



# State Fleet and Alternative Fuels Policy

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## **This Presentation**

- ~ Who we are**
- ~ Petroleum Displacement Plan Overview**
- ~ Energy Policy Act Credit Banking & Selling Program**
- ~ State Fleet Activities**
- ~ Policy Recommendations-**



## Who are we? NC Solar Center

- Part of the College of Engineering at NC State University,
- Created in 1988 & serves as focal point for information, training, technical assistance deployment, demonstration and applied research
- Example programs: solar, wind, biomass, sustainable building, combined heat and power, and ***clean transportation***





# State Petroleum Displacement Plan

## Session Law 2005-276

- All State agencies, universities, and community colleges that have State-owned vehicle fleets shall develop and **implement plans to achieve a twenty percent (20%) reduction or displacement of the current petroleum products consumed by January 1, 2010.**
  - **Extended through FY 2011** in 2009
  - A State-owned vehicle fleet consists of more than 10 motor vehicles, designed for highway **EXCLUDES SCHOOL BUSES**
  - Specialty vehicles, that are used for educational or emergency purposes are subject to ten percent (10%) reductions.
  - Agencies report annually by September 1<sup>st</sup> to the State Energy Office on efforts undertaken to achieve the reductions with annual reporting by Nov 1 to the Joint Legislative Commission on Governmental Operations.



## State Vehicles in the '08-'09 PDP count

- Current total = 28,995

Vehicle Types	FY 2004-05 Baseline yr	FY 2008-09	
	#	#	% change
Gasoline	10,816	10,229	-6%
Hybrid	78	137	75%
Flex-fueled Vehicles	4,752	6,956	46%
Comp Natural Gas	14	9	-36%
Diesel	4,498	5,139	14%
Propane	192	145	-24%
Emergency/Ed (10%)	6,007	6,219	2%
Electric	13	161	1238%
<b>Total</b>	<b>26,370</b>	<b>28995</b>	<b>6%</b>

- Fleet increases since FY 04-05
  - FFVs: 2,204
  - Diesels: 641
  - Elec: 148
  - Hybrid: 59



## Success!!

- Total petroleum use in FY 2007-08 was 21.4M gallons of petroleum compared to (adjusted baseline) 26.1M gallons displacing 4.76 M gallons of petroleum. Goal was -17.5%, achieved -18.2% displacement.
- ✓ Fleet size is up 6% yet mileage is down by 2.7%
- ✓ 3.5 % was displaced through E10 use
- ✓ 4.3 % was displaced through biodiesel use
- ✓ 7.7% *may* have been through conservation and efficiency (reduced idling, observing speed limits, properly maintained tire pressure, use of more efficient vehicles)



## EPAct Credit Banking & Selling Program

- The Energy Policy Act (EPAct) State and Alternative Fuel Provider Rule requires state government and alternative fuel provider fleets that operate, lease, or control 50 or more light-duty vehicles (LDVs) within the United States to acquire alternative fuel vehicles (AFVs).
- Since 2001, as a covered fleet, 75% of North Carolina State Government new LDV acquisitions must be AFVs.
- In 2005 NC Legislation passed allowing state to sell excess EPAct credit earned through DOT use of B20 and MFM use of E85
- 2007 Ruel making process established an Alternative Fuel Revolving Fund for accruing and distributing funds
- On behalf of the State Energy Office the NCSC organizes meetings of the NC Alternative Fuel Consortium ( primarily state agencies & Clean Cities reps) & Credit Selling Work Group ( agencies that generate credit) to discuss and prioritize distribution of funds;
- Fund distribution is prioritized based on maximizing benefits to the State for the purchase of alternative fuel, related refueling infrastructure and AFV purchases;

## EPAct Credit Banking & Selling (cont'd)

- Tradable credits are accrued through the use of E85 in FFVs, NCDOT biodiesel credits help support EPAct requirements allowing for MFM to generate tradeable credits
- Credits were traded through a credit broker as well as direct sales
- 2009 CSWG agreement to split funds ½ between DOT & MFM.

EPAct Credit Banking & Selling Program	CREDITS*	Federal FY TRADES
FY 04-05 credits	365	
FY 05-06 credits	424	
FY 06-07 credits	291	
FY-07-08 credits	353	111
FY 08-09**	TBD	322
<b>TOTAL CREDITS</b>	<b>1433</b>	<b>433</b>
<b>BALANCE</b>	<b>1000</b>	
* based on state FY E85 fuel use tracking		
** SEO requesting extension on report to DOE		



## Credits sold/ funding distributed

Federal Fiscal Year	DEPOSITS	CREDITS
FY-07-08	\$425,580.00	429
FY-08-09	\$3,800.00	4
Interest	\$17,075.22	
total deposits	\$446,455.22	433

In Dec 2009

- an additional \$265,375 was deposited for the sale of 275 credits.
- \$223,228 AFRF monies were dispersed to DOT to construct 2 E85 dispensers in Marion and Asheboro



# Motor Fleet Management Update

- Did not purchase ANY new vehicles last year
- Currently has over 1800 vehicles with 90,000 miles with request to purchase: 915 FFVs, 50 HEVs & 490 gasoline only
- Would like to use \$223,000 from AFRF to offset HEVs incremental costs (estimated at \$6,000 ea)



## MFM Update continued

Would like an additional E85 station in  
Raleigh- possible state sites

- Dix HHS fuel site,
- Hwy Patrol, Old Garner Rd
- SBI, near Chapenoak

MFM is also encouraging drivers to fuel at  
14 commercial E85 stations across NC



## Recomendations

- **Cabinet and Executive Office support** will reinforce the importance of the PDP/ low carbon transportation. Establishing a state agency task force and incentive program to recognize exemplary efforts will support staff level efforts. Tie executive office involvement to existing Alternative Fuels Consortium
- **Update MFM rules to encourage conservation and expanded use of AFV and hybrid electric vehicles: ie-allow agencies to purchase their own HEVs, replace older less efficient vehicles even if they have lower mileage**
- **Require E10 and B20 use for agencies that operate their own fueling sites, and require agencies that do not operate their own sites to fuel at DOT sites (which all have E10 and B20).**



## Recomendations

- **Expand access to E85 refueling to provide for the state's E85-capable flex-fuel vehicles (FFVs) while earning Energy Policy Act credits that are being sold and deposited in the Alternative Fuel Revolving Fund (AFRF)**
- **Expand support for and revise the PDP.** Funding for a full-time PDP position will facilitate better PDP tracking and implementation among state agencies
- **Develop trial program to purchase biofuels produced in North Carolina and examine state purchasing contract to expand biofuel use- i.e require that all diesel be B5 on state contract**



## 2010 General Assembly –

### Short Session Recommendations for action on existing bills

- **Senate Bill 1066 Tax Credit for Alternative Fuel Facilities/Vehicles** Sponsors: Senators Albertson; Atwater, Davis, Dorsett, Goss, Jenkins, Kinnaid, Purcell, Stein, and Weinstein. Referred to Finance
- **House Bill 906 Alternative Fuel Infrastructure & Vehicle Tax Credit** Sponsors: Representatives Bryant, Harrison, Tolson (Primary Sponsors); Faison, Fisher, Glazier, Insko, Martin, McLawhorn, and Wray. Status: Favorable report from Energy and Energy Efficiency; now assigned to [Finance Committee](#).
- ***Summary: Provides a 30% tax credit for refueling infrastructure for biodiesel, ethanol (E85), propane, natural gas and electricity for motor vehicles.*** Sellers to tax exempt entities may take credit and presumably pass on benefit to purchaser.
- ***A \$2,000 tax credit is provided for vehicles that operate on natural gas, propane and electricity.*** Electric vehicles must be less than 14,000 pounds, charged from an external source and have a battery capacity no less than 4 kWh. Sellers to tax exempt entities may take credit and presumably pass on benefit to purchaser.



## H1079 Energy Efficient State Motor Fleet Sponsors

Harrison, Martin, Tillison, Samuelson. **Status: Ratified by 2009 General Assembly**

***Summary: Requires that every request for proposals for new passenger motor vehicles to be purchased by the Department to state a preference for vehicles that have a fuel economy for the new vehicle's model year that is in the top 15% of its class of comparable automobiles. Awards will be based on the Department's evaluation of the best value for the State, taking into account fuel economy ratings and life cycle cost that reasonably consider both projected fuel costs and acquisition costs. Requires that the Department report the number of new passenger motor vehicles that are purchased as required by, the savings or costs for the purchase of vehicles to comply with this sub-sub-subdivision, and the quantity and cost of fuel saved for the previous fiscal year on or before October 1 of each year to the Joint Legislative Commission on Governmental Operations and the Environmental Review Commission. Excludes vehicles used in law enforcement, emergency medical response, and firefighting.***



## NCSC/NCSU Clean Fuel Advanced Technology II ~ 2010-2012

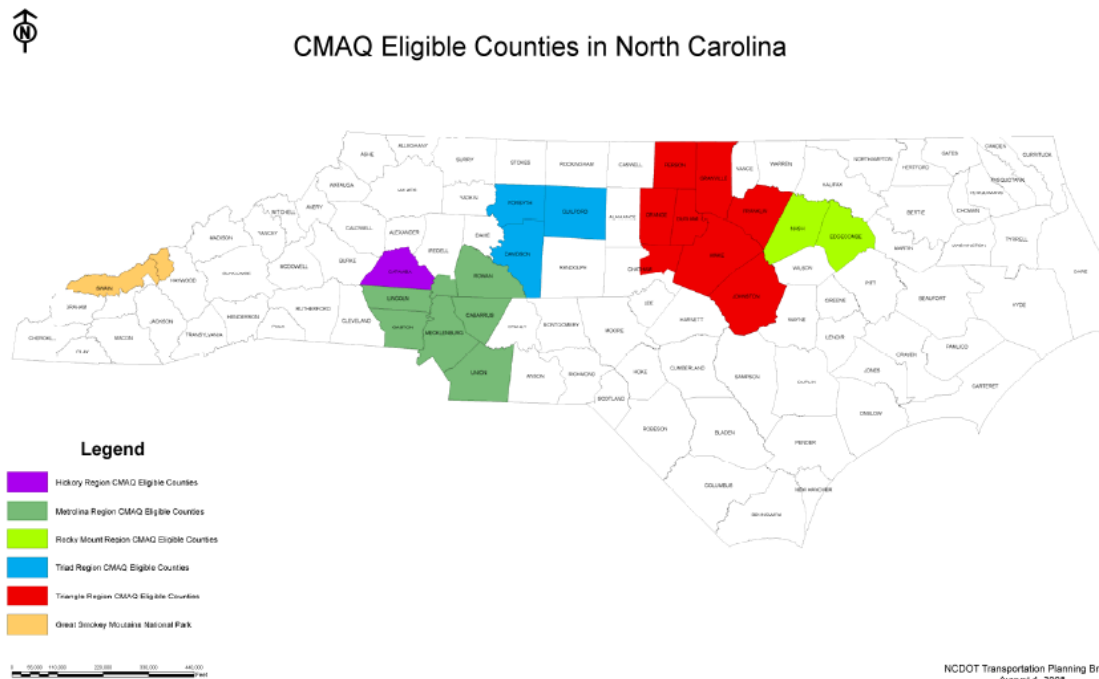
- \$1 M provided by NC DOT with an additional \$100,000 anticipated from SEO to support an additional 3 years of CFAT project
- \$700,000 currently available for emission reduction sub award grants through call for projects process ending March 15

More info: Funding at [www.cleantransportation.org](http://www.cleantransportation.org)



## NC Air Quality Non-Attainment Areas

- Cabarrus, Catawba, \*Chatham, Davidson, Davie, Durham, **Edgecombe**, Forsyth, **Franklin**, Gaston, **Granville**, Guilford, \* Haywood, \*Iredell, Johnston, Lincoln, Mecklenburg, **Nash**, Orange, **Person**, Rowan, \*Swain, Union, Wake.
- \* Represents partial counties.





## Eligibility

- **All public and private sector entities (no individuals)**

- **Public sector fleets**: Up to 80% of an AFV purchase price is eligible for funding.

Additional cost share strongly encouraged for NEVs and HEVs

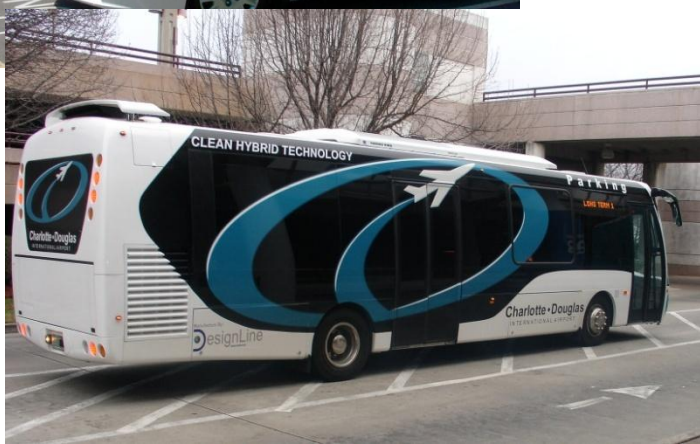
- **Private sector fleets**: Up to 80% of the **incremental costs** of purchasing AFVs are eligible. Incremental cost considered to be the difference between an AFV and a comparable new gasoline or diesel-powered vehicle.
- **Refueling Infrastructure, diesel retrofits and Idle Reduction Technologies public and private entities eligible for up to 80% of total project costs**



## Eligible CFAT Projects~ AFVs & Hybrids

Up to 80% of cost of:

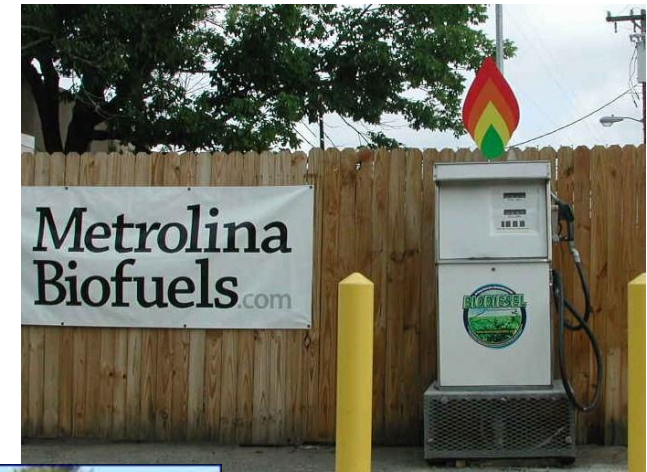
- ✓ Alternative fuel vehicles (natural gas, propane, electric)
- ✓ Hybrid vehicles (heavy duty & passenger)





## Eligible Projects ~ Refueling Infrastructure, Idle Reduction & Diesel Retrofits

- ✓ Refueling infrastructure (E85, Biodiesel (B20 or greater), natural gas, propane & electricity)
- ✓ Idle reduction (auxiliary power units & truck stop electrification)
- ✓ Diesel retrofits (particulate filters, oxidation catalysts, crank case ventilation systems)





## Project Requirements

- A minimum of 20% cost share ( based on total project costs)
- Rebate Program- successful applicants must expend funds first and will receive reimbursement
- Emission reductions- NCSC will evaluate potential emission reductions based on applicant info. Awardees will be required to track fuel/technology use for 12 mos
- Location- Emissions benefits must accrue to an eligible region



## Partnerships Are Important

- CFAT 2012-2012 is sponsored by NC DOT ( \$1M) with an addition \$100,000 provided by State Energy Office
- NC Solar Center/NCSU subcontracts with Triangle J and Centralina Council of Govt's/Clean Cities programs for education and outreach
- Informal partnerships with other COGs and regional Air Awareness program
- Project grant recipients will also contribute significantly. While only 20% cost share was required on average 40% of total project costs was contributed by CFAT 2006-2009 emission reduction grant recipients



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## Questions & Comments?

