# PITTSBURGH REGION CLEANGITLES

# GAZETTE

#### DRIVING THE WAY TOWARD ENERGY INDEPENDENCE

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CCAC's Bob Koch and National Car Charging's Michael Kirven Led PRCC's Hands-On Workshop on Hybrid Electric Vehicles in June

#### CHALLENGES AND OPPORTUNITIES IN DEVELOPING A WORKFORCE FOR ELECTRIC VEHICLES (EVS)

#### **ISSUE CONTRIBUTORS:**

Rick Price, Executive Director Kristen Sabol, Program Assistant Jeff Twardy, Webmaster As the world increasingly recognizes the urgency of transitioning toward sustainable transportation, electric vehicles (EVs) have emerged as a promising solution. However, the successful adoption of EVs is not only dependent on technological advancements but also on developing a skilled workforce capable of supporting the industry's growth.

First, we know that a transition to electric vehicles is a crucial step in reducing greenhouse gas emissions and combating climate change. But without an adequately trained workforce, it will be difficult to meet the growing demand for EVs allowing us all to contribute to a cleaner, greener future. Workforce Development for EVs is therefore essential.

The EV industry also presents economic significant opportunities. Developing a skilled workforce can lead creation, stimulate local to job economies, and attract investments in research and development, infrastructure manufacturing, and development.

In listening to community members throughout the Western Pennsylvania region, Pittsburgh Region Clean Cities (PRCC) has frequently heard Stakeholders express concerns about building the future EV workforce. Why do these constituents feel it is such an important issue?

Although many share in a strong commitment to addressing climate change while pursuing the economic opportunities ade possible by the coming wave of EV adoption, there is still some hesitation about adopting EVs without a certified support technician on staff. It is felt that too often, this specialized talent is hired up quickly and early by the car makers and dealers, leaving fleet managers unable to find the critical staff they need to make the transition to electrification feasible.

That's why PRCC is currently partnering the Community College with of Allegheny County (CCAC), West Virginia University (WVU) and the National Alternative Fuels Training Consortium new Workforce (NAFTC) on а Development Initiative that will better support the transition to electric vehicles in our region. Together the partnership has already secured a 2 year grant to facilitate curriculum development and training efforts focused on Workforce Development.

An initial hands-on training session was held on June 22nd at CCAC's West Hills Campus with Bob Koch of CCAC and Michael Kirven of National Car Charging. The workshop focused on maintenance and safety aspects of Hybrid Electric Vehicles. Additional workshops are in development.

What are some of the other challenges to establishing the EV Workforce?
1.) Technological Advancements: The rapid evolution of EV technology requires a knowledgeable and adaptable workforce capable of keeping up with the latest advance-

ments. Continuous training and upskilling programs are necessary to bridge the knowledge gap across various domains, from battery technology to charging infrastructure.

and Demand Gap: The 2.) Supply increasing demand for personnel manufacturing skilled EV in and servicing is outpacing the availability of a trained workforce. This gap poses a challenge for recruiting and retaining talent, requiring proactive measures to develop the necessary skills at various educational levels.

As we work to overcome these barriers, there are significant opportunities on the road ahead!

Collaborations between educational institutions, industry stakeholders, and government bodies is crucial in designing and implementing comprehensive EV training programs. This includes incorporating EV-related courses, internships, and apprentice-



Blink Charging station recently donated to CCAC for Workforce Development training.

iships to provide hands-on experience and equip individuals with the necessary skills for the EV industry.

One way that PRCC is addressing these barriers is by inviting our partners, collaborators and friends to donate equipment that can be used for EV training efforts at CCAC. Initial donations have been received by Eaton Corporation and Blink Charging; we are optimistic that more contributions will soon be on the way!

As the EV market expands, there will be a surge in demand for electricians, technicians, and engineers specializing EV infrastructure development, in networks, and charging battery technologies. Investing in these skilled trades and fostering partnerships between public and private entities can create job opportunities and ensure a robust EV ecosystem.

CCAC is quickly evolving its skilled trades training programs specific to the EV space, including some certification offerings with Ford, VW and other automakers. The school is also pursuing partnerships to develop a development workforce program focused exclusively on charging. New offerings may be made available at other CCAC locations beyond the West Hills Campus. If you are interested in learning more about these programs or would like to get involved in curriculum development, please reach out to Bob directly at 412-788-7378 or rkoch@ccac.edu.

And finally, innovation in EV technology ongoing, presenting immense is opportunities for research and development. Encouraging collaboration between academia, industry, and research bodies can drive breakthroughs in battery efficiency, range extension, lightweight materials, and other areas critical to electric vehicle progress.

PRCC can help stakeholders identify and apply for critical funding to explore areas of innovation. these Two examples include the **Department of** Energy's Office of Energy Efficiency and Renewable Energy (EERE) Fiscal Year 2023 Vehicle Technologies **Office (VTO) Program Wide Funding Opportunity** and the Consumer **Electronics Battery Recycling**, **Reprocessing, and Battery Collection** funding opportunity.

PRCC and its partners know that developing a skilled workforce for electric vehicles is a crucial step forward in realizing the potential of transportation. sustainable By addressing the challenges and seizing the opportunities, we can cultivate a workforce in our region that is equipped to support the growth of the EV industry. It is through collaboration, education, and investment in research and development that we can drive the electrification revolution and create a greener, cleaner future for all.

# DEPARTMENT OF TRANSPORTATION OPENS SMART COMMUNITY RESOURCE CENTER

The <u>Smart Community Resource</u> <u>Center (SCRC)</u>, maintained by USDOT's Intelligent Transportation Systems Joint Program Office, includes resources that can be used to develop intelligent transportation systems and smart community transportation programs.

A "smart community" is a community that uses innovative technologies, data, and analytics to improve the community and address local challenges. Intelligent transportation systems (ITS) play a key role in building smart communities of the future.

SCRC connects Tribal states, governments, and local communities with resources that can be used to develop and deploy innovative solutions to transporation challenges by receiving, analyzing, and sharing data in real time to make better decisions and provide more responsive, efficient, data-driven services.

## THE SUCCESS OF "CLEAN CITIES" SHOWS HOW U.S. GOVERNMENT CAN HELP DEPLOY MORE CLEAN TECH

By U.S. Department of Energy Originally published June 8, 2023 in *CleanTechnica.com* 

long-standing federal effort A to decarbonize transportation proves how technologies make advanced can meaningful, real-world impacts by intertwining national goals and initiatives with local, community-based actions.

The innovative model built over the past 30 years by the Clean Cities Coalition Network demonstrates how federal programs can successfully deploy new technologies through longmultidirectional stakeholder term. engagement. Clean Cities coalitions implement alternative fuel and advanced transportation projects throughout the United States. A new National Renewable Energy Laboratory (NREL) report, Clean Cities: A Model of **Collaborative Technology Innovation** Built Over 30 Years, tells the story of Clean Cities, documenting how and why the success of Clean Cities can serve as a model for other federal efforts.

<u>**Clean Cities**</u> is a collaboration of more than 75 coalitions covering nearly every state and 85% of the U.S. population. Coalitions boost the country's economic vitality, energy security, and quality of life by advancing the deployment of



*Clean Cities coalitions act locally in urban, suburban, and rural communities throughout the nation, covering 85% of the U.S. population* 

affordable. efficient. and clean transportation fuels and technologies. As the technology deployment arm of the U.S. Department of Energy's (DOE's) Vehicle Technologies Office, Clean Cities operates within a framework of collaborative governance and leverages expertise from federal agencies, national laboratories — including NREL - and coalitions. Coalitions provide resources and technical guidance to local decision makers and fleets implementing alternative and renewable fuels, electric vehicles, idlereduction measures, fuel economy improvements, new mobility choices, and emerging transportation technologies.

"Clean Cities has thrived for 30 years in part because it is so collaborative and leverages relationships among public, civic society, and private sector entities at the local, state, and national level," said Patricia Romero-Lankao, a senior research scientist and interdisciplinary sociologist at NREL who co-authored the report. "These collaborations are highly intensive while still preserving the autonomy of the individual coalitions."

In addition to rigorous collaboration, the institutional structure of Clean Cities contributes to its long-term success by being stable yet nimble, enabling continuous adjustment and adaptation. Each coalition receives national-level support but remains semi-autonomous and makes independent strategic and programmatic decisions in response to local needs and market shifts.

"Coalition staff are typically hired by and from the community they serve, so they have knowledge of the local area with and experience local systems," transportation Romero-Lankao said. "This helps foster local trust, allowing coalitions to build bridges between DOE, national labs, transportation stakeholders. and Coalitions can connect with networks and communities where national entities often cannot directly engage."

Building trust at the local level creates a sense of shared motivations and can help overcome competing local and national interests — a historic challenge for national-level environmental efforts, according to the report. Federal coordination also enhances the capacity of local stakeholders who otherwise would lack authority or access to initiate the types of large-scale collaborations that generate widespread impact.

Clean Cities engages in broad coordination and leverages internal expertise to advance high-level goals and strategies. Coalitions share local insights, data, and experiences with national laboratories and DOE to improve national data sets, resources, and technical response capabilities. NREL and other national laboratories proactively developed this community of collaboration over decades by creating opportunities for ongoing relationship building, including a peerto-peer mentorship program, in-person workshops for coalition staff, virtual working groups, and outreach materials that support consistent messaging among all coalitions.

"The level of cooperation Clean Cities has created among national labs and between coalitions is unique in the federal government," said Margo Melendez, a transportation technology deployment group manager at NREL. "We all share the same goals and have an essential role to play, so we are collaborating instead of competing. This allows Clean Cities to make a much bigger impact than if we were all acting on our own." A project that raised awareness and acceptance of electric vehicles (EVs) across the Midwest exemplifies how this level of collaboration enhances impact. Leaders from Clean Cities coalitions in seven states (Illinois, Indiana, Michigan, Minnesota, North Dakota, Ohio, and Wisconsin) joined forces to form Midwest Electric Vehicle **Opportunities:** Learning, eVents. Experience (Midwest EVOLVE), which reached more than 290,000 people and helped change the narrative about EVs in the Midwest. Survey data collected by the project partners showed that 75% of people reached by Midwest EVOLVE took the next step of visiting a dealership or talking to someone else to consider EVs more closely. Twenty-two percent of respondents said they ultimately purchased or leased an EV.

"Clean Cities is required by federal law to be technology and fuel neutral, meaning it can't advocate for a specific technology or fuel," said Wendy Dafoe, a Clean Cities senior project leader at NREL. "This helps coalitions remain relevant wherever they are located, because they create solutions that make sense for their local communities."

The collaborative framework, nimble structure, and iterative feedback mechanisms demonstrate the power of Clean Cities' long-term collaborative governance for initiatives aiming to impact local communities at a national scale. Clean Cities centers the knowledge, expertise, and vision of local communities, making it a model for how to design community-centered solutions that align national objectives with local goals and visions.

The long-standing success of Clean Cities as a technology deployment model is also being leveraged by more recent federal efforts, including **Clean** Energy to Communities (C2C) a new DOE program that helps local governments, tribes, electric utilities, and community-based organizations set and meet their clean energy goals. C2C leverages the latest set of advanced capabilities from national laboratories, including NREL, as well as community engagement and peer-learning strategies. Under NREL's leadership, Clean Cities coalitions will support participating communities in C<sub>2</sub>C leveraging offerings by the transportation technology deployment partnership-building and expertise within the Clean Cities Coalition Network.

Learn more about <u>NREL's sustainable</u> transportation and mobility research. And sign up for NREL's quarterly transportation and mobility research newsletter, <u>Sustainable</u> <u>Mobility Matters</u>, to get the latest news.

Courtesy of NREL.

## REVOLUTIONIZING THE ALTERNATIVE FUEL INDUSTRY - HOW NEUFUEL SOLUTION IS MAKING ALTERNATIVE FUELS MORE AFFORDABLE AND CONVENIENT

#### **BY ZIYI SONG**

My career goal is to become a business analyst, and I have always wanted to environmental contribute to sustainability. Working with the Center for Sustainable Business and Ingevity provides me the opportunity to align my interests with my career goals and then put them into practice. The Fellowship also provides me with valuable practical experience in marketing analytics, data visualization, and data presentations to customers. I've gained solid fundamentals on those skills throughout the experience, and those will assist me further in my career development.

Since the beginning of the Fellowship, I've been studying the characteristics of multi-pronged strategies for decarbonizing fleet solutions. As there are multiple approaches in renewable energy spaces such as full electric, hybrid electric, hydrogen fuel cells, and biofuels, NeuFuel Solution at Ingevity stands out as a leader in such a space. The team developed the ANG (adsorbed natural gas) technology to make the natural gas vehicle conversion more accessible. The ANG system utilizes Ingevity's specialized activated carbon that can adsorb or soak up natural gas molecules on its internal surface,

creating a compact and stable storage medium. The activated carbon is packed into a cylinder, which can be filled with natural gas at a low pressure of around 900 psi (pounds per square inch). This is much lower pressure required than the for traditional compressed natural gas (CNG) storage, which typically requires pressures of 3,000 to 3,600 psi. The system boosted the storage efficiency and accessibility of natural gas; it represents an innovative and more sustainable approach. The NeuFuel offers Solution the fleet of medium/light-duty vehicles a chance to access natural gas from a housegrade pipeline without worrying about safety and accessibility of the expensive infrastructure.

The NeuFuel Solution also utilizes RNG (renewable natural gas), which is a type of biogas that is produced from organic materials such as agricultural waste, food waste, and wastewater. It can be used in the same applications as traditional natural gas without the need for major modifications to existing infrastructure. Since RNG is captured from organic waste, the capturing of the methane and combusting reduces the impact on the environment. Methane is 28 times more harmful than CO2 as a type of



Ziyi Song with Chris Gassman at Columbia Gas Ribbon Cutting Ceremony Event Last Fall

greenhouse gas. Therefore, capturing it, combusting it, and using the energy from combustion helps reduce the impact and moves us closer to carbon neutrality.

The NeuFuel team is passionate about helping the environment. They partnered with **DEMI** to bring the "Cow Fart Bus" to schools across the country, visited school districts and engaged with kids. The bus is being considered as an innovative and sustainable transportation solution, as it not only reduces emissions from the bus itself but also helps educate consumers about RNG. School districts can use their existing school buses to make the conversion; meaning the "Cow Fart Bus" will help them build a more sustainable and cost-saving transportation system compared to using diesel as the only fuel source.

#### **The Challenge**

I've been researching ANG-RNG tech stack solution and alternative fuel vehicles, then attending events and studying materials to gain knowledge on the mechanism, metrics, and characteristics of the system. I discovered the challenge is to stand alternative among all fuel out solutions. particularly electric. propane, and CNG vehicles. Increasing product awareness of the solution and educating consumers on RNG is crucial for the NeuFuel team to succeed in this alternative fuel competition.

#### The Methodology/Approach

conducted l've analysis and visualization on AFDC (alternative fuel data center) data using an open source statistics tool called R on all alternative fuel vehicles to confirm my direction and strategies. The analysis found that nearly all the natural gas (CNG, LNG, LPG) or propane infrastructures are owned by the government or private organizations. Government-owned fueling facilities generally don't open for public use; most of them are for public transportation or city works. Some of the privately owned stations are built for specific fleets. The operation of privately owned facilities is just like that of a publicly funded gas station if they are open for public access. However, the bar plot shows that less than 40 privately owned compressed natural gas refuel stations across the entire state of Pennsylvania have public access, and the rest of them are primarily owned by the government or inaccessible. This means it's nearly impossible for regular company fleets to get access to that CNG (Compressed Natural Gas) infrastructure freely.

The analysis narrows down the target audience of NeuFuel Solution to existing natural gas fleets that have accessibility issues for a refuel station and businesses that have natural gas access in their buildings. In the same analysis, the number of public electric charging stations is 30 times more (1200 charging points) than CNG refueling stations in the state of Pennsylvania. More than half of them fall in the PA category which means they were built for public access, just like a gas station. The conclusion also verifies the challenge that NeuFuel Solution is facing, to stand out among all alternative fuel solutions.

Another part of my approach is to analyze another option in the climate positive transportation pathways portfolio, electric vehicles. I've found out that if our electricity is not by enough renewable generated resources, the **well-to-wheels** (W2W) greenhouse gas emissions of fleet electric vehicles are generally higher than vehicles using NeuFuel Solution powered by RNG. A bar plot was created with data from the **ALFLEET Tool** and **EPA**. Considering the capacity of RNG to reduce GHG emissions, the W2W emission of RNG is significantly lower than electric vehicles in the Pittsburgh region when the consumption of gasoline equivalent is 30 gallons. This emission number is obtained from the Pittsburgh region power grid, RFC west, whose electricity power source is made up of 27% gas and 35% coal. The emission calculator

for the bar plot is available here (DOWNLOAD FILE).

#### Learnings

When it comes to reducing carbon footprint and **<u>GHG</u>** emissions, EVs are undoubtedly cleaner and more sustainable than traditional gasolinepowered vehicles and will continue to become cleaner as we clean emissions out of the grid. However, it's important to recognize that they are not completely emission-free yet and put the "buying an EV zeros my emission" mindset away. Fighting climate change in an innovative way not only means reducing emissions, but also considering all factors as well as a cost-saving solution. The NeuFuel Solution team at Ingevity nudges the entire fleet solution industry without a convenience trade-off with ANG technology and RNG as renewable energy. Sustainability on the businessto-business side is still facing the challenge of awareness. There could be some improvements to fleet managers' knowledge space on alternative fuels. The decision makers hold the key to nudging the process of transformation. NeuFuel team could take this as an educational opportunity for fleet managers. Exploring and comparing multiple options, both financially and environmentally, will assist the business's growth and make a positive ESG (environmental, social, and governance) metrics impact when stepping into innovative alternative fuel vehicles.



A Ribbon Cutting Ceremony marked the opening of 3 new dual-port EV charging stations in Oakmont.

# OAKMONT LEADS WITH EV VEHICLE AND CHARGING FOR THE COMMUNITY

The Oakmont community, utility partners, and municipal officials celebrated the opening of its first public electric charging stations and showcased its new electric municipal vehicle! Through **Duquesne Light Company's Community Charging Program**, the Borough of Oakmont installed **<u>3 Dual-Port EV charging</u>** Riverside stations at park. This provides six publicly accessible EV parking spots, including a space for those with disabilities. The Borough recently purchased a F-150 Lightning for use by their Parks Department, poised to save the Borough in fuel costs over its lifetime. With this project, Oakmont Borough joins a growing number of communities in Pennsyvlaia taking steps to save

money, provide new opportunities to residents, and reduce emissions.

To learn more about these efforts, contact Assistant Borough Manager, Phyllis Anderson at:

assistant@oakmontborough.com.

# NEW AFDC WEBPAGE ON EVs FOR CONSUMERS

The Alternative Fuels Data Center now includes <u>a webpage with consumer-</u><u>oriented information on EVs</u>. This page features content to help consumers find the right vehicle for their needs, understand charging options, and learn about EV driving and maintenance considerations.

Download a corresponding two-page **EVs for consumers brochure** to share with your stakeholders.

#### **UPCOMING EVENTS:**

# BOARD OF DIRECTORS MEETING SCHEDULE FOR 2023:

The PRCC Board of Directors meeting schedule is as follows:

July 12, 2023 September 6, 2023 November 1, 2023

10:00 a.m. - 11:30 a.m.

#### **OTHER UPCOMING EVENTS:**

Webinar: DEMI-NeuFuel School Buses July 11, 2023 2 p.m. - 3 p.m.

**EV Preparedness Workshop for Ambridge Borough** July 19, 2023 10 a.m. - 12 p.m.

**Drive Electric PA Coalition Meeting** July 20, 2023 10 a.m. - 12 p.m.

**PRCC Virtual SWOT** July 27, 2023 10 a.m. - 11 a.m.



#### TRAINING COURSES:

PRCC joins the National Alternative Fuels Training Consortium and the Community College of Allegheny County – West Hills Center in offering training classes.

This year, we are expanding our curriculum offerings focused on alternative fuels and we'd love to hear from you!

Please join us for our upcoming course offerings:

Hands-On Workshop: Propane Vehicles TBA

Hands-On Workshop: Natural Gas Vehicles TBA

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

#### U.S. OIL AND U.S. GAIN COMBINE TO FORM U.S. ENERGY™

U.S. Oil, a leader in retail, commercial, and wholesale fuel distribution; supply and trading; logistics; and terminal operations of refined products and renewable fuels, and U.S. Gain, a leader in the development and distribution of alternative fuels and environmental credits, announced the formation of a combined company: U.S. Energy<sup>™</sup>.

U.S. Energy is a vertically integrated energy solutions provider proficient in refined products, alternative fuels, and environmental credits. Its comprehensive portfolio of assets paired with risk management, financial services, and advisory insights offer customers realistic, executable strategies that satisfy both their economic and environmental goals.

U.S. Energy has offices in Wisconsin and Texas with an asset portfolio of more than 30 refined product terminals, 40 renewable natural gas development projects, 50 alternative fuel stations, and three forestry projects. As a key supplier to the transportation market, U.S. Energy offers diesel, gasoline, natural gas liquids, ethanol, biodiesel, renewable diesel, compressed natural gas, renewable natural gas, electric



The newly formed entitly, U.S. Energy, will continue to supply a wide variety of leading alternative fuel solutions.

charging solutions, hydrogen, and a variety of carbon credits. Tenured in trading, logistics, storage, compliance, and marketing, U.S. Energy is uniquely positioned to serve its customers' current and future energy needs.

As a privately held, family-owned business, U.S. Energy is a U.S. Venture company, committed to finding a better way to be the very best provider of transportation products, sustainability solutions, and insight driving the world forward.

U.S. Oil was most recently led by Eric Kessenich who joined the company in 2010 and was promoted to president in 2017. Kessenich was further promoted to chief operating officer of U.S. Venture in August 2022. As chief operating officer, Kessenich will oversee the operations of all U.S. Venture companies: including U.S. Energy, U.S. AutoForce, U.S. Lubricants, Breakthrough, and IGEN. "This reunion is an important milestone for our company. While our roots remain in the refined products side of our business, we recognize the need to offer a more diverse range of solutions under one brand as our customers' needs evolve—ultimately becoming an energy-agnostic solutions provider," shared Eric Kessenich, chief operating officer at U.S. Venture. "With U.S. Oil's tenure in refined products and U.S. Gain's expertise in renewables, we knew we had an opportunity to service with our customers а more comprehensive offering and а streamlined experience."

Mike Koel has been selected to lead U.S. Energy as its president. Koel has been with U.S. Venture for over 20 years-working within U.S. Oil as a trader, vice president of supply and trading, and vice president of business development. In May 2017, Koel was named president of U.S. Gain: a Sustainable Energy Solutions™ company he founded within U.S. Oil in 2011. In his new role as president of U.S. Energy, Koel will be responsible for the company's growth and expansion into new markets and technologies.

"I'm honored to lead the U.S. Energy team in this next chapter as a company, and I'm excited to share we've already discovered synergies and opportunities to improve our customer experience," said Mike Koel, president of U.S. Energy. "Our vertical integration throughout the energy supply chain



enables access to an array of solutions at a competitive price. As an energy developer, distributor, and marketer, we can ensure our customers are aware of risks and opportunities within the industry and benefit from our development of new technologies that integrate with our service offerings."

"The U.S. Oil brand dates back to our inception as a business. Formerly Schmidt Brothers Oil known as Company, my father and uncle founded this company in 1951 on our customer promise of finding a better way," shared John Schmidt, president and chief executive officer at U.S. Venture. "As market needs have shifted, so have our solutions—giving way to new portfolio offerings and additional business units. The U.S. Energy brand continues that legacy: putting our customers first alongside their unique energy needs."

Driven to be the very best and most trusted energy solutions provider dedicated to finding a better way toward a sustainable future, U.S. Energy has diversified throughout the energy supply chain to better serve its customers. For more information, visit www.us-energy.com.

#### ULTRA-LOW NOX COMES STANDARD WITH ROUSH CLEANTECH PROPANE AUTOGAS ENGINES

#### Beginning mid-2023, all ROUSH CleanTech propane engines certified to near-zero nitrogen oxide emissions

ROUSH CleanTech has received California Air Resources Board certification for 2023 model year propane engines at 0.02 grams per brake horsepower-hour. Previously available as an added-cost option, the oxide ultra-low nitrogen (NOx) emissions package is now standard on every propane engine sold by ROUSH CleanTech.

The engines emit 90% less NOx emissions than allowed under 2023 regulations, and are 60% cleaner than California's 2024 low-NOx standard, without compromising performance or efficiency.

"Customers can rest easy knowing that ROUSH CleanTech propane engines provide ultra-low NOx emissions with no added cost today. And, we are well on our way to meeting California and EPA's emissions standards for 2027 and beyond," said Todd Mouw, executive vice president at ROUSH CleanTech. Fleet purchasing 2023 operators models will have a greater chance of accessing state and federal funds that incentivize near-zero emission vehicles, including the Infrastructure Investment and Jobs Act's Clean School Bus Program and the Volkswagen Environmental Mitigation Trust settlement, among others.

As a leading alternative fuel technology company, ROUSH CleanTech first released <u>low NOx engines in 2018</u>. And in 2021, ROUSH CleanTech was the first manufacturer to receive CARB's ultra-low 0.02 grams per brake horsepower-hour certification for <u>Blue</u> <u>Bird school buses</u> and commercial vehicles. "We didn't wait for the regulation to go into law. We already achieved it," said Mouw.

ROUSH CleanTech's newest technology and a growing renewable propane supply showcase how the fuel is no longer simply a "bridge" to help fleets reach U.S. emissions goals, but rather a destination transportation energy. Once fleets adopt renewable propane, they will operate with the same power and reliability as conventional propane. Renewable propane has an ultra-low carbon intensity, and at the point of combustion it is actually carbon neutral.

Nitrogen oxides are a group of gases known as a primary contributor to acid rain, smog and other air quality issues. According to the Environmental Protection Agency, exposure to NOx can trigger health problems, such as asthma and other respiratory issues, especially in children. Conversely, the EPA states that operating vehicles with ultra-low emission engines can make significant improvements to regional air quality and reduce a wide variety of human health impacts.

There are more than 37,000 advanced clean vehicles equipped with ROUSH CleanTech's engines on the road today, including 18,500 school buses in 1,000 U.S. school districts. "Our propane autogas engines reinforce ROUSH CleanTech's commitment to provide vehicle solutions that reduce the impact to the environment while leveraging an abundant, domestically produced fuel that costs less than diesel. We double down on that commitment every year," said Mouw.

About ROUSH CleanTech: ROUSH industry leader of CleanTech, an advanced clean transportation solutions, is a division of the global engineering Roush company Enterprises. ROUSH CleanTech develops propane autogas technology for medium-duty Ford commercial vehicles and school buses. With more than 37,000 vehicles on the road, the Michigan-based Livonia. company economical. delivers emissionsreducing options for fleets across North America. Learn more at **ROUSHcleantech.com** or by calling 800.59.ROUSH.

#### CONGESTION MITIGATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM UPDATES

FHWA has updated 8 brochures for the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

These CMAQ resources can help State and local governments or CMAQ project sponsors learn about available programs. Additional resources are also available on the <u>CMAQ reference</u> <u>site</u> to help identify the fundamentals behind apportionment, develop transportation-air quality strategies, or put together project applications.

- <u>CMAQ Essentials</u>
- Public-Private Partnerships
- Intermodal Freight Transportation
- Intelligent Transportation
   Systems (ITS)
- Idle Reduction Techniques
- Public Transportation
- Diesel Retrofits
- <u>Alternative Fuel Vehicle (AFV)</u>
   <u>Projects</u>

For more information about CMAQ and available resources, contact Edward Dancausse, (919) 747-7026.

#### NATIONAL CLEAN HYDROGEN ROADMAP RELEASED BY U.S DOE

The U.S. Department of Energy (DOE) has released a new report setting forth the "U.S. National Clean Hydrogen Strategy and Roadmap." The report was informed by extensive industry and stakeholder feedback including workshops and listening sessions, written comments from more than 50 organizations, and ongoing engagement. In addition, this roadmap sets forth an all of government approach to clean hydrogen, with contributions across multiple agencies as well as key experts in the Executive Office of the President.

The report is meant to be a living strategy that provides a snapshot of hydrogen production, transport, storage, and use in the United States today, as well as an assessment of the opportunity for hydrogen to contribute



to national decarbonization goals across sectors over the next 30 years. The report will continue to be updated with collaboration across government through interagency coordination.

This roadmap is based on prioritizing three key strategies to ensure that clean hydrogen is developed and adopted as an effective decarbonization tool for maximum benefit to the United States. The strategies include:

1.) Strategic, high-impact uses for clean hydrogen

- 2.) Cost-reduction of clean hydrogen
- 3.) Regional networks

While Congress required the DOE to develop this national strategy and activities will roadmap, include collaboration across multiple federal U.S. agencies including the Departments of Agriculture, Commerce, Defense, Energy, Interior, State, Transportation, and Labor, Treasury, the Environmental Protection Agency, the National Aeronautics and Space Administration, the National Science Foundation, and the Office of Science and Technology Policy, in close coordination with the Executive Office of the President.

#### The full report is available online.



#### DATABASE TOOL TRACKS INCENTIVES AND SUBSIDIES FOR ELECTRIC BICYCLES

*Ride Review*, in association with *Micromobility Industries* compiled an active list of <u>electric bicycle incentive</u> <u>programs</u> available across the globe. The database is updated regularly and aims to bring the micromobility community together through content and better awareness of incentives and subsidies available to encourage use of electric bicycles.

#### TOOLKIT OFFERS RESOURCES TO DEVELOP AND IMPLMENT ELECTRIC BICYCLE INCENTIVE PROGRAMS

PeopleForBikes released an Electric **Bicycle Incentive Toolkit** as а resource to help advocates, industry, and levels of government propose, design, and implement e-bike incentive programs in communities nationwide. The toolkit includes a database of existing incentive programs across States; best practices for designing an incentive program; lessons learned from existing data; frequently asked questions; point-of-sale incentives; and sample legislative language to assist policy makers to propose bicycle incentive programs in communities.

#### U.S. DOT RELEASES ELECTRIC MOBILITY TOOLKITS

The U.S. Department of Transportation released two toolkits to help community stakeholders scope, plan, and identify ways to fund electric mobility charging infrastructure for broader public or private use.

A Rural Electric Vehicle (EV) Toolkit focuses on infrastructure for light-duty electric passenger vehicles, but also addresses funding opportunities and planning considerations for other types of electric vehicles and devices. including micromobility, transit and school buses, medium- and heavy-duty vehicles, and agricultural equipment such as tractors. An Urban Electric Mobility Toolkit will serve as a onestop resource to support diverse forms of electric mobility including travel by personal vehicle, transit, micromobility, and ride-sharing services.

The toolkits can help identify key partners for electric charging projects, take advantage of relevant planning tools, and identify available funding or financing to help make that project a reality. The nationwide adoption of electric mobility is part of the Federal Government's strategy to eliminate climate-related emissions from transportation, including through investments in electric transit, micromobility, and pedestrian networks.

#### WELCOME TO PRCC'S NEW INTERN

This Summer, Alexander T. de AlmeidajoinsPRCC as our Clean CitiesUniversity(CCU)WorkforceDevelopment Program (WDP) Intern.

Alexander is a joint-degree JD / MBA graduate student at the University of Pittsburgh. He is specializing in IP Law and Innovation, with a focus on Sustainability, Inclusivity, and Entrepreneurship. Alexander is passionate about these topics, having previously worked with NPOs, DEI and Community Engagement organizations, and as the David Berg Fellow at the Pitt Center for Sustainable Business.



Aug 22-24, 2023 Tacoma, WA

The **Green Transportation Summit** & **Expo (GTSE)** is the West Coast's premier fleet modernization and sustainable transportation event. Get an inside look at the latest in fleet technologies and innovations; informative sessions feature a who's who of national and regional transportation leaders. <u>Learn More</u>



Alexander T. de Almeida joins PRCC.

For the Summer term, Alexander will support PRCC's efforts on Diversity, EEJ and Justice40 Strategies, Strategic Planning and Public Policy.



Sept 12-14, 2023 Nashville, TN

RNG WORKS is the North American Renewable Natural Gas industry's annual Technical Workshop, Trade Expo & Golf Tournament. The event educates, demonstrates and promotes RNG industry best practices to realize sustainable development, deployment and utilization of renewable natural gas. Learn More

# **SUSTAINING MEMBERS**

#### **PLATINUM LEVEL MEMBERS:**





## THANK YOU FOR YOUR SUPPORT!

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

PRCC Membership Levels:

Individual -- \$150 Nonprofit -- \$300 Bronze -- \$500 Silver -- \$1000 Gold -- \$2000 Platinum -- \$4000+

#### CONTRIBUTE YOUR NEWS:

Help us share success stories about the projects in our region!

Please feel free to contact: **Rick Price**, Executive Director/Coordinator 412-735-4114 <u>coordinator@pgh-cleancities.org</u>

# **LEARN MORE:**

Learn more about Clean Cities at: <u>www.cleancities.energy.gov</u>

Or get involved with the Pittsburgh Region Clean Cities coalition at: <u>www.pgh-cleancities.org</u>

Learn more about membership at: <a href="http://www.pgh-cleancities.org/membership/">www.pgh-cleancities.org/membership/</a>





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