

PRCC GAZETTE

“DRIVING THE WAY TOWARD ENERGY INDEPENDENCE”

Volume 5, Issue 10

July 2018

DRIVING PA FORWARD

DEPLOYING CLEANER TECHNOLOGIES FOR PENNSYLVANIA

Reducing emissions from diesel engines is one of the most significant air quality challenges facing the Commonwealth of Pennsylvania.

To help Pennsylvania meet its diesel emissions reduction goals, the Wolf Administration has developed new grant and rebate programs to improve air quality in Pennsylvania and drive transformation from older, polluting diesel engines to clean technologies.

New engine technologies like electric, compressed natural gas, propane, and clean diesel can significantly reduce pollutants from freight and delivery trucks, transit and school buses, cargo handling equipment, ocean going vessels in port, forklifts, tugs, and freight switchers that rely on older diesel technology.

To go to DRIVEPAFORWARD website
<http://www.dep.pa.gov/Business/Air/Volkswagen/Pages/default.aspx>

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Alternative Fuel Incentive Grant Program (AFIG)

Wolf Administration Allocates \$5 Million to Support Alternative Fuel Transportation Initiatives

The Pennsylvania Department of Environmental Protection (DEP) is accepting grant applications for innovative, advanced fuel, and vehicle technology projects that will result in cleaner advanced alternative transportation within the commonwealth. DEP's Alternative Fuels Incentive Grant (AFIG) Program offers funding for the purchase and use of alternative fuels and alternative fuel vehicles.

The first application period just ended on July 13, 2018. The second Grant applications period will be accepted through December 14, 2018. New this year, AFIG will give priority to projects that include the use of the funded vehicles by emergency personnel in emergency responses, rescues, and evacuations.

The AFIG Program can assist school districts, municipal authorities, nonprofits, corporations, LLCs, and partnerships registered to do business in Pennsylvania in offsetting the costs of implementing alternative fuel using transportation projects. The AFIG Program is funded by annual gross receipts tax on utilities.

DEP is offering grants in the following project categories:

- Vehicle Retrofit or Purchase – To offset the incremental cost of purchasing alternative fuel vehicles or retrofitting existing vehicles to operate on alternative fuels.

CALENDAR OF EVENTS

BOARD OF DIRECTOR MEETING SCHEDULE FOR 2018

The PRCC Board of Directors meeting schedule is as follows:

October 3, 2018

All meetings will be at:

Five Star Development Inc.

1501 Preble Ave.

Pittsburgh, PA 15233

Starting at 9:30 AM

Upcoming Events

Odyssey Day –October 12, 2018 – CCAC – West Hills Center

EV Educational & Ride-n-Drive Events – TBD

FREE WORKSHOP - GTI Workshops to address the issue of code compliance for natural gas, hydrogen, and propane vehicle maintenance garages.

July 24th in Cheswick, PA, and this will include a tour of a Pitt-Ohio garage that has been upgraded for natural gas service.

[Click here for more information!](#)

Training Classes

The PRCC is working with the National Alternative Fuels Training Consortium and the Community College of Allegheny County – West Hills Center to conduct training classes. These classes are free to Sustaining Members

Light Duty Natural Gas Vehicles

ATE-115-WH85

1. CEU

TBD

Introduction to Hybrid Electric Vehicles Training

ATE-136-WH85

1.0 CEU

TBD

CNG Tank Inspector Prep for Certification

ATE-601-WH85

TBD

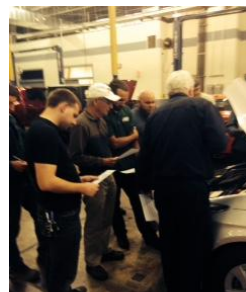
Servicing Hybrid Electric Vehicles

ATE-137-WH85

TBD



To register for these classes contact Bob Koch at 412-788-7378 or rkoch@ccac.edu



- **Alternative Fuel Refueling Infrastructure** – To assist in the costs to purchase and install refueling equipment for fleet and workplace, home or intermediary refueling.
- **Innovative Technology** – To support research, training, development, and demonstration of new alternative fuels and alternative fuel vehicles.

DEP is instituting changes to the grants awarded for vehicle purchase and retrofit projects:

- For new CNG, LNG, biodiesel vehicles using a blend greater than B20, Electric Vehicles with a battery system capacity equal to or greater than 20 kWh, and Hydrogen Fuel Cell vehicles, applicants may request 100% of the incremental cost of the vehicle up to \$40,000 per vehicle.
- For Electric Vehicles with a battery system capacity between 10 kWh and 20kWh, applicants may request 75 percent of the incremental cost of the vehicle up to \$20,000 per vehicle.
- For Existing CNG, LNG, and biodiesel vehicles using a blend of B20 or greater, and Electric Vehicles with a battery system capacity of less than 10 kWh, applicants may request 50 percent of the incremental cost up to \$20,000 per vehicle.

The application period opens on May 4, 2018 at 4:00 PM and will remain open throughout 2018. DEP will collect and review applications received by 4:00 PM on Friday, July 13, 2018 and 4:00 PM on Friday, December 14, 2018. For the first time the AFIG program will be submitted online through the Electronic Single Application system at www.esa.dced.state.pa.us. Hardcopy applications will not be accepted.

More information can be found at:
www.dep.pa.gov/Citizens/GrantsLoansRebates/Alternative-Fuels-Incentive-Grant/Pages/default.aspx



Altoona CNG transit fueling station opens

June 18, 2018. The Wolf Administration announced the formal opening of service at one of the 29 compressed natural gas (CNG) fueling stations planned as part of a Public Private Partnership.

Officials from the state Department of Transportation, Trillium CNG, and AMTRAN-Altoona marked the start of fueling at the facility at 3301 Fifth Ave., Altoona.

“We are making steady progress towards our goal of having CNG fueling stations across Pennsylvania,” Gov. Tom Wolf said. “The benefits include more efficiency, cleaner burning fuels and lower fuel costs for our transit agencies.”

Through the \$84.5 million statewide P3 project, Trillium is designing, building, financing and will operate and maintain CNG fueling stations at 29 public transit agency sites through a 20-year P3 agreement. Other stations will be constructed over the next five years, and Trillium is also making CNG-related upgrades to existing transit maintenance facilities.

As part of the conversion, AMTRAN-Altoona will convert 28 full-size buses to CNG. The authority estimates saving roughly \$350,000 annually based on current diesel costs and their diesel usage of roughly 340,000 gallons per year. The authority is installing four CNG buses into service this month.



Clean technology company plugs into electric

ROUSH CleanTech unveiled its newest carbon footprint-friendly vehicle — an all-electric Ford F-650. The company, which includes propane autogas and compressed natural gas in its technology portfolio, expands its alternative fuel market with zero-emission electric vehicles. “An electric battery option for medium-duty trucks and buses is a great fit as there is increasing demand in this gross vehicle weight range (GVWR) with very few OEM solutions,” said Todd Mouw, president of ROUSH CleanTech. “This builds from our robust foundation already in place at ROUSH CleanTech that supports more than 1,200 customers and 19,000 propane and natural gas units on the road.”

Built on the Ford F-650 chassis, ROUSH CleanTech’s new fully electric vehicles will have a lithium ion battery system of up to 225 kilowatt hours and 700 volts. Depending on the vehicle’s GVWR, the average range will be up to 120 miles with a top speed of 75 miles per hour. The AC permanent magnet motor will have a continuous-rated power of 150 kilowatts (200 horsepower), with a peak-rated power of 250 kilowatts (335 horsepower). “We are excited to leverage the company’s product development, supply chain, manufacturing and customer service expertise to support the expected growth in the medium-duty electric vehicle market,” said Mouw.

On May 1, ROUSH CleanTech launched its new electric model at the Advanced Clean Transportation (ACT) Expo in Long Beach, California. To start, the company will be offering Class 6-7 electric vehicles. Customers who operate larger (up to 33,000 GVWR) trucks and buses need a robust and reliable zero-emission solution to diesel that is not present today. As the market evolves, we also plan to offer this scalable technology in our Class 4-5 trucks and buses. The company is currently participating in Ford’s eQVM process to become an Advanced Fuel Qualified Vehicle Modifier for electrified powertrains for commercial vehicles.

To learn more about ROUSH CleanTech’s new electric fuel system technology that powers school buses and Ford commercial vehicles, please visit www.roushcleantech.com.



ROUSH CleanTech launched its first-ever electric model at the Advanced Clean Transportation (ACT) Expo in Long Beach, California.



Electrify America Releases Map of Charging Network

Electrify America has published on its website a [map of the company’s planned charging network](#). The goal is for all 2,000+ stations to be “operational or under construction at 484 sites in 17 metropolitan areas and on highways in 39 states by the end of 2019 as part of its Cycle One infrastructure investment.” Stations will have both CHAdeMO (50 kW) and SAE Combo connectors (50 kW to 350 kW).



Schwan's Home Service Unveils Newest Fleet of Propane Autogas Delivery Trucks

Nationwide food delivery company to deploy 600 ROUSH CleanTech vehicles by year's end

MARSHALL, Minn. (May 2, 2018) — Schwan's Home Service, Inc., continues its decades-long commitment to clean-burning propane autogas vehicles. The company deployed 200 [ROUSH CleanTech E-450 cutaways](#) with plans to lease an additional 400 units by the end of 2018, totaling 600 vehicles.

"Propane-powered vehicles have played a key role in Schwan's product delivery for more than 40 years," said Danielle Stariha, senior manager of fleet and procurement for [Schwan's Home Service](#). "Total costs of ownership for propane autogas is much lower than traditional fuels and other alternative technologies, which is why we are continually implementing the newest propane technology."

Schwan's Home Service, which has one of the larger privately held fleets in the United States, will take delivery of its first 200 Ford E-450 cutaway vehicles this month. Each frozen food delivery truck is equipped with a Ford 6.8L V10 engine and a [ROUSH CleanTech propane autogas fuel system](#).

Implementing alternative fuels is one way that Schwan's Home Service helps meet its corporate environmental objectives. Each Ford E-450 propane autogas truck emits about 91,000 fewer pounds of carbon dioxide emissions over its lifetime than a gasoline-powered vehicle. Propane autogas is a low carbon fuel that reduces greenhouse gases by up to 25 percent, carbon monoxide by up to 60 percent, and nitrogen oxide by 20 percent compared to gasoline.

"Schwan's long-time investment in propane autogas is a testament to the staying power of this economical and domestically produced transportation fuel," said Todd Mouw, president of ROUSH CleanTech. "And, we are bringing Schwan's the cleanest-operating propane technology on the market."

Schwan's is also concerned about the comfort of its drivers, who are behind the wheel delivering frozen food products to its residential and business customers.

"Propane-powered vehicles are much quieter than equivalent diesel-powered vehicles, which leads to higher driver satisfaction," said Ron Moore, vice president of warehouse and fleet operations for Schwan's Home Service. "We deliver across the U.S., in various climates, conditions and terrains, and our drivers are excited about the ROUSH CleanTech-powered E-450 chassis."

Today, Schwan's Home Service unveiled its new propane autogas vehicles at the Advanced Clean Transportation (ACT) Expo in Long Beach, California.

About Schwan's Home Service, Inc.: Schwan's Home Service, Inc., a subsidiary of Schwan's Company, markets and distributes more than 300 high-quality frozen foods through home-delivery and mail-order services. To learn more, visit [Schwans.com](#), download the Schwan's mobile app, or call 1-888-SCHWANS (1-888-724-9267).



ROUSH
CLEANTECH

The Future Of Electrified Trucks, A Discussion With Tesla Cofounder Ian Wright (CleanTechnica Exclusive)

December 2nd, 2017 by **Kyle Field**

The Tesla Semi Truck announcement represents a head-on challenge to the way people move goods around the country, but Tesla is not the first to move into plug-in trucks — far from it. I recently had the opportunity to talk with Tesla cofounder Ian Wright, who has since moved on to start his own company Wrightspeed, which has been helping shipping companies slash their heavy-duty truck emissions for years with its hybrid powertrains. [Note: We also had a Cleantech Talks interview with Ian Wright in 2015 that's worth a listen.]

Getting right to the heart of the matter, we talked about the Tesla Semi announcement and what it meant for reducing or eliminating emissions from heavy-duty trucks. Ian shared that, while Tesla was able to put on a good show, electrifying heavy-duty powertrains was nothing new. “I’m very pleased to see other companies getting around to addressing trucks,” he shared. “As Tesla did with cars, [the Tesla Semi announcement] will raise awareness across the industry.” Ian commented that using fully electric trucks for long hauls did not make sense to him, as the sheer number of batteries required for a long-distance haul would make the vehicles extremely capital intensive, in addition to the weight of the batteries having a detrimental impact on hauling capacity.

Ian and company took a different tack with Wrightspeed, which focuses on striking a balance between reducing fuel consumption and emissions as much as possible by looking at the least efficient applications of internal combustion engine vehicles. They found the sweet spot — or the sooty spot, if you will — to be refuse trucks and local delivery vehicles like those used by FedEx and UPS.

The Wrightspeed Solution

To realize this opportunity, the Wrightspeed team built a suite of powerful yet efficient plug-in hybrid powertrains for heavy-duty, frequent, stop-drive cycle trucks that allow owners to slash fuel consumption and emissions more than 50% compared to conventional petrol powertrains. Wrightspeed does this by utilizing electric motors alone to drive the wheels and move the vehicle forward, which is complemented by a microturbine that runs on any number of fuels — including liquid propane, diesel, liquid natural gas, compressed natural gas, or even landfill recovered gas (sour gas). The microturbine exists solely to provide electricity to the battery packs.

The efficient combination translates into serious savings, with an estimated 4 year return on investment for customers compared to the extremely inefficient, maintenance-intensive petrol-fired refuse or delivery truck.

The Wrightspeed plug-in hybrid electric powertrain was such an innovative, impactful solution that Wrightspeed was recognized by the World Economic Foundation as a 2016 Technology Pioneer. Wrightspeed’s powertrain solutions deliver:

Up to 67% reduction in fuel consumption

Up to 63% reduction in emissions

Up to \$25,000 reduction in annual maintenance

One of the many innovations in Wrightspeed’s solution is its Fulcrum microturbine, which was developed in-house. Ian shared that it delivers efficiencies that are very close to the same as the best of the gasoline piston range extenders used in the Chevy Volt and the BMW i3. With comparable efficiency, where the turbine really shines is in maintenance. With only one moving part, two bearings, and no piston rings, maintenance is as easy as changing the air filter and fuel filter, which are extremely simple compared to the maintenance required on a heavy-duty diesel refuse truck or delivery truck.



Friend or Foe?

With such a prominent name in electrified vehicles entering into the competitive landscape, my question was “does the Tesla Semi Truck announcement change anything for Wrightspeed?” Ian shared that he believed Tesla moving into electrified trucks would help the mainstream media and mainstream consumers to be more aware of the problem and the varied solutions available to solve the problem and that, if anything, it should help the industry.

Battery Technology

Just as in the early days of internal combustion vehicles, today’s electric vehicles feature numerous innovative technologies, with batteries representing one of the most varied of the bunch. I asked who supplied Wrightspeed’s batteries and Ian shared that they used Toshiba’s lithium-titanate (LTO) batteries. He shared that back in 2003, when he was with Tesla, their battery technology improvement projections led them to expect batteries to improve much faster than they have.

There have been cost-competitive technologies in batteries like lithium-iron-phosphate (LiFePo) that have promise and are being adopted for commercial applications today. BYD and SimpliPhi Power are two big names using LiFePo chemistries, for example. There are also a number of emerging chemistries, like lithium-titanate, where Ian expects costs to continue to come down over the coming years as volume ramps up.

Lithium-titanate batteries are already being used in a handful of electric vehicle applications, like Honda's Fit EV and some of the Japanese versions of Mitsubishi's MiEV, but the tech has yet to see true mass-production volumes. Ian believes it is superior to more conventional lithium-ion chemistries because it is not prone to thermal runaway, and he noted that it is the hardest battery chemistry to have any bad things happen, making it very safe. That's exactly what you want when you are lugging around a few hundred kilograms of batteries in an electric car or truck, if you ask me.



In addition, LTO batteries can be charged down to -30°C whereas many of the other high-energy battery chemistries cannot be charged below freezing. This means the batteries do not require a heating circuit to keep them from freezing, nor do they have to expend the energy to keep the liquids in the battery from freezing.

Finally, the constituents of LTO batteries are not sourced from conflict areas, like the hotly debated cobalt in Tesla's batteries. Cobalt is not a show-stopper at current volumes, but with the majority (63%) sourced from politically unstable Democratic Republic of the Congo, it will have to be managed very closely if automakers using it are going to sustain the insane growth curves EVs and stationary storage are going to experience over the coming years. LTO batteries are also easier to recycle than chemistries containing cobalt.

What's Ahead for Wrightspeed?

Ian shared that he is passionate about completely displacing heavy-duty vehicles in open environments and believes the financials make it a no-brainer for many companies around the world today. Converting the heavy-duty vehicles roaming around neighborhoods to pick up trash day in and day out to plug-in hybrid electric and fully electric powertrains will also have a noticeable impact on noise pollution. That's another one of the many, many benefits of electrified transportation that we just don't talk enough about.

Feedback so far is extremely positive for Wrightspeed, with most people left in awe of how quiet they make refuse trucks. Regenerative braking also has an extremely positive upside in that conventional refuse trucks chew up a set of brake pads in 3 months. That's a lot of nasty particulate that we have been breathing in that simply goes away with plug-in vehicles.

Wrightspeed is currently focused on the US and North American markets but has had significant interest from folks in New Zealand where they are paying \$8/gallon for petrol



SAVE-THE-DATE

ODYSSEY DAY October 12, 2018 at CCAC-West Hills Center



To register click here:

https://docs.google.com/forms/d/e/1FAIpQLSd_2zpSGCBwm_jFXCJ9kZ_hwtDH-qVvEN0yWFkcJLVcfGjNog/viewform

UPS: New Workhorse electric truck will be the first to rival cost of ICE vehicles

UPS plans to collaborate with Workhorse to develop an electric delivery truck that will be comparable in acquisition cost to legacy ICE trucks without any subsidies, an industry first.

Each Class 5 truck will have a range of approximately 100 miles, quite sufficient for delivery routes in and around cities.

UPS will test 50 of the vehicles in several cities across the country, including Atlanta, Dallas and Los Angeles. Following real-world test deployments, UPS and Workhorse will fine-tune the design and begin rolling out a larger fleet in 2019. UPS has approximately 35,000 diesel or gas trucks in its fleet that are comparable in size and duty cycle to the new EVs.

UPS expects the operating cost of its new e-truck to be less than that of a similarly equipped legacy vehicle. The new trucks will join over 9,000 alternative fuel vehicles already in the UPS fleet. The company has set a goal that one in four new vehicles purchased by 2020 will be “an alternative fuel or advanced technology vehicle.”

“Electric vehicle technology is rapidly improving with battery, charging and smart grid advances that allow us to specify our delivery vehicles to eliminate emissions, noise and dependence on diesel and gasoline,” said Carlton Rose, President, Global Fleet Maintenance and Engineering for UPS. “With our scale and real-world duty cycles, these new electric trucks will be a quantum leap forward for the purpose-built UPS delivery fleet.”

“This innovation is the result of Workhorse working closely with UPS over the last 4 years refining our electric vehicles with hard-fought lessons from millions of road miles and thousands of packages delivered,” said Steve Burns, CEO of Workhorse Group. “Our goal is to make it easy for UPS and others to go electric by removing prior roadblocks to large scale acceptance such as cost.”



The lowdown on electric vehicles and the future of driving

Anmar Frangoul

Published 4:45 AM ET Mon, 12 Feb 2018
CNBC.com



Tetra Images | Getty Images

More than 750,000 electric cars were sold in 2016 and the global electric car stock grew to more than 2 million, according to the International Energy Agency (IEA).

As people become more environmentally conscious, major motor manufacturers are making big changes. Every Volvo from 2019, for example, will have an electric motor, while Ford recently announced that it would increase its planned investments in electrification to \$11 billion by 2022.

Here, Sustainable Energy takes a look at electric vehicles: how they work, their environmental impact and the role they will have to play in the future of transport.

The inside of EVs



Jeff Greenberg | Universal Images Group | Getty Images

An electric vehicle uses a battery pack to store electric energy, which in turn powers a motor. These vehicles are charged up, usually at a charging station on the street.

According to the U.S. Department of Energy's Alternative Fuels Data Center, fully charged EVs have, at present, a shorter range "per charge" than conventional vehicles with a tank of gas. Driving conditions and driving habits can influence both the efficiency and range of EVs, the DOE says.

One of the current challenges for EVs is ensuring there are enough charging stations for longer journeys to be completed. Efforts are being made to remedy this.

In January, for instance, BP Ventures invested \$5 million in FreeWire Technologies, a U.S. company that specializes in mobile electric vehicle rapid-charging systems. BP said it planned to use the units at a selection of BP retail sites in the U.K. and Europe this year.

In the U.K., the Office for Low Emission Vehicles is providing more than £900 million to place Britain at "the global forefront" of the development, manufacture and use of ultra-low emission vehicles.

The environment



While the energy sources that some charging stations use may not be regarded as "sustainable," it is true that, in terms of direct emissions, electric cars do have their advantages. "Electric vehicles come with zero pollutant emissions at the tailpipe — there's no tailpipe," Pierpaolo Cazzola, a senior energy and transport analyst at the IEA, told Sustainable Energy.

The DOE has said that electric vehicles can cut emissions that contribute to both smog and climate change, thus boosting public health and "reducing ecological damage."

For its part, the European Commission says that the use of electricity as an "energy vector for vehicle propulsion" offers the possibility of substituting oil with a wide range of primary energy sources.

This, the Commission adds, could ensure the security of energy supply as well as a "broad use of renewable and carbon-free energy sources in the transport sector."

The future



xPACIFICA | The Image Bank | Getty Images

In some countries, the transition to electric vehicles is gaining momentum.

In Europe, Norway offers a glimpse of a future when electric cars have an integral role in society. In December, around 27 percent of new cars sold in Norway were "battery electric," according to its government.

Efforts are underway to make the move from traditional, petrol-powered vehicles, to electric ones. Battery electric cars sold in Norway have exemptions from value-added tax, one-off registration tax and traffic insurance tax. These vehicles are also, barring a few restrictions, allowed to drive in bus lanes and park for free or half price.

In China, which has long standing issues with air pollution, changes are also being made, often on a large scale.

One of China's major cities and a hub for technology companies, Shenzhen, is now home to a vast fleet of electric buses. Last June, authorities announced that the Shenzhen Bus Group had replaced all 5,698 of its buses with electric vehicles.



<https://driveelectricpa.org/>

PRCC Holds Informational Event for Transportation Management Associations



On June 5th and 6th the Oakland Transportation management Associations held its' 2018 Annual Transportation Management Association Summit in Pittsburgh. A group of nine transportation management organization from across the state participated in the event along with some other state and local speakers. The first day started a meeting at the Pittsburgh Downtown Partnership with speakers, then a Downtown Walking Tour of Pittsburgh to see some of the pilot projects aimed at improving mobility and livability made possible through a partnership between Pittsburgh Mayor Bill Peduto and the Pittsburgh Downtown Partnership. The Envision project is changing the way Pittsburgh approaches public space and infrastructure projects in the urban core. Then the group traveled to the Airport Corridor via shuttle (will include West Busway Stop in Carnegie), where Assistant Manager of Special Services for the Port Authority of Allegheny County Chuck Rompala will talk to us about the Port Authority's West Busway.

Along the way they told the story of the success of last mile transit service (RideACTA) that the Airport Corridor Transportation Association (ACTA) developed over the past 8+ years to provide access to the 76,000 jobs in the airport corridor, a suburban area (4 townships) west of the City of Pittsburgh. RideACTA provides nearly 80,000 rides per year. Some of the areas that will be covered are how and why the service started, how we've been able to sustain funding, the financial support from the business community and local townships, and how we plan to use the latest technology to enhance the service.

ACTA recently won second place in a national competition for the most innovative microtransit service in the country. They group had lunch at IKEA and heard from other speakers from that area.

On the second day the group traveled to University of Pittsburgh's Center for Sustainable Transportation Infrastructure (CSTI) and Carnegie Mellon University's Metro21-Smart Cities Institute. The last stop was at the Pittsburgh Parking Authority's Second Avenue Parking Plaza to take part in vehicle demonstrations and discussion including the following:

- *City of Pittsburgh's Electric Vehicle fleet and solar charging stations*
- *Pittsburgh Region Clean Cities Electric Vehicle*
- *STAR Transportation Group's Autonomous Tesla*
- *Discussion regarding the Pennsylvania Alternative Fuels Incentive Grant program*
- *Duquesne Light's Electric Charger Program Initiatives*
- *National Charge Car Product and Services*



Electric Vehicles



Attendees Discuss Features



City's EV Vehicle



Star Transportation Group Tesla



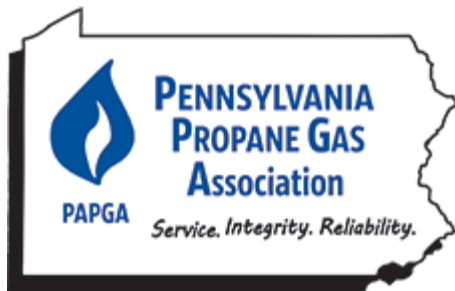
Bob Delucia Talks with Attendees

PRCC and CCAC Host Propane Class - Pennsylvania Propane Autogas Technician Training

The training was held at the Community College of Allegheny County – West Hills Center in Oakdale, PA on May 21-23, 2018. It was attended by 20-25 attendees who had instruction and hands on working with many other the major propane upfitters kits. It included a NAFTC Trainer and Engine Test Stand as well as propane vehicles provided by ProGas, Bluebird of Pittsburgh and McCandless Township Sanitary Authority(MTSA).



Food was provided by the Pennsylvania Propane Gas Association.



The National Alternative Fuels Training Consortium (NAFTC) in conjunction with the Propane Education & Research Council (PERC) has launched a new Propane Autogas Vehicle Technician Training.



Recognizing a need for qualified technicians to adapt, service, and maintain these vehicles, the comprehensive course covers topics including propane characteristics, fuel systems, vehicle compatibility, system components, and safety. The course was a three-day course, participants had an in-depth understanding of servicing and maintaining these vehicles.

This state-of-the-art training is being offered at locations across the United States in 2018 at no cost. This training session targets professional automotive technicians currently working in the automotive repair industry who want to enhance their skills and learn more about working with propane autogas vehicles. This three-day course includes an overview of propane technology, automotive components, and propane autogas related systems.



Propane Tank



Students Layout Propane System



Propane Trainer



Instructor Explains System



Mike Smyth Test Stand



Classroom Presentations



Trainer Screen



Ford Instructor Explains Ford Engine Bus

PRCC Sustainable Members

PLATINUM MEMBERS



GOLD MEMBERS



SILVER MEMBERS



PRCC Membership Levels Information

Membership Options: Individual- \$150 Nonprofit- \$300 Bronze- \$500 Silver- \$1000 Gold- \$2000 Platinum/Sponsor- \$4000+

To find out more on membership levels go to:

<http://www.pgh-cleancities.org/membership/>



The Pittsburgh Region Clean Cities Board of Directors would like to thank all of our members and stakeholders for supporting our coalition and mission!



UNITED WE STAND – SEPTEMBER 11, 2001

Our deepest sympathy and heartfelt thoughts go out to our fellow Americans during this time of crises. We will continue to stand strong and united in our support of the men and women protecting our country's interests.

Please come visit our PRCC Web Site:

www.pgh-cleancities.org

. Contribute Your News!

In trying to get the news of successes we have in our area. Please feel free to contact Rick Price, Executive Director/Coordinator at 412-735-4114 or at coordinator@pgh-cleancities.org.

Learn more about Clean Cities at cleancities.energy.gov, and learn how to get involved with the Pittsburgh Region Clean Cities coalition at www.pgh-cleancities.org

