Natural Gas Vehicles: Availability, Cost, and Benefits

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PRESENTATION OUTLINE

Public Policy Benefits of NGVs

- Clean, Healthy Air
  - NOx
  - CO
  - Toxics
  - VOCs
  - Particulate
- Climate Change
- Energy Dependence
  - Balance of trade
  - Jobs
  - Defense risks
  - Economic risks

Light Duty OEM NGVs—Model Year 1998

- Ford (800-ALT-FUEL)
  - Crown Victoria sedan (dedicated)
  - Contour/Mondeo sedan (bi-fuel)
  - Econoline vans (dedicated and bi-fuel)
  - F-series pickups (dedicated and bi-fuel)
  - Expedition SUV (dedicated)
- GM (888-GMAFT4U)
  - GMC/Chevy 2500 pickup (bi-fuel)
  - Chevy Cavalier sedan (bi-fuel)
- Honda (888-CCHONDA)
  - Civic Sedan (dedicated)

Light Duty OEM NGVs—Model Year 1999

- Chrysler
  - Mid-size van (dedicated)
  - Maxi-van (dedicated)
- Toyota
  - Camry sedan (dedicated)
- Volvo
  - S80 sedan (bi-fuel)
1999 EPA LEV Certified NGVs

- Chrysler: Dodge Ram Van/Wagon (dedicated): ULEV/ILEV*
- Ford: Crown Victoria sedan (dedicated): ULEV/ILEV
  Econoline vans (dedicated): ULEV/ILEV
  F-series pickups (dedicated): ULEV/ILEV
  Contour sedan (bi-fuel): LEV on CNG
  Econoline vans (bi-fuel): LEV on CNG
  F-series pickups (bi-fuel): LEV on CNG
- GM: GMC/Chevy pickup (bi-fuel): LEV on CNG*
  Chevy Cavalier sedan (bi-fuel): LEV on CNG*
- Honda: Civic GX (dedicated): ULEV/ILEV

* Certification in process

The World Wants NGVs

- Europe
  - Italy
  - England
  - Germany
- Asia/Pacific
  - Australia
  - Indonesia
  - Malaysia
  - Japan
  - Korea
- North America
  - Canada
  - Mexico
- South America
  - Venezuela
  - Argentina
  - Brazil
- Other
  - Egypt (Cairo)
  - Iran
  - Uzbekistan

Available Natural Gas Engines

- Caterpillar: 3126; C-10; C-12
- Cummins: B5.9; C8.3; L10G
- Deere Power Systems: 6.8L; 8.1L
- Detroit Diesel: 50G
- Mack: E7G
- TecoDrive/Crusader: 4.3L; 7.0L
1999 EPA LEV Natural Gas Engines

- Baytech:
  - Certified conversions for three engine families
  - Rated HP range: 177–122
  - LEV and ULEV
- Cummins:
  - Nine certified engine families
  - Rated HP range: 195–300
  - LEV and ULEV

More Truck Manufacturers Offer Natural Gas Models

- Freightliner
- Kenworth
- Peterbilt
- Mack
- Volvo GM
- Crane Carrier
- Athey
- Elgin
- Ottawa
- SISU

More Bus Manufacturers Offer Natural Gas Models

- Transit Buses
  - Orion
  - NeoPlan
  - El Dorado
  - North American Bus
  - New Flyer
  - NOVA
- School Buses
  - Blue Bird
  - Thomas Built
- Shuttles
  - El Dorado
  - Blue Bird
  - Champion
  - Goshen
  - Metrotrans
  - North American
  - Transit
  - Orion
Factors Making NGVs Less Expensive to Own and Operate

- Federal Incentives
- State Incentives
- RD&D
- Competition
- Economies of Scale