



Virginia Clean Cities



U.S. Department of Energy



Stakeholder Newsletter

Volume 3-May

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Diamond and Platinum Level Stakeholders



Carter Machinery Company, Inc.



2nd Annual Rally at the Raceway Update

“The key to Virginia Clean Cities’ enduring success over two decades is the coalition’s proven ability to build relationships,” said Alleyn Harned, Executive Director of Virginia Clean Cities. In an effort to continue building relationships across Virginia, VCC invited alternative fuel vehicles of all types from across the Commonwealth to meet at the Richmond International Raceway for the second annual alternative fuel vehicles rally. The event included the inaugural delivery of the Governor’s Green Fleet Awards, a State of the Alternative Fuel Industry in the Commonwealth Address and the first-ever alternative fuel vehicle ride & drive on the raceway track. Many vehicles from a variety of alternative fuels were in attendance.

The Governor’s Green Fleet Awards are meant to recognize successes and achievements of green fleets across the Commonwealth in areas of greenhouse gas reduction, petroleum reduction and leadership in advancing alternative fuel vehicles. The recommendation to establish Governor’s Green Fleet Awards was detailed in the 2014 Virginia Energy Plan developed by the Virginia Department of Mines, Minerals and Energy, Virginia Clean Cities and the Governor’s Virginia Energy Council among others.

This year’s award recipients were the following:

- Governor’s Greenhouse Gas Reduction Award: Supervalu
- Governor’s Petroleum Reduction Award: Dominion Resources
- Governor’s Green Fleet of the Year Awards: Greater Richmond Transit Company

Virginia Clean Cities also announced the latest alternative fuel fleet vehicle numbers in Virginia, including 24,642 alternative fuel vehicles in 100 fleets. VCCs also announced that there are currently 431 alternative fuel stations in Virginia, ready to support vehicles fueled by electricity, propane, CNG, E85 and biodiesel.

VIRGINIA CLEAN CITIES, 2014 STATS

430+
clean fuel stations95,000+
tons of CO₂ prevented16,800,000+
gallons of petroleum displaced100+
clean fleets

DC Fast Charger Deployment Update



March and April of 2015 saw the continued deployment of DC Fast Charging infrastructure for electric vehicles throughout Virginia. In partnership with ChargeUp, Virginia Clean Cities was able to find site hosts for new chargers in Staunton, New Kent County, and Williamsburg. To date, 21 DC Fast Chargers have been deployed through this program. With the exponential growth of electric vehicles in Virginia, there is a growing demand for fast and convenient charging infrastructure near retail and cultural destinations. These newest DC Fast Chargers address a critical regional transportation by connecting the Shenandoah Valley to Hampton Roads. This initiative shows that Virginia's local government and businesses are committed to the most cutting-edge vehicle technologies and environmental sustainability. For more information on this equipment and how you can access it, please visit www.afdc.energy.gov/locator/stations.

AmeriGas Adds 50 Propane Autogas F-550 Trucks



AmeriGas Propane has more than doubled its propane autogas medium-duty fleet with the purchase of 50 Ford F-550 trucks from ROUSH CleanTech.

The company is adding to its existing fleet of 35 ROUSH-produced propane autogas F-550s that were purchased back in 2013. All of these vehicles are currently equipped with cranes to deliver propane tanks to customer sites across the nation.

"By fueling with the product it supplies, AmeriGas is proving to its millions of customers that propane as an engine fuel is realistic and being used today in their communities," said Todd Mouw, vice president of sales and marketing for ROUSH CleanTech.

UPS Building CNG Fueling Stations in Roanoke and Richmond



On April 1, UPS announced plans to build 15 compressed natural gas (CNG) fueling stations to support the purchase and planned deployment of 1,400 new CNG vehicles over the next year. Two of the CNG stations will be in Virginia, with one in Roanoke and one in Richmond.

This purchase represents a nearly 30% increase to UPS's current industry-leading alternative fuel and advanced technology fleet of 5,088 vehicles worldwide. The CNG fueling stations and vehicle purchases are part of UPS' ongoing commitment to diversify its fuel sources, and implement a fleet infrastructure with lower tailpipe emissions.

"UPS's investment in a large scale alternative energy fleet has enabled the company to avoid more than 34 million gallons of conventional fuels since 2000," said Mitch Nichols, UPS senior vice president of transportation and engineering. "Today's CNG announcement demonstrates UPS's plans to expand use of widely available natural gas. CNG is an important building block in our long-term fleet strategy and offers environmental and economic advantages."

VT Researchers Achieve Hydrogen Production Breakthrough



A team of Virginia Tech researchers discovered the method to create hydrogen fuel using a biological method that greatly reduces the time and money it takes to produce the zero-emissions fuel. The team's findings could help speed the widespread arrival of the hydrogen-powered vehicles in a way that is inexpensive and has extremely low carbon emissions. The new method for producing hydrogen involves using corn stover – the stalks, cobs, and husks – thereby paving way for cheaper hydrogen-fueled vehicles.

The discovery is an "important step toward a hydrogen economy – producing distributed and affordable green hydrogen from local biomass resources," said Percival Zhang, a professor in the Department of Biological Systems Engineering. Unlike other hydrogen fuel production methods that rely on highly processed sugars, the Virginia Tech team used dirty biomass — the husks and stalks of corn plants — to create their fuel. This reduces the initial expense of creating the fuel and enables the use of a fuel source readily available near the processing plants, making the creation of the fuel a local enterprise.

The Hybrid Electric Vehicle Team at Virginia Tech



The EcoCAR3 team at Virginia Tech is finishing up the first year of a four year program sponsored by the Department of Energy and General Motors. The goal of EcoCAR3 is to re-engineer a Chevy Camaro to decrease petroleum use and greenhouse gas emissions while also maintaining safety, performance, and consumer acceptability. The Hybrid Electric Vehicle Team of Virginia Tech (HEVT) has been participating in Advanced Vehicle Technology Competitions for 20 years. Several of the HEVT members were able to attend the 2015 Rally at the Raceway and show their support for the mission of Virginia Clean Cities. VCC was also able to help the team put on a Nature and Sustainability Day event at Virginia Tech where students had the chance to learn more about the work of both

organizations. The team will be traveling to Seattle at the end of May to showcase their work in design, project management, communications, and vehicle architecture for the end of Year 1 competition. As this competition continues, Virginia Clean Cities looks forward to continuing their relationship with this group of motivated, intelligent, and innovative students who represent the future of vehicle technology.

Superior Energy Systems' Autogas Dispensers Lower Fleet Costs



Superior Energy Systems has incorporated mass flow meter technology into their PRO-Vend and Dual Hose propane autogas dispensers. This technology delivers more accurate long-term fuel measurement compared with mechanical meters.

The anti-corrosive, stainless-steel Micro Motion Coriolis mass flow meters help reduce fleet operators' costs. Mass flow meters virtually eliminate unaccounted fuel that slips through the worn moving parts of mechanical meters.

Mass flow meters work by introducing Coriolis force into the flow stream of a fuel dispenser, then measuring liquid flow by detecting the resulting change in fluid momentum. Mass flow meters are ideal for measuring liquefied gases such as autogas due to the fuel's inherent temperature and pressure fluctuations.

DoE Awards \$6 Million To 11 Plug-in Electric Vehicle Projects

The Energy Department recently announced \$6 million for 11 projects aimed at improving potential buyers' experiences with alternative fuel and plug-in electric vehicles, supporting training, and integrating alternative fuels into emergency planning. By removing barriers to market growth, these projects will expand Americans' transportation options, minimize fuel costs, reduce carbon pollution, and increase the nation's energy security.

One project in Orlando will enable consumers and fleets to drive alternative fuel vehicles for extended periods of time to help them better understand how these vehicles can meet their everyday needs. A

Virginia Clean Cities is the recipient of one of these grants in a partnership with National Fire Protection Association that will focus on training for first responders, public safety officials, tow-truck operators, and collision repair specialists and teach these service providers how to safely handle alternative fuel vehicles.

FedEx Uses 15 Hydrogen Fuel Cell Tractors



On April 9th, FedEx Corp., with a grant from the U.S. Department of Energy and in collaboration with Plug Power Inc. and CharlotteAmerica, rolled out the 'world's first zero emissions, hydrogen fuel cell ground support equipment (GSE). The hydrogen fueling station was provided by Plug Power.

The 15 hydrogen fuel cell-powered GSE cargo tractors are now part of a fleet of more than 1,500 gas, diesel and electric cargo tractors at the FedEx World Hub in Memphis, Tennessee. Hydrogen, is dispensed directly into the fuel cell systems by the truck driver from a 15,000-gallon liquid hydrogen fueling station located on the airport ramp.

Upcoming Events

For a full list of upcoming events, please visit

www.vacleancities.org/events

5/4/15 - [ACT Expo](#), Dallas, TX

5/18/15 - [CNG Training and Certification](#), Chesapeake, VA

5/19/15 - [Electric Drive Transportation Association Conference](#), Indianapolis, IN

6/4/15 - [June Stakeholder Luncheon](#), Norfolk, VA

6/18/15 - [Natural Gas Vehicles Infrastructure USA Conference](#), Atlanta, GA

8/13/15 - [August Stakeholder Breakfast](#), Roanoke, VA

8/24/15 - [Fleet Technology Expo](#), Long Beach, CA

2/7/16 - [Energy Independence Summit](#), Washington, D.C.

4/7/16 - [2016 Rally at the Raceway](#), Richmond, VA

Staff News

Virginia Clean Cities (VCC) seeks a qualified professional to serve as **Deputy Director** to provide organizational leadership support, and to oversee the program's portfolio of activities, sponsored projects and contracts. For more information, please visit <https://joblink.jmu.edu>.

Thank You to Our New and Renewing Stakeholders!



ChargeUp, LLC is a specialty construction and project management firm focused on the installation of Electric Vehicle Infrastructure nationwide supporting both Level II and DCFC charging stations. ChargeUp expertly develops the Scope of Services for each client outlining objectives and deliverables for each project.



J. Sargent Reynolds Community College helps students realize their career and life aspirations. They provide an outstanding college experience and support systems engineered for student success.



James City County is a leader in alternative fuel deployment in the Commonwealth. The county has a commitment to clean, domestic fuels and have chosen to deploy autogas in several applications in their school division and fleet department



The Propane Education & Research Council promotes the safe, efficient use of odorized propane gas as a preferred energy resource through research and development, training, and safety programs.



As a global specialist in energy management Schneider Electric makes energy safe, reliable, efficient, productive and green. How? Simply by making energy visible and giving you the means to act to optimize its consumption.



Tidewater Community College provides collegiate education and training to adults of all ages and backgrounds, helping them achieve their individual goals and contribute as citizens and workers to the vitality of an increasingly global community.

Join Us Today

Virginia Clean Cities counts on a diverse membership base to facilitate our mission. If you are considering becoming a stakeholder, please visit our membership page at:

www.vacleancities.org/about/join-us.

You can also follow VCC on Twitter at [@VACleanCities](https://twitter.com/VACleanCities) or www.facebook.com/viriniacleancities