

# CNG for Commercial Applications

UPS

9/29/2004

# Why Use Alternative Fuels?

- Politics - Dependence
- Reduce Vehicle Emissions
- Reduce Operating Costs

# History of Alternative Fuel Use

- 1930's - Electric Vehicles in New York City
- 1970's - Stratified Charged Engines/Multiple Fuels
- 1980's - Propane Vehicles
- 1990's - Compressed Natural Gas Vehicles

# Alternative Fuels - Today

- Operate over 1800 Alternative Fuel Vehicles (mix of conversions and OEM)
- LNG Tractors

# Alternative Fuel Truck Evaluation Project

- NREL Study
- Evaluate Economics of CNG vs Diesel
- Collect and Analyze Data on Emissions - CNG vs Diesel
- Collect and Analyze Data on Maintenance Cost

## Results of NREL Study - Fuel

- CNG fuel economy averaged 27% lower versus Diesel (gallon equivalent)
- Fuel consumption cost: \$0.107 for diesel - \$0.111 for CNG (per mile)

## Results of NREL Study - Maintenance Cost

- CNG averaged \$0.177 per mile versus Diesel \$0.167 per mile

# Emissions Test Results

- CO = CNG was 75% less than diesel
- NO<sub>x</sub> = CNG was 49% less than diesel
- PM = CNG was 95% less than diesel

# Conclusions and Comments

- Delivery Vans operate each day
- Minor complaints from drivers
- Technology has improved
- Many conversion companies - out of business
- On site fueling - expensive
- Fuel price has increased
- Supply/Demand - OEM reluctance

# Conclusions and Comments

- Get Supplier Commitment
- Sign CNG Contracts
- Explore Local and State Programs for Grants