



# GENERAL SERVICES

## Energy Conservation Initiatives



# Property Service Management

P  
S  
M



# Facility Revolving Fund

- Safety, Security & Maintenance

- Building Status ( as of 6/30/2007 )

<u>Owned</u>	<u>Leased</u>	<u>Total</u>
158	367	525
5,677,921 sq. ft.	3,324,645 sq. ft.	9,002,566 sq. ft.

- Office and Office / Warehouse space

# FRF Utility Costs (FY07)



<u>Utility</u>	<u>Cost</u>
Electricity	\$12,492,320
Chilled Water	\$ 3,154,769
Steam	\$ 3,106,385
Natural Gas	\$ 2,226,876
Water & Sewer	<u>\$ 1,210,460</u>
<b>Total</b>	<b>\$22,190,810</b>
<b>FRF Square Footage</b>	<b>9,002,566</b>
<b>Utility Cost Per Sq. FT.</b>	<b>\$2.47</b>

# Immediate Improvements

- **Analyze Utility Monthly Usage**
- **Involve Building Tenants**
- **Teleconferencing**
- **Set Heating / Cooling Temperatures**
- **Replace Filters Regularly**
- **Manage Outside Air Dampers**
- **Confirm Adjustable Speed Drives Working**
- **Manage Window Coverings**
- **Inspect Control Schedules / Zones Regularly**
- **Protect Thermostats From Drafts**
- **Check Duck Work For Leaks**

# Immediate Improvements (cont.)

- **Replace Appliances With Highest Energy Rating**
- **Continue Installation OF Energy Management Systems**
- **Equipment / System Maintenance**
- **Multiple Chillers & Boilers**
- **Motors**
- **Utility Collaboration**
- **HVAC Scheduling**
- **Economizer Operations**
- **Variable Speed Drives**
- **Use Lower Wattage Bulbs**
- **Turn Off All Unnecessary Equipment**

# Fleet Management

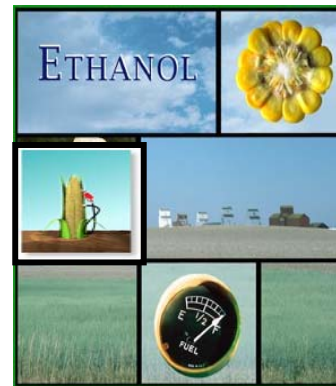


# Fleet Information

- **FFV's Purchased in FY 07/08 = 648**
- **Hybrid's Purchased in FY 07/08 = 15**
- **Total fleet Flex Fuel Vehicles = 1549**
- **Total fleet Hybrid's = 24**
- **650 estimated units are projected in the current replacement schedule for FY 08/09, of which 480 units qualify as FFV's or Hybrid's**

# BioFuels Presently Consumed by the State of Tennessee

- E85 – Ethanol



- B20 - Biodiesel



# **Tennessee BioFuels Station Totals for E85**

**East Tennessee – 4 locations  
Middle Tennessee – 9 locations  
West Tennessee – 0 locations**

**Total = 13 locations**

**Projected 5 locations under the TDOT  
Green Island Program**

# **Tennessee BioFuels Station Totals for B20**

**East Tennessee – 14 locations  
Middle Tennessee – 15 locations  
West Tennessee – 2 locations**

**Total = 31 locations**

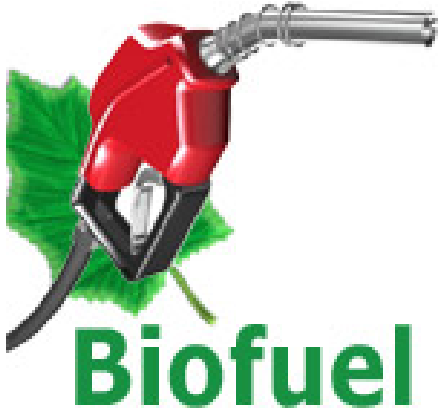
**Projected 12 locations under the TDOT Green  
Island Program**

# Jan. – Dec. 2007 Fuel Cost/Gallons

	Total Gallons	Total Cost
Unleaded	4,466,734.38	10,033,067.56
Diesel	365,967.74	849,999.61
Ethanol	9,023.89	22,511.12
Biodiesel	<u>25,194.05</u>	<u>64,887.19</u>
<b>TOTAL</b>	<b>4,866,920.06</b>	<b>\$10,970,465.48</b>

# Jan. – Apr. 2008 BioFuel Gallons Usage

<u>Fuel Type</u>	<u>Total Gallons</u>
Ethanol (E85)	7,348
Biodiesel (B20)	<u>10,223</u>
<b>TOTAL</b>	<b>17,571</b>



**Biofuel**

# Current 2008 State Cost per Gallons

<u>Fuel Type</u>	<u>Cost per Gallon</u>
Unleaded	3.15
Diesel	3.64
Ethanol (E85)	<u>2.62</u>
Biodiesel (B20)	\$3.88

# MVM Goals for 2008 (cont.)

- **Establish Statewide Contracts for BioFuels which will make BioFuels available for State owned facilities that have onsite fuel pumps/tanks:**
  - E10 Gasoline
  - E85 Gasoline
  - B20 Diesel



# MVM Goals for 2008 (cont.)

- **Synthetic Oil Products**
  - MVM has started the use of synthetic oil products to reduce oil consumption.
  - By using these products the State has extended the service intervals for the following vehicles:
    - Pursuit Vehicles from 3000 miles to 5000 miles.
    - Standard Gas Vehicles from 5000 miles to 7500 miles.