PITTSBURGH REGION CLEAN CITIES

# PRCC GAZETTE

*"DRIVING THE WAY TOWARD ENERGY INDEPENDENCE"*

Volume 5, Issue 22 July 2020

## PRCC Webinars

**Webinar – July 29, 2020**
**Time – 11:00am – 12:00 Noon**
**Renewable Natural Gas**
**Penn State University**
**Dr. Richards**

Renewable Natural Gas: Powering Sustainable Energy with Sustainable Food Systems

In our next episode of PRCC's webinar series, Prof. and the Director of Penn State's Institutes for Energy and the Environment, Tom Richards, will be discussing the renewable natural gas (RNG) and its potential as an alternative and sustainable fuel.

**Join Zoom Meeting Registration**
https://us02web.zoom.us/meeting/register/tZUvdeqtpzkoGNRfJ4JnSOYZQfHEJXK9VPwd

**Webinar – August 5, 2020**
**Time – 11:00am – 12:00 Noon**
**CNG Hybrid System**
**Hyliion**
**Ted Anderson & Matt Gold**

**Class 8 Electricfication**

**Presentation Overview:**

The presentation reviews Hyliion's electric powertrain solutions for the heavy-duty trucking Class 8 market, with a mission to electrify trucking and reduce emissions while minimizing total cost of ownership. Hyliion is commercializing its diesel and CNG hybrid e-axle solution in addition to developing a fully electric powertrain with an onboard range extending generator. These efforts will be funded through the recently announced merger between Hyliion and Tortoise Acquisition Corp and will become a publicly traded organization in the coming months.

Join Zoom Meeting Registration Link:
https://us02web.zoom.us/meeting/register/tZIsfuitrz0iGtxAuZYEIq0-L0MZ7GkA8wLa

Watch the website and media accounts for additional upcoming webinars at http://pgh-cleancities.org/prcc-webinar-series/

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# Calendar of Events

## BOARD OF DIRECTOR MEETING SCHEDULE FOR 2020

The PRCC Board of Directors meeting schedule is as follows:

October 7, 2020

All meetings will be at:

Five Star Development Inc.

1501 Preble Ave.

Pittsburgh, PA 15233

Starting at 9:30 AM

**Upcoming Events**

**Webinar – July 29, 2020**
**Time – 11:00am – 12:00 Noon**
**Renewable Natural Gas**
**Penn State University**
**Dr. Richards**

**Webinar – August 5, 2020**
**Time – 11:00am – 12:00 Noon**
**CNG Hybrid System**
**Hyliion**
**Ted Anderson & Matt Gold**

**Odyssey Day October 2, 2020**

**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

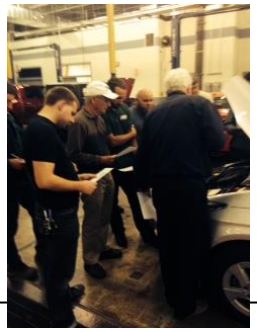
**Light Duty Natural Gas Vehicles**
ATE-115-WH85
1. CEU
TBD

**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**



**DRIVE PA FORWARD DC FAST CHARGER PROGRAM REOPENS**

On July 2, 2020, the PA Department of Environmental Protections opened up their DC Fast Charger Program. There is up to $1,800,000 available for reimbursement grants from the Pennsylvania Department of Environmental Protection (DEP) under the 2020 DC Fast Charging and Hydrogen Fueling Grant Program. Eligible Project Types

1. Publicly accessible DC Fast Charging projects for light-duty EVs.

2. Publicly accessible DC Fast Charging projects for light-duty EVs combined with Level 2 charging at the same location.

3. Publicly accessible hydrogen fuel cell supply equipment projects for light-duty hydrogen fuel cell vehicles.

The project period will begin upon execution of a grant agreement and end 24 months later. Projects without an executed site host agreement within 12 months of the date of the execution of the grant agreement will be subject to termination by DEP.

**Application Submission Periods** – The DC Fast Charging and Hydrogen Fueling Grant Program application submission period will begin upon public notice of availability and will remain open continuously through February 26, 2021. DEP will review and score applications after each submission period end date. Submission period end dates are 4:00 PM on:

- September 4, 2020
- February 26, 2021

For more information go to

http://www.depgis.state.pa.us/DrivingPAForward/

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Increasing Energy Efficiency by Diversifying Your Fuel Chain**

By William Sapon, Sr. Clean Energy & Transportation Advisor, Peoples Natural Gas

Every spring, the Lawrence Livermore National Laboratory (LLNL) releases its annual energy flow chart. The flow chart, ***Fig 2***, illustrates the nation's energy production, consumption, and the quantified amounts of useful and rejected energy. This diagram is critical in understanding the inflow and outflow energy values, which can then help us determine existing energy efficiencies and energy intensity improvement potential. LLNL estimates that in 2019, we consumed 100.2 Quads of energy, or one hundred quadrillion BTUS. That's down 1% from 2018.

Let's break down that 1% drop in energy usage from 2018 to 2019.

**Energy Usage Comparison 2018-2019.**

📉 Overall usage declined by 1%
🌬️ Wind energy increased by 8%
☀️ Solar energy increased by 10%
🔥 Natural gas increased by 3.5%

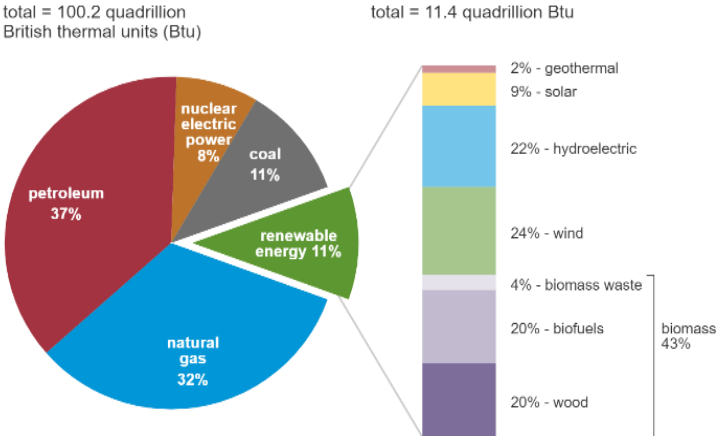
**Rejected energy is still over 2/3 of production.** Although we saw a 1.5% decrease in wasted energy in 2019 compared to 2018, it is our duty to continue to invest in energy efficiency. The displacement of coal by natural gas and renewables contributed in the drop in rejected energy due to their efficient use of energy. According to LLNL, rejected energy often takes the form of waste heat from auto exhaust and centralized power plants. By replacing aging centralized coal plants with decentralized **CHP-based microgrid plants**, we can further **reduce rejected energy**. In commercial and industrial applications, microgrids can be easily deployed closer to existing heat loads, which decreases electric grid inefficiencies while recovering energy in the form of useful heat.[1]

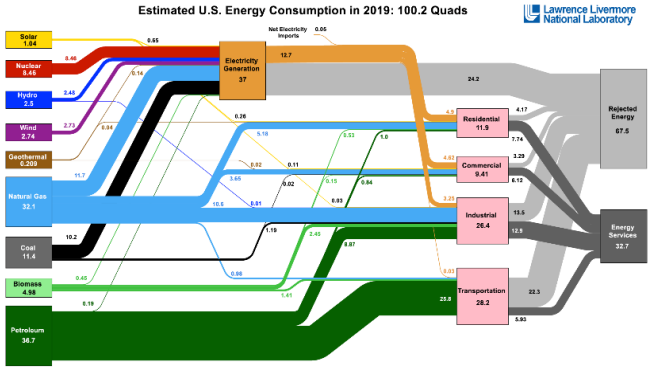
**Transportation is the biggest and most wasteful sector.**

The transportation sector is only 20% efficient. This means that for every 5 units of input energy, only 1 unit of energy is useful energy. **Road transport also produces vast amounts of CO2**, the most significant greenhouse gas (GHG), by using petroleum as primary energy source. A reduction of CO2 emissions can be achieved by **implementing alternative fuel chains**.[1] Building and fleet owners who diversify their energy and fuel chains, respectively, should strongly consider adopting alternative fuels to help meet corporate sustainability and GHGe reduction goals.

[1] Series, I. R. E. "Microgrids and active distribution networks." The institution of Engineering and Technology (2009).
[1] Hekkert, Marko P., et al. "Natural gas as an alternative to crude oil in automotive fuel chains well-to-wheel analysis and transition strategy development." Energy policy 33.5 (2005): 579-594

If you're interested in learning more about, clean, sustainable energy solutions, let's talk!




*Source: U.S. EIA, Monthly Energy Review, April 2020. You can find PDF version of* ***Fig 2*** *here.*

[1] U.S. Department of Energy, Energy Information Administration, "US Energy Information Administration Monthly Energy Review." April 2020.
[1] U.S. Department of Energy, Lawrence Livermore National Laboratory, "Estimated U.S. Energy Consumption in 2019." March 2020.

PEOPLES™

**Propane Autogas Benefits You May Not Know**

By Todd Mouw, president of ROUSH CleanTech

The most notable benefits to switching to propane autogas include decreasing both emissions and fleet cost. As an alternative fuel,

It's also known that propane autogas costs less and lowers maintenance costs. Yet, what often gets overlooked is the impact on human health, how safe propane vehicles are, and their energy security.

### Human Health Improved

When a fleet uses propane vehicles, they're investing in the health of its drivers and the communities in which they drive. Propane vehicles lower the amount of nitrogen oxides (NOx) emitted into the air. By reducing NOx, fleets are preventing health problems, such as asthma, bronchitis and other respiratory issues. Additionally, there are no strong-smelling fumes and noise levels are reduced compared to diesel, allowing drivers to focus more on the road ahead.

### Safety Built In

Not only are propane vehicles clean, but they are safe. Fuel tanks, which are constructed from carbon steel in compliance with ASME, are 20 times more puncture-resistant than gasoline or diesel tanks. Propane is part of a close-looped system, meaning the fuel is never exposed to air and won't spill. And, weather doesn't impact how propane vehicles run operating reliably in all weather conditions, from the hottest days to as cold as -40 degrees or more. The ROUSH CleanTech system is also designed with a thermal management feature. If the system is exposed to extreme heat due to the result of an accident or another cause, it adjusts to a vent cycle to manage pressure and prevent tank integrity from being compromised.

### Energy Security Included

When a fleet uses propane, it's relying on an established fuel system, providing security for its business. Right now, there are more than 27 million propane vehicles across the globe. About 200,000 of them are in the U.S. The nation has thousands of public fueling stations. More than 90 percent of the United States' propane supply is produced domestically, making it a stable and readily available option.

Propane vehicles offer deep benefits to better our communities. They can improve human health, provide a safe ride for drivers and deliver energy security for fleet operators.

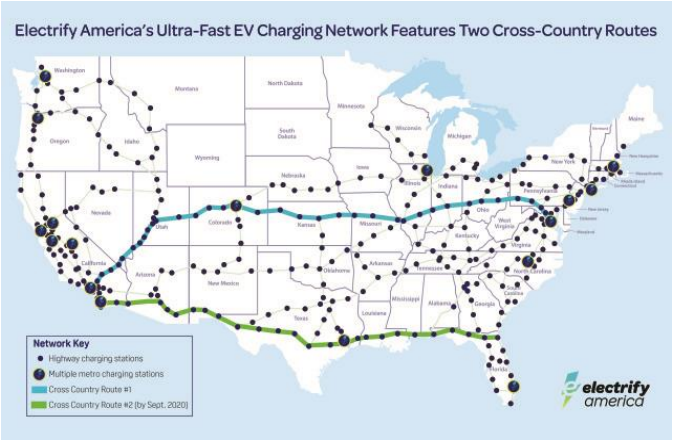
To learn more about ROUSH CleanTech's advanced clean transportation solutions, please visit ROUSHcleantech.com.

ROUSH® CLEANTECH

*Todd Mouw is president of ROUSH CleanTech, an industry leader of advanced clean vehicle technology. Mouw has more than two decades of experience in the automotive and high-tech industries. As former president of the NTEA Green Truck Association, Mouw helped set standards in the green trucking industry. To learn more, visit ROUSHcleantech.com.*

**Electrify America;s First Cross-Country EV Charging Route is Complete**

It stretches 2,700 miles from Washington DC to LA.




Taking a cross-country roadtrip in your electric vehicle is a little more feasible thanks to Electrify America. Its first coast to coast EV fast charging route is now complete, and the company plans to have another route finished by September. The routes provide high-powered chargers to all EV brands, and on average, the stations are spaced about 70 miles apart, so EV owners can travel beyond a single charge without being stranded.

The first route stretches over 2,700 miles from Washington DC to Los Angeles. It follows Interstates 15 and 70 and passes through 11 states. The second route will connect Jacksonville and San Diego.
"Electrify America's primary goal has always been to advance electric vehicle adoption in the U.S., and that starts by instilling feelings of confidence and freedom in consumers when it comes to EV ownership," said Anthony Lambkin, director of operations at Electrify America. "The completion of our first cross-country route is a significant step towards that goal – by making long-distance travel in an EV a reality, we hope to encourage more consumers to make the switch to electric."

Electrify America already has routes along the East and West coasts, and with these new routes it will be even easier for EV owners to travel farther. This is especially important for non-Tesla owners. Tesla's Supercharger network already covers much of the country and has some trip-planning tools. Those chargers are only available to Tesla customers. In contrast, Electrify America's chargers are "open" to all EVs.

**How do funds from federal programs, such as the Congestion Mitigation and Air Quality Improvement (CMAQ), Diesel Emissions Reduction Act (DERA), and Volkswagen (VW) Settlement, get distributed at the state level?**

First, it's important to note that states prioritize funds from federal programs in different ways and program processes vary by state and region. And in some cases, state legislation and long-term planning efforts can affect the ways that state agencies allocate their federal funding. Below, we've outlined how federal funds are distributed at the state level and included a few examples, sourced from the Alternative Fuels Data Center's Laws and Incentives database (https://afdc.energy.gov/laws), of how states are using funds from one or more of these programs. If you'd like a deeper dive into one of your state programs, please let us know.

**CMAQ** (https://afdc.energy.gov/laws/284)
National surface transportation acts authorize funds for highway construction and highway safety and public transportation programs. States receive federal funds to administer a variety of these transportation improvement programs, including CMAQ. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (Public Law 102-240), established the CMAQ Program (http://www.fhwa.dot.gov/environment/air_quality/cmaq/), and the most recent Fixing America's Surface Transportation (FAST) Act, enacted in 2015, reauthorized CMAQ through 2020.

The FAST Act also added new provisions related to alternative fuels, including the establishment of national alternative fuel station corridors and authorization for federal agencies to install electric vehicle supply equipment (EVSE) for employee use, subject to certain conditions (https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm).

The FAST Act directs the U.S. Department of Transportation Federal Highway Administration (FHWA) to apportion funding as a lump sum for each state then divide that total among apportioned programs. Once each state's apportionment is calculated, funding is set-aside for the state's CMAQ Program (https://www.fhwa.dot.gov/fastact/factsheets/apportionmentfs.cfm).

State departments of transportation (DOTs) and metropolitan planning organizations (MPOs) determine how to allocate federal funding within the state. Specifically, state DOTs and MPOs make planning, programming, and project selection decisions, which must be included in the approved state transportation plan or transportation improvement program. Then state DOTs select projects that meet applicable requirements for funding and are reimbursed the federal share (typically 80%).
For example, the Driving a Cleaner Illinois (https://afdc.energy.gov/laws/12307) is the Illinois Environmental Protection Agency's (IEPA) grant program developed in conjunction with the Illinois DOT, to distribute funding for various types of diesel emission reduction projects involving on-road vehicles, off-road equipment, and EVSE. Projects are funded by Illinois' portion of the VW Environmental Mitigation Trust, U.S. Environmental Protection Agency's (EPA) DERA Program, and FHWA's CMAQ Program. For specifics on funding for this program, see the following from the Driving a Cleaner Illinois website (https://www2.illinois.gov/epa/topics/air-quality/driving-a-cleaner-illinois/Pages/default.aspx):

The purpose of the CMAQ program is to provide a funding source to state and local governments for transportation programs or projects that reduce congestion and improve air quality in areas that do not meet, or need to maintain compliance with, federal air quality standards. FHWA provides this funding to state DOTs. Through Intergovernmental Agreements, the Illinois Department of Transportation provides this funding to IEPA for ultimate granting to eligible applicants for eligible projects."

**DERA** (https://afdc.energy.gov/laws/389)
The Clean Diesel Program provides support for projects that protect human health and improve air quality by reducing harmful emissions from diesel engines. This program includes grants and rebates funded under DERA, including state allocations (https://www.epa.gov/cleandiesel/state-grants-diesel-emissions-reduction-act-dera). On a federal fiscal year basis, EPA allocates DERA funds to eligible U.S. states and territories for the establishment of grant, rebate, and loan programs to achieve diesel emissions reductions. Using the formula outlined in the Energy Policy Act of 2005 (http://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf), the state grants are allocated 30% of the annual DERA appropriation. Of the state portion of the funding, two-thirds is provided to participating states and territories as base funding. The remaining third is allocated as an incentive to those states and territories that voluntarily provide a match equal to the base funding. For example, Iowa DOT is using VW Settlement funds as the DERA match in order to receive the EPA incentive. For more details see the Iowa DOT DERA website (https://iowadot.gov/dera).

To administer their allocation of DERA funds for eligible project types, states enter into cooperative agreements with EPA (https://www.epa.gov/sites/production/files/2019-12/documents/2020-dera-national-grants-competition-12-2019.pdf). Unlike CMAQ funding, note that there isn't a specific state agency that handles DERA funding in each state.

For example, the Wisconsin Department of Natural Resources provides EPA DERA funding for projects that reduce diesel emissions (https://afdc.energy.gov/laws/12325).

Funding for between 25% and 100% of eligible projects costs is available to businesses, nonprofits, and public entities that reduce diesel emissions by replacing engines, retrofitting exhaust controls, purchasing new vehicles, or installing idle reduction equipment (https://dnr.wi.gov/Aid/CleanDiesel.html).

**VW**

As part of the VW Settlement, a mitigation trust agreement was created for states, Puerto Rico, and the District of Columbia (DC) to pay for defined eligible projects that reduce oxides of nitrogen (NOx; eligible mitigation actions) (https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement). The settlement is structured to provide the states, Puerto Rico, and DC with the ability to select and implement appropriate mitigation actions funded by VW. As beneficiaries, each state, Puerto Rico, and DC receive a specific allocation of funds that can be used for any of the listed eligible mitigation actions, primarily based on the number of registered affected VW vehicles within the boundaries of the beneficiary.

Each state, Puerto Rico, and DC designated a lead agency to administer funds allocated to the state from the VW Environmental Mitigation Trust (https://www.epa.gov/enforcement/environmental-mitigation-trust-agreements). The state lead agency then submits its plan for administering the funds to the VW Trustee (Wilmington Trust). The plan details the types of projects and funding allocations.

For example, Colorado will receive over $68.7 million from the VW Settlement. The Colorado Department of Public Health and Environment (CDPHE) was designated as the lead agency to oversee how VW money is distributed and spent (https://www.colorado.gov/pacific/cdphe/VW).

CDPHE coordinates with the Colorado Department of Transportation (CDOT) Colorado Energy Office (CEO), Regional Air Quality Council (RAQC), and other agencies to help develop the state's beneficiary mitigation plan, including public outreach. The initial beneficiary mitigation plan is available here: https://environmentalrecords.colorado.gov/HPRMWebDrawer/Record/1239351/File/document.

In 2019, Colorado established a Transportation Electrification Workgroup (Workgroup; https://afdc.energy.gov/laws/12163) to develop, coordinate, and implement state programs and strategies to support transportation electrification in Colorado. CDPHE, along with the Workgroup, revised the state Beneficiary Mitigation Plan for allocating funds from the VW Environmental Mitigation Trust (https://environmentalrecords.colorado.gov/HPRMWebDrawer/Record/1451740/File/document).

Both beneficiary mitigation plans detail the funding process:

> "Colorado may submit funding requests to the trustee thirty days after submitting this Beneficiary Mitigation Plan. Colorado may not request payout of more than (i) one-third of its initial allocation during the first year after the Settling Defendants make their Initial Deposit into the trust or (ii) two-thirds of its initial allocation during the first two years after the Settling Defendants make their Initial Deposit. The trustee must approve, deny, or request modifications of funding requests within 60 days of receipt. The trustee shall respond to any modified or supplemental submission within 30 days of receipt. The trustee shall begin disbursing funds within 15 days of approval of a funding request "according to the written instructions and schedule provided by the Beneficiary." Appendix D, paragraph 5.2.15.1.
>
> Colorado has established a state account called the "VW Settlement Fund" to receive and hold disbursements from the trustee until an eligible mitigation action is completed. Colorado will fully track and account for all trust funds in its possession using established accounting mechanisms. Colorado will use program codes and appropriation codes to track the expenditures for each Eligible Mitigation Action and facilitate reporting. Funds must be spent in accordance with state fiscal and contracting laws and regulations.

CDPHE will enter contracts or interagency agreements with partner agencies to administer specific programs…the RAQC will administer the Alternative Fuel Vehicle Replacement Program, CDOT will administer the Transit Bus Replacement Program, and the CEO and RAQC will jointly administer the Zero Emission Vehicle Supply Equipment Program. CDPHE will administer DERA projects, publish Requests for Application, and award grants directly to funding recipients.

RAQC, CDOT or CEO will oversee the execution of individual projects, such as the replacement of one or more trucks or buses, or the installation of an electric vehicle charging station. These partner agencies will announce the availability of funds, publish criteria and applicable requirements for receiving funds, solicit applications, determine eligibility, and approve applications for funds."

To see whether your state has passed legislation on how VW funding should be used, please select your state from the AFDC State Laws and Incentives page (https://afdc.energy.gov/laws/state), or email the Technical Response Service.

**Westmoreland Sanitary Landfill to Produce Vehicle Fuel from Renewable Sources**

***May 27, 2020***. Westmoreland Sanitary Landfill is pleased with the terms and conditions of the Consent Order and Agreement entered into with the Pennsylvania Department of Environmental Protection (DEP) in February 2020. Under the terms and conditions of this agreement, Westmoreland Sanitary Landfill has committed to investing substantial amounts of capital to purchase and install technology and equipment capable of treating and evaporating the leachate generated from the landfill on site.

Westmoreland Sanitary Landfill is confident that the plan for onsite treatment and evaporation will resolve the landfill's recent leachate disposal issues.

Meantime, the landfill's parent company, Pittsburgh-based Noble Environmental announced that it is working to reduce greenhouse emissions from Westmoreland Sanitary Landfill by up to 90%. The company is also transforming waste into reusable energy. A process involving membrane technology is now being used to separate methane from the gases emitted at landfills across the country, including the one in Belle Vernon. This innovation strips CO2 and other volatile organic components from the gas.

Noble Environmental CEO Rich Walton said, "The process is part of a $10 million dollar investment that will improve emissions by collecting landfill gas and converting it into valuable natural gas that will power our natural gas vehicles."

Those natural gas vehicles include trash hauling trucks used by Noble Environmental subsidiary County Hauling which services municipalities through Western Pennsylvania.

**Pittsburgh's Rapid Bus Line Project Lands $100M from Federal Government**

BOB BAUDER | Friday, May 29, 2020 8:33 a.m.


PORT AUTHORITY OF ALLEGHENY COUNTY
A computer rendering of a Bus Rapid Transit stop in Pittsburgh

TribLIVE's Daily and Weekly email newsletters deliver the news you want and information you need, right to your inbox.

The U.S. Department of Transportation has approved nearly $100 million for a rapid bus line linking Downtown Pittsburgh and Oakland.

President Trump announced in a tweet Thursday that the Port Authority of Allegheny County would receive $99.9 million for its long-planned Bus Rapid Transit project.

"We are pleased to learn such positive news for our bus rapid transit project," Port Authority CEO Katharine Kelleman said. "The federal dollars are a significant portion of the overall funding plan. We look forward to discussing this with federal transit officials next week." Local officials earlier this year said the federal grant was a key piece of funding needed to start construction.

Mayor Bill Peduto lauded local congressional representatives for securing the grant.

"It is fantastic that we received the funding," Peduto said. "It means that we're moving now to the implementation part and out of the planning phase."

He said the project might have to be scaled back somewhat because of Port Authority funding cuts, but the overall concept would remain the same.

Plans call for dedicated bus lanes running outbound from Downtown along Forbes Avenue to Oakland and back along Fifth Avenue. Three branch lines will extend to Swissvale via a connection in Oakland to the Martin Luther King East Busway, Highland Park and Hazelwood.

BRT buses will operate seven days a week, arriving about every three minutes during rush hours and up to seven minutes during off-peak hours. The system will have 44 stops, including one on Wood Street, Downtown, where riders can access the Port Authority's light rail system.

Allegheny County Executive Rich Fitzgerald said he is excited about the project.

"We were delighted to get the news about the funding decision and thank President Trump for the financial support of the Bus Rapid Transit (BRT) project," he said in a statement Friday. "We are also lucky that Congressman Doyle, the 'Dean of the Delegation,' has such vision and clout and has championed this project from the very beginning. He, along with Congressman Conor Lamb who is a member of the Transportation Committee, have been vocal advocates for this important connection since it was first envisioned."

Fitzgerald said he is grateful the project has bipartisan support.

"This project will be transformative for our city, connecting Downtown Pittsburgh with fast-growing areas like Oakland and the East End," Doyle, D-Forest Hills, said in a statement. "This project will connect some of the fastest-growing parts of our city and provide a fast, efficient way for workers to commute."

**What alternative fuel vehicle (AFV) first responder training materials are available?**
There are two main AFV first responder training organizations at the national level: National Fire Protection Association (NFPA) and National Alternative Fuels Training Consortium (NAFTC).

NFPA (https://www.nfpa.org/) offers self-paced online training for emergency responders that covers how to safely deal with emergency situations involving alternative fuel passenger vehicles, trucks, buses, and commercial fleet vehicles. NFPA's AFVs Safety Training page (https://www.nfpa.org/Training-and-Events/By-topic/Alternative-Fuel-Vehicle-Safety-Training) provides free access to online resources that are customized for various first responders in the United States. Please visit NFPA's website for details. A few key training resources are:

- AFVs Training Program for Emergency Responders Online Training (https://catalog.nfpa.org/Alternative-Fuel-Vehicles-Training-Program-for-Emergency-Responders-Online-Training-P15552.aspx?order_src=D762)
    - NFPA's self-paced online training teaches emergency responders including firefighters and Emergency Medical Services (EMS) professionals how to safely deal with emergency situations involving alternative fuel passenger vehicles, trucks, buses, and commercial fleet vehicles. Upon completing the program, students will receive a certificate for their successful completion.

- Emergency Field Guide (https://catalog.nfpa.org/Emergency-Field-Guide-2015-Edition-P13872.aspx?icid=D762)
    - This field guide is available for first responders free of charge. This guide addresses potential hazards and know how to handle electric, hybrid, fuel cell, and gaseous fuel trucks, buses, commercial fleet, and passenger vehicle.

- Emergency Response Guides (https://www.nfpa.org/training-and-events/by-topic/alternative-fuel-vehicle-safety-training/emergency-response-guides)
    - These guides are also free to download. NFPA actively maintains a collection of vehicle-specific fire-prevention guides for over 35 AFV manufacturers.

You also may consider reviewing the Triangle Alternative Fuels First Responder Online Training Modules, which are free, self-paced curriculum for the fire and rescue community (http://www.ncdoi.com/OSFM/RPD/PT/Videos_Alternative_Fuels.aspx). The modules cover gaseous fuels, biofuels, and electric-drive vehicles and the safety measures that must be taken for each.

NAFTC develops curricula and disseminates training about alternative fuels, AFVs, and advanced technology vehicle education (http://naftc.wvu.edu/). NAFTC offers AFV First Responder Safety Training (http://naftc.wvu.edu/afv-safety-training-home/). The First Responder Safety Training Overview page (https://obh.uct.mybluehost.me/toolbox/?page_id=260) provides the materials and information you need to plan promote, host and evaluate First Responder Safety Training. Note that NAFTC's training schedule is currently on hold due to the coronavirus. For information on upcoming trainings and classes visit: http://naftc.wvu.edu/training-schedule/.

There are also a few fuel-specific training resources, such as:

- Ethanol Emergency Response Coalition's Ethanol Safety Seminars (https://www.ethanolresponse.com/upcoming-ethanol-safety-seminars/)

- NFPA's Electric/Hybrid Vehicle Safety Training for Emergency Responders (http://www.nfpa.org/News-and-Research/Data-research-and-tools/Electrical/Electric-Hybrid-Vehicle-Safety-Training-for-Emergency-Responders)

- Center for Hydrogen Safety's Introduction to Hydrogen Safety for First Responders (https://www.aiche.org/academy/courses/ela253/introduction-hydrogen-safety-first-responders)

- Natural Gas Vehicle Institute's Naturel Gas Vehicle Training for Firefighters and First Responders (https://www.ngvi.com/role/firefighters-first-responders/)

- Propane Education & Research Council's *Propane Emergencies 3rd Edition Book* (https://propane.com/resource-catalog/resources/propane-emergencies-3rd-ed/)

Lastly, while a bit dated, there are a few First Responder Training Resources located on the Clean Cities SharePoint (https://members.cleancitiessharepoint.org/Wiki/First%20Responder%20Training.aspx).

# PRCC Sustainable 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