydrocarbons
- In many regions, less costly than petroleum diesel fuel

Resources:

<http://biodiesel.org/using-biodiesel/market-segments/school-buses>



Thank You to Our Sponsors

THE NATIONAL
BIODIESEL
FOUNDATION



Ira H. Dorfman

iradorfman@gwrccc.org

202.671.1580

