



## September 25, 2014 Stakeholder Meeting Notes

- I. Welcome and Introductions** Brennan Bouma, Assistant Coordinator  
Brennan Bouma welcomed the group and went over the agenda. Triangle Clean Cities Coordinator Lacey Jane Wolfe is attending the Southeast Vehicle Collaborative.

**Attendees:**

Brennan Bouma, Triangle Clean Cities Coalition  
Sarah Bruce, Triangle Clean Cities Coalition  
Joe O'Neill, Piedmont Natural Gas  
Katie Drye, Advanced Energy  
John Jessup, NC Propane Gas Association  
David Donahue, NC Propane Gas Association  
Jeff Thompson, Orange County  
Alan Dorman, Orange County  
Lyle Estill, Piedmont Biofuels  
Dick Sloane, Retired; Formerly NIEHS  
Elaine Loyack, Triangle Air Awareness  
Miguel Guerreiro, Blue Gas Marine, Inc.  
Timo Pakkala, Capital Ford  
Emily Fera, City of Fayetteville  
Emily Barrett, Town of Cary  
Joe Gordon, e-Energy Alternatives  
Steven Rice, NCDENR Division of Air Quality  
Michael Terreri, North Carolina Clean Energy Technology Center  
Belen Baca-Costa, SSI  
Carmalee Scarpitti, City of Raleigh

- II. Current Funding Opportunities** Steven Rice, NC Division of Air Quality  
Mike Terreri, NC Clean Energy Technology Center

Steven Rice updated the group on current funding opportunities. Diesel Emission Reduction Grant (DERG) applications must be received or postmarked by Dec 7. \$250,000 is available (2–5 projects are usually funded). Counties eligible are the same as CFAT; however, diesel-related projects may be eligible in additional counties. To ensure that the diesel engine is not repurposed/does not remain in service, the engine needs to be destroyed and the chassis cut. Steven Rice also did some case studies this past summer on DERG funding, which included two airports; a Fayetteville recycling company; and a Durham refuse truck.

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Rick Sapienza spoke regarding the \$1.3 million in [CFAT funding from NCSU via DOT](#); applications are due Nov. 3; emissions estimates and committee review and notification by December. NCCETC is accepting applications electronically for any project that reduces emissions on public roads. Electric charging station projects may be anywhere in NC; other projects must be in the 24 eligible counties. Fuel diversity and geographic diversity are considered.

### III. **Electric Vehicle Market and Infrastructure Updates** Katie Drye, Advanced Energy

Katie Drye presented on the NC Plug-In Electric Vehicle Task Force DC Fast Charge Deployment Efforts. EV sales data from DOT indicate that sales are steadily increasing in NC, mirroring the increase nationally. In 2014, there are 230,000 vehicles registered, and states with more incentives have higher sales. For example, Georgia sales of the LEAF are the highest in the country; they offer \$5,000 from the state plus free HOT/HOV lane access in addition to the \$7500 federal incentive on EV purchases).

Other states are increasing their incentives; 10 states are working on an MOA to streamline codes and incentives to boost EV registrations. The Electric Drive Transportation Association is producing information on sales and models in a variety of useful formats (e.g., infographics). Currently, there are 22 passenger electric vehicles available in dealerships in the US. In NC, at least 9 are available for purchase.

The group discussed specifications in the state contract for EVs. NCCETC (Marcy Bauer) is working to ensure that several alt-fuel vehicle options are included in the list of vehicles available for purchase. (Local governments are encouraged and some have requirements to use the state contract list to obtain vehicles as their prices are often significantly reduced due to the bulk purchase agreements.)

Recently, fast-charge stations have been popping up around the Triangle. There are now 4, and currently they are free and open to the public. "Plugshare" is a useful EV charging station locator.

Charging stations are being put in through an Advanced Energy program via an OEM competitive bid for host sites to submit applications. The requirement for an EV fast-charge station was that it was available to the public. The first round was put in through federal grants; now, private industry is increasingly installing them (e.g., Nissan "no charge to charge" program, Tesla superchargers, BMW partnership with Bosch for DC fast-charge stations).

It doesn't look like there will be a uniform standard for connectors anytime soon; DC fast charge stations are installing both SAE Combo and CHAdeMo ports now.

OEM deployment of fast charge stations has focused on strategic placements along major highways and travel corridors.

Last year, the NC PEV Task Force Infrastructure Working Group released an addendum to the NC PEV Readiness Plan with criteria, recommendations, and scenarios related to DC fast charging. This year, the annual NC PEV Task Force Summit will be held in conjunction with the Southeast Alternative Fuels Conference to get NC stakeholder feedback on DCFC station locations, etc. There will also be a multistate Clean Cities Coordinators panel session on connecting Southeast corridors and destinations.

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Workplace charging is a positive and negative concern for consumers, with some arguing against charging station installation as that amounts to preferentially providing fuel to EV drivers but not to gasoline-fueled vehicle drivers. Timo Pakkala asked if word was getting out to workplaces to get them involved in meeting the need and consumers' interest. Rick Sapienza said that the NCCETC was definitely working on this and encouraged Clean Cities Stakeholders to get involved. Katie Drye mentioned that the grant was being heavily publicized but that additional publicity help was needed. Elaine Loyack asked if information could be given to potential purchasers could help pressure their employers. Timo Pakkala clarified that he's wanting to promote more directly to workplaces.

The group discussed repositories for information on vehicle specifications:

- [GoElectricDrive virtual showroom](#)
- [Clean Cities 2014 Vehicle Buyer's Guide](#)
- [AFDC Vehicle Search and Comparison Tool](#)

Also, UC-Davis has an ["EV Explorer" web tool](#) that lets consumers explore costs with driving electric based on where they live and work and what EV they might want to drive.

Orange County is interested in payment plans for public charging stations since public entities cannot resell electricity and, at some point, once demand rises, free charging won't be cost feasible. The question of whether a viable business model can be developed is being debated. Brennan Bouma mentioned the City of Raleigh model of charging for the parking space. Ostensibly, this spot is restricted to only EVs, but unfortunately, signage is difficult for drivers to see and EV drivers sometimes get "ICEd out." There is an applet for drivers to see how the City of Raleigh's EV parking spots are being utilized; this may be useful to help Chapel Hill determine when the tipping point for restricting access to ONLY EVs is reached. Jeff Thompson is seeking assistance on this topic since officials are getting heat from non-EV drivers about the EV-restricted parking spaces.

Lyle Estill said the inability to sell electricity back was due to controversial regulatory commission policies. Katie Drye mentioned that an access fee or a fixed parking space fee can be charged to the driver. Magnetic swipe machines cost \$16 per station per month plus an additional charge for each transaction, so cost recovery is not very cost effective. Some public stations are seeing a *decrease* in use, since EV drivers can charge at home for cheaper.

National Drive Electric week was last week and Advanced Energy and Clean Cities Coalitions across the state organized and took part in several successful awareness events.

#### IV. First Responder Video Highlights and TCCC Coalition News

Sarah Bruce, TCCC Staff

Brennan Bouma, Assistant Coordinator

Sarah Bruce provided a brief overview of the newly available First Responder Training videos. As part of the American Recovery and Reinvestment Act, the U.S. Department of Energy funded the Carolina Blue Skies Initiative, which coordinated a series of trainings in North and South Carolina last fall. The trainings varied in duration, but all reviewed all the common alt fuels and vehicles and had vehicles onsite for first responders to examine.

The Raleigh training was a two-day event coordinated by the NC Clean Energy Technology Center taught by Rich Cregar, Department Head of Advanced Transportation Technologies at Wilson Community College. Video

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recordings courtesy of the NC Clean Energy Technology Center are accessible via the web at the NC Department of Insurance website under Videos at [http://www.ncdoi.com/OSFM/RPD/PT/Videos\\_Alternative\\_Fuels.aspx](http://www.ncdoi.com/OSFM/RPD/PT/Videos_Alternative_Fuels.aspx), and no registration is required to view them.

Brennan Bouma mentioned the contest to win a lease for a Nissan LEAF. It is associated with the NC Alternative Fuels Conference; however, conference attendance is not required to be eligible to win the lease.

#### V. Nominations and Voting for the next TCCC Vice-Chair

The TCCC asks two members to be chair and vice-chair each year. Jeff (chair) has served for a year, Marcy will become the chair, and there is an opening for a new vice-chair. Joe O'Neill, Timo Pakkala, and Emily Barrett were on the ballot for vice-chair.

The group voted, and Timo Pakkala will be the next vice-chair.

#### VI. Stakeholder Updates

Advanced Energy has put together a “lessons learned” document on DC fast charging.

Triangle Air Awareness is working on a teleworking toolkit. They are also offering free air quality education curricula for middle schools and high schools. Their End of Ozone Forecast Luncheon will be October 17 at RTP Foundation from 12–1:30 pm.

The group discussed the difference between measuring improvements in ambient air quality due to cleaner fuels (which is desirable but difficult) versus measuring reduced *emissions*. The group also discussed school buses. Buncombe County recently retrofitted 500 school buses. Constraints identified were the buying cycle (vehicle may not be ready to be revamped or replaced), budget, and resistance to change. Rich Sapienza mentioned that he had a good case study on school bus conversions in Arizona.

The Town of Cary is wrapping up an EV charging station pilot project with 3 brands being installed at 3 locations. Town Council will decide on the pilot at end of October; Advanced Energy is contributing information to help decisionmakers. Emily Barrett offered to present in November on the Council’s decision and expressed gratitude to Cary’s internal departments for their efforts to right-size (going to small sedans from small trucks).

Orange County is hiring a Sustainability Coordinator. They have a Brightfield Charging Station licensing agreement that is well accepted by their County Commissioners: one will be in Chapel Hill and one in Hillsborough at no cost to the County, and they have a 10-year option to purchase. Installation is still in the permitting process. The County is also looking at options for their Sherriff’s vehicles and also at transportation network companies (e.g., Uber) to help connect their different worksites. The County recently applied for a diesel mitigation grant for standby generator at health department but it was declined (grants are usually more focused on mobile engines, but the bigger reason they didn’t get the grant is that the generator doesn’t run that often). Jeff Thompson asked if anyone knew of funding available for this type of backup generator.

Joe O’Neill of Piedmont Natural Gas observed that nature of CNG business has shifted a lot in 3 years and is seeing great success with heavy-duty vehicles. PNG recently completed a big station for Wave transit in

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Wilmington; 12 station projects on drawing board, and only 3 are speculative! Joe sees fueling shifting to private stations more than public stations due to load/wait time.

e-Energy Alternatives is doing conversions all along the East Coast and is growing fast and doing lots of great projects. They are on legislative committee with PNG, Waste Management, UPS, and others to put together a stimulus program. Private investment for public fueling allows them to focus on buying and converting vehicles. Joe Gordon mentioned that many school buses are old and that newer buses are hard to convert; he recommended that schools go with dedicated alt-fuel vehicles. South Carolina recently added 10 new vehicles and is converting their entire fleet to dedicated CNG.

The NC Clean Energy Technology Center is focused on the CFAT grant and the Southeast Alternative Fuels Conference. The conference will include an NC Smart Fleet recognition program to recognize fleets at different levels (recognitions take place on a rolling basis, though). The Center is also working on a PSA campaign for radio and TV that will focus why businesses and concerned consumers choose to use alternative fuels and is seeking interviewees for the PSA.

Blue Gas Marine is shifting its focus from hydrogen, propane, natural gas conversion kits to natural gas due to its quicker payback period, which is even faster for boats compared to land vehicles due to their low "mileage". The company recently announced a major partnership with an OEM boat manufacturer and is showing examples at boat shows. They are getting a lot of press, and the units are not even available publicly yet. They are being approached by natural gas companies in Europe and South America who are offering to provide the gas. Blue Gas Marine is seeking investors to enable them to sell products more broadly (gas prices are hurting the boating industry, so natural gas is a great alternative). Miguel Guerreiro said that NC has 400,000 registered boats, and Miami has hundreds of public boats patrolling its waters. A bi-fuel retrofit test boat will be on display at the SEAFAC. Both outboard and inboard motors can be retrofitted. Blue Gas Marina has focused on the dominant engine brands Yamaha and Mercury, but they are now expanding to outboard Suzuki and Honda engines too. Miguel Guerreiro sees great potential for outfitting trucks that haul boats too.

The City of Raleigh transit program has 20 new Clean Diesel buses. They are currently running three hybrid diesels for the R-Line downtown circulator, perfect for the slow stop-and-go traffic downtown.

Dick Sloane reported that there is a lot of activity in the region on bike-ped planning. There is a new gas-powered trike coming out called the Elio. The ELF by Organic Transit in Durham is improving their product's steering and suspension.

Capital Ford of Raleigh reported that sales of Ford electric vehicles have seen a 35% increase in sales over last year. They are seeing more diversity in consumers: the general public is becoming more curious and seeking out alt-fuel vehicles. EVs are doing really well in Europe, where gas is \$8-\$9/gal. Capital Foed will have 3 vehicles at the SEAFAC, 2 of which will be available for test driving. Timo Pakkala also offered to bring vehicles to any business that is interested in them to show.

NCPGA reported that 37 states now have propane buses, but NC only joined that group this month with Davidson County's plan to obtain propane buses. Acceptance has been slow due to a lack of willingness to accept data from out-of-state and mechanics to work on them. Four propane mowers will be on display at the SEAFAC, and incentives to convert mowers to propane are actually increasing! There was a special promotional conference email sent to landscape companies and golf course superintendents.

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Piedmont Biofuels reported that 2014 is a tough time to be in biodiesel (production tax credits have expired); lots of biodiesel plants are shuttered or working at reduced capacity.

The City of Fayetteville is preparing an application for CFAT and working to get an EV charging station.

SSI specializes in doing filter testing for aircraft other applications and is getting into product development for hydrostatic drive systems. As engineers, they are seeking to serve and help the industry grow. Belen asked the group what happens at the end of a battery's life. The Freedom Center at NCSU's Centennial Campus is working on this issue. NC has a long history of lithium mining and is home to a branch of an international battery recycling company Umicore. Katie mentioned that there is a battery recycling plant coming online near Laurinburg and a partnership with OEMs. The group discussed that "spent" for vehicle purposes doesn't mean unusable; can be used as a backup storage for other forms of energy. Timo Pakkala said that 5 rare earth metals in metal hydride batteries are being recycled in Europe.

Our next stakeholder meeting will be Thursday, November 20, 2014, from 9:30 to 11:30 at  
4307 Emperor Boulevard, Suite 110, Durham 27703

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