

What We Bought – What We Want to Buy



Fairfax County, VA

Department of Vehicle Services

December 13, 2007

Outline



- **Which fleets are likely to buy**
- **Challenges of a local government fleet**
- **What we've bought so far**
- **Why we bought those**
- **What we are looking for now**

What made us get interested



- **Air quality non-attainment**
 - Health and welfare of residents
 - Jeopardized transportation funds
- **Perceived leadership role**
- **Prior interest in alternative fuels**
- **Grant programs for emissions improvements**

Fleet makeup – 5500 vehicles



- **1500 school buses**
- **250 off-road pieces**
- **150 class 8 trucks**
- **200 Fire & Rescue pieces**
- **400 “Under 8” trucks**
- **3000 non-diesel vehicles**
- **[200 transit and 100 paratransit buses]**

School bus engine types



- **International T444E (436)**
- **Cummins 5.9 (188)**
- **International DT466 (139)**
- **Ford 6.6 (119)**
- **Caterpillar 3126 (81)**
- **Caterpillar 3208 (20)**
- **International 7.3 (19)**
- **International DT360A (6)**
- **Caterpillar 3116 (3)**
- **International T444E (ineligible for reflash) (2)**

Heavy duty truck engine types



- **Volvo VED 12 (17)**
- **Cummins ISM (17)**
- **DDC Series 60 (12)**
- **Cat 3126 (9)**
- **Volvo VE 7.3 (7)**
- **Int'l T444E (6)**
- **Cummins L10 (5)**
- **Ford FD1460 (4)**
- **MBE 9000 (2)**
- **Cummins NTC400 (2)**
- **Volvo VE275 (2)**
- **Cummins B5.9 (2)**
- **Caterpillar C10 (2)**
- **Caterpillar C12 (1)**
- **Cummins 3354 (1)**
- **DDC 12.9 (1)**
- **Ford FD1060 (1)**
- **Ford 210 (2)**
- **Ford 7.8 (1)**
- **Ford 8.3 (2)**
- **Int'l DT466 (2)**
- **Int'l D210F (1)**
- **Cummins ISB (1)**
- **Volvo 10.8 (1)**
- **Volvo 11L (1)**

What we've bought so far



- **School buses**

- Reprogram of ECM on eligible T444E engines; add DOC (NOx, PM) [436 buses]
- DOC on all others (HC, PM, CO) [576 buses]

- **Class 8 trucks**

- DOC only (HC, PM, CO) [113 trucks]

Why We Chose These –



- **Verified Technologies**
- **Adoptable by other fleets**
- **ECM Reflash**
 - NOx reduction
 - No continuing logistical burden
 - Tolerable cost
- **DOC**
 - HC reduction
 - No continuing logistical burden
 - Widely available, easily adaptable

Why We Passed Up Other Technologies –



- **DPF: Requires ULSD**
- **Fuel emulsion**
 - HC offset
 - Logistical burden
- **Fuel-borne catalyst, Cetane enhancers: Logistical burden**
- **Biodiesel**
 - NOx disbenefit
 - Logistical uncertainties

What We Want Now –



- **Given: Verified!**
- **NOx reduction (PM distant second)**
- **Cost effective (\$ per ton reduced)**
- **Low or no logistical burden**
- **Expandable and adaptable to other fleets**

Further information



- **Contract Administrator:**

Lander Napper

Lander.Napper@fairfaxcounty.gov

703-324-3276

- **Technical representative:**

Dave DuVal

Dave.Duval@fairfaxcounty.gov

703-324-3554