



**TRIAD Mobile C.A.R.E. partnership meeting**  
**Wednesday January 14, 2009**  
**10:00 am to 12:00 noon**  
**Forsyth County Environmental Affairs Dept.**  
**537 N. Spruce St**  
**Winston-Salem, NC 27101**

In attendance:

Mr. Sandy Barfoot	Fleet Services, City of Winston-Salem	<a href="mailto:sandyb@cityofws.org">sandyb@cityofws.org</a>
Mr. Rick Bevain	White's International Trucks	<a href="mailto:BB@whitetractor.com">BB@whitetractor.com</a>
Ms. Ginger Booker	Piedmont TRIAD COG	<a href="mailto:gbooker@ptcog.org">gbooker@ptcog.org</a>
Mr. Arthur Busch	TRIAD Electric Vehicle Assoc	<a href="mailto:a24lbusch@embarqmail.com">a24lbusch@embarqmail.com</a>
Ms. Bonnie Clark	BonZoni Enterprises	<a href="mailto:bonniedclark@gmail.com">bonniedclark@gmail.com</a>
Ms. Chelsea Conover	NC Solar Center	<a href="mailto:Chelsea_conover@ncsu.edu">Chelsea_conover@ncsu.edu</a>
Ms. Lorelei Elkins	TRIAD Air Awareness	<a href="mailto:elkinslt@forsyth.cc">elkinslt@forsyth.cc</a>
Mr. Dave Harris	Piedmont TRIAD COG	<a href="mailto:Dharris@ptcog.org">Dharris@ptcog.org</a>
Ms. Sally Hirsh	Temple Emanuel	<a href="mailto:alnsalnjo@earthlink.net">alnsalnjo@earthlink.net</a>
Mr. Greg Jones	Blossman Gas	<a href="mailto:gjones@blossmangas.com">gjones@blossmangas.com</a>
Mr. Dave Navey	Charlotte Truck Center	<a href="mailto:dnavey@charlottetruckcenter.com">dnavey@charlottetruckcenter.com</a>
Mr. Par Neiburger	Altech-Eco	<a href="mailto:par@transecoenergy.com">par@transecoenergy.com</a>
Mr. Joseph O'Neill	NC Solar Center	<a href="mailto:joseph_oneill@ncsu.edu">joseph_oneill@ncsu.edu</a>
Mr. Chris Payne	City of Greensboro	<a href="mailto:chris.payne@greensboro.nc.gov">chris.payne@greensboro.nc.gov</a>
Mr. Gary Pellet	TRIAD Elec. Vehicle Assoc.	<a href="mailto:gpellet@triad.rr.com">gpellet@triad.rr.com</a>
Mr. Hoyte Phifer	Physical Plant, UNC-Greensboro	<a href="mailto:hdphifer@uncg.edu">hdphifer@uncg.edu</a>
Mr. Jack Phillips	Fleet Mgrn.City of Kannapolis	<a href="mailto:jphillips@ci.kannapolis.nc.us">jphillips@ci.kannapolis.nc.us</a>
Mr. Pat Reagan	TRIAD Air Awareness	<a href="mailto:reaganpa@forsyth.cc">reaganpa@forsyth.cc</a>
Mr. Randy Rogers	Facilities, City of Winston-Salem	<a href="mailto:randyr@cityofws.org">randyr@cityofws.org</a>
Mr. Steve Simpson	Manager, Equip. Services, City of Greensboro	<a href="mailto:steve.simpson@greensboro-nc.gov">steve.simpson@greensboro-nc.gov</a>
Mr. John Snoke	VP Sales, FLEET Biodiesel	<a href="mailto:JSnoke@FleetBiodiesel.com">JSnoke@FleetBiodiesel.com</a>
Ms. Anne Tazewell	NC Solar Center	<a href="mailto:anne_tazewell@ncsu.edu">anne_tazewell@ncsu.edu</a>
Ms. Gayle Tuch	Gayle Goldman Tuch, PC	<a href="mailto:gttuch@yahoo.com">gttuch@yahoo.com</a>

**Minutes of our meeting**

Our meeting began with Anne Tazewell introducing our first speaker:

**Mr. John Snoke**- representing Fleet Biodiesel, offering field test kits for biodiesel fuel. John's presentation highlighted:

The 'Fear Factor' of using alternate fuel. With biodiesel there are stories, anecdotes of problems. John passed around clogged diesel fuel filters as examples of fuel quality problems. Even good quality biodiesel poses challenges because the good quality (biodegradable) is also a bad quality (..degradable)

For fuel blending (for instance to produce B20) Injection blending is best- where fuel is blended precisely (80% diesel with 20% biodiesel to produce B20) yet, splash blending is more common- fill 80% of a tank with diesel and 20% with biodiesel and hope it blends as the tanker rolls down the road. The possibility exists that the blend delivered to the station or dispensing point, and ultimately- the user will not be consistent. Instead of all getting B20- some get B70, some get B2, and some get everything in between. Good Quality biodiesel

should be consistent. Even good quality biodiesel degrades over time. The risks to biofuel quality are: time, turnover, poor blending, poor storage or transport.

Bulk deliveries are accompanied with a certificate of fuel specification but that document may not refer to the particular batch of fuel being delivered.

As a means to check on fuel quality before it is used John shows three easily portable test kits for testing biodiesel quality

1. Water contamination test- in 10 to 15 seconds if fuel added to this small vial turns RED it indicates too much water is present
2. Acid Test: to indicate the level of fatty acid clots within fuel- fuel in test vial: PINK is OK, Cloudy WHITE is bad; Dilution of fuel with fresh #2 is the quick cure.
3. Percentage of biodiesel test kit: a 'threshold' indicator kit. The kit is not intended as a carefully calibrated identification but rather a quick means of determining: is this fuel "at least\_\_%, more than\_\_%, or 100% biodiesel. The % threshold amount as predetermined by the customer. This is a check to assure a biofuel type is not mistakenly delivered for an incorrect application. If all is OK-fuel will stratify in layers; too high a %- fuel looks coagulated with junk floating in it; B100 will be indicated by an almost solid white paste in the vial.

Since the 'Safe Zone' for biodiesel use is typically considered B20 or less many vehicle users are confident using that blend or lower expecting no operational issues. *A question was posed: "does biofuel use affect warranty coverage?"- NO, using 'quality fuel' no matter whether petro or bio based cannot negate manufacturer's warranty coverage.*

Second presenter: **Par Neiburger** from Altech-Eco Corp.

Their newest product is an EPA certified Compressed Natural Gas (CNG) conversion applicable to 2008 and 2009 model 4 cylinder Ford Focus automobile. It is available as dedicated (CNG only) or bi-fuel (can use CNG or gasoline)

Highlights of Par's presentation: his company is NC based and offers Research & Development as well as conversions for CNG. Other divisions of Trans Eco Energy own and operate CNG stations, build 'turn-key' CNG stations, and acquire and manage land for CNG station placement. They offer CNG conversion of Heavy Duty trucks using the Cummins Westport CNG engine (built in Rocky Mount, NC)

CNG: volume is measured in Gasoline Gallon Equivalent or GGE meaning the dispensed GGE has the same BTU content as a gallon of gasoline. Worldwide there are over 7 million vehicles using CNG. In the U.S. only about 150,000. CNG is cheaper than gasoline, typically 25% to 40% less than fuel from crude oil. It is abundant and 98% of our supply comes from North America. It is a fossil fuel but also potentially a renewable, as bio-methane can be blended in. CNG combustion results in Greenhouse gas emissions about 23% lower than diesel and 30% lower than gasoline. The only Original Equipment Manufacturer (OEM) producing a CNG vehicle for the U.S. market is Honda with the Civic GX. This vehicle is in short supply and limited production. Therefore the market exists for a similar vehicle than can use CNG.

Simply converting a vehicle to run on CNG does not assure cleanliness of emissions. Emissions systems on modern cars are complex and adjusted to work with a specified fuel. Tampering with a vehicle is a violation of memorandum 1A in the Clean Air Act. Simply converting a car to run on CNG is illegal. An aftermarket converter of a vehicle must certify the modification with the EPA. A complying emission modification is issued a Certificate of Conformity. This is a lengthy and expensive process.

The Altech-Eco conversion for the Focus is applicable to the Ford 'engine family' used in both 2008 and 2009 model Focus. It is EPA certified as Tier 2, BIN 4 emissions.

There is an 80K miles warranty on all CNG components. This vehicle is sold, financed, services through the regular Ford dealership network. Altech-Eco trains those dealers who wish to sell the CNG version.

The up-charge for the CNG is about \$8,000 placing the retail price of a CNG equipped Focus less than a Honda Civic GX. IRS tax credit of \$2,500 is available to purchasers of the dedicated CNG Ford Focus (for tax paying entities). This is less than the \$4,000 available on the Civic GX. *WHY? a 'deterioration factor' of the emission system based on a car having 120K miles is part of the EPA emissions equation. OEM's have the capability of setting this factor (seemingly because they have extensively tested their vehicle and can determine this number through actual use or degradation testing). Aftermarket mfg's have neither the time nor financial resources to 'use up' a converted vehicle. Their degradation factor is set by EPA. The Civic GX is BIN 2; Focus with CNG is called BIN 4 because the degradation factor cannot be proven. Therefore it gets lower IRS credit.* The bi-fuel version is not eligible for the tax credit.

Par had a demonstration Focus available for viewing and testing after the meeting.

**Anne Tazewell** announced:

- NC MobileCARE Award nominations are open for 2009. Anyone wishing to nominate a person or organization that has done work worthy of praise may go to [www.cleantransportation.org](http://www.cleantransportation.org) or [www.ncmobilecare.org](http://www.ncmobilecare.org) to download a nomination form.
- There will be a "Roundtable on Sustainable Biofuels" (RSB southeast stakeholders meeting) at 100 Capitola Dr, Suite 100, Durham on Jan 28 at. This full day event has a global focus. Participants are welcome to contact Matt Rudolf [matthew.rudolf@epfl.ch](mailto:matthew.rudolf@epfl.ch) for more details.
- Driving Clean & Green is being planned for April 15 and 16, 2009. This event will showcase alternatively fueled and advanced technology vehicles. Begins at the State Energy Office's 6<sup>th</sup> annual conference [www.energync.net](http://www.energync.net) in Raleigh, continues with celebrity drivers leading the tour to Greensboro and Charlotte. More detail at [www.ncmobilecare.org](http://www.ncmobilecare.org)
- A conference on Electrifying Transportation is being planned for May 27, 2009 see: [www.electrifync.com](http://www.electrifync.com)

**Arthur Busch** from the Triad EV Association took a moment to tell us about his Alt-fuel themed music. He has written and self-produced five songs that allude to electric vehicles and alternative fuels.

**Reminders** from the Agenda:

- January 20, 2009 **1:00-3:00** Triangle Clean Cities Policy committee conference call to discuss alternative fuel/advanced transportation technology priorities for NC Legislative. Call in 919-515-7150 RSVP to [anne\\_tazewell@ncsu.edu](mailto:anne_tazewell@ncsu.edu)
- February 9-10 Emerging Issues Forum, Raleigh "Building the Good Growth State" [www.emergingissues.org](http://www.emergingissues.org)
- Feb 11 & 12 Southeast Diesel Collaborative 2009 Grant Application workshop ( learn about federal funding for diesel emission reductions no charge) <http://www.southeastdiesel.org/>

**Reminders on funding opportunities:**

- US Department of Energy, National Energy Technology Laboratory Clean Cities FY 09 Petroleum Reduction Technologies Projects for Transportation Sector. Applications due Feb 27<sup>th</sup> Areas of Interest: (1) Refueling Infrastructure for E85 and Other Alternative Fuels, DE-PS26-09NT01236-01; (2) Incremental Cost of Dedicated Alternative Fuel Vehicles, DE-PS26-09NT01236-02; and (3) Education/Outreach and Workshops for Petroleum Reduction Fuels and Technologies, DE-PS2609NT01236-03. Anticipated federal funds for fiscal year 2009 are estimated at \$3 million. Announcement on [Grants.gov](http://Grants.gov), refer to specific Funding Opportunity Nos. DE-PS26-09NT01236-01, DE-PS26-09NT01236-02, and DE-PS26-09NT01236-03.
- U.S. Environmental Protection Agency, Community Action for a Renewed Environment (CARE) program~ \$3M to support community-based partnerships to reduce pollution at the local level. Applications due: March 16,2009  
<http://www.epa.gov/CARE/>