

GAZETTE

DRIVING THE WAY TOWARD
ENERGY INDEPENDENCE

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PRCC's Rick Price with Michael Kirven showing the internal components of a Tesla during last January's Electric Vehicles (EV) Mini Workshop.

PRCC 2023 YEAR IN REVIEW

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2023 was a fantastic year for educating Western Pennsylvanians about the benefits of clean fueled vehicles. Pittsburgh Region Clean Cities (PRCC) hosted or participated in over 30 events this year, ranging from workshops and webinars to full-scale expos and tours. As we close the year out, we look back on some highlights. Our gratitude to all those throughout the coalition who helped out. We can't wait for next year's activities to begin!



February is a short month, but it was action packed for PRCC! The start of the month was marked by a tour of the Eaton Power Systems Experience Center and a trip to Washington D.C. for the annual Energy Independence Summit. Member of Three Rivers EVA attended panel presentations at the Pittsburgh International Auto Show.

Late February featured a program with Ingevity and Columbia Gas on the NeuFuel School Bus platform as well as First Responder Training Programs that offered opportunities to learn the most critical points about safety when responding to electric vehicle incidents



Earth Day is always a big celebration for PRCC each **April**, but this year we split into groups to branch out with presence at five different events and Ride-N-Drives, including this one in Market Square with the Pittsburgh Parrot!

May marked a major collaboration with Duquesne Light Company on the Electric Fleet Expo at Robert Morris University, which featured panel presentations, and a large interactive electric vehicles display. The event sold out to a crowd of over 250 attendees!





Just weeks after a new award to develop Workforce Training for Electric Vehicles, PRCC jumped into its first Hands-On EV Training Workshop offering with CCAC in **June**. Space was limited for this first offering; and equipment donations were accepted from PRCC partners. CCAC expects to launch a full program in 2024.

Late Summer and **early Fall** saw a handful of ribbon cutting ceremonies for new electric vehicle charging stations throughout the region. PRCC also joined with CONNECT and Duquesne Light Company to offer a tour of some installations for local municipalities.



October marked our annual Odyssey Day Event at CCAC, with a full day of panel presentations, discussions, vehicle displays, ride-n-drives, vendor tables and more! This snapshot showcases our expert panelists on alternative fueled vehicles.

In **late October** and throughout **November**, PRCC kicked off its new Workplace Charging program with CALSTART. Early events in the program included a tour of the charging infrastructure at EPIC Metals in Braddock and a Lunch-N-Learn Ride-N-Drive Event at S&B Construction.



BIDEN-HARRIS ADMINISTRATION CONTINUES TO ACCELERATE ENVIRONMENTAL JUSTICE IN DISADVANTAGED COMMUNITIES THROUGH THE PRESIDENT'S INVESTING IN AMERICA AGENDA

Inflation Reduction Act programs add to list of over 500 federal programs now covered under President Biden's Justice40 Initiative

The Biden-Harris Administration published the list of Inflation Reduction Act programs working to advance the President's [Justice40 Initiative](#), which aims to deliver 40 percent of the overall benefits of certain federal investments to disadvantaged communities that are marginalized by underinvestment and overburdened by pollution. By expanding the Justice40 Initiative to include Inflation Reduction Act programs, the Biden-Harris Administration is helping ensure communities that have been historically underinvested in can access the benefits of the largest climate investment in history and a core pillar of Bidenomics.

The 74 Inflation Reduction Act grant, rebate, loan and other funding programs now covered by the Justice40 Initiative together add up to over \$118 billion in federal funding. In addition, many of the Inflation Reduction Act's tax credits will benefit disadvantaged communities because the law provides bonus incentives for private sector clean energy development in low-

income areas and in energy communities. With the addition of Inflation Reduction Act programs, now [518 programs across 19 federal agencies](#) are being reimaged and transformed through the Justice40 Initiative to maximize benefits to disadvantaged communities such as cleaner air, good-paying jobs, and affordable clean energy.

"For far too long, communities that have borne the brunt of power plant and industrial pollution have been left out and left behind," said John Podesta, Senior Advisor to the President for Clean Energy Innovation and Implementation. "The Inflation Reduction Act and President Biden's Justice40 Initiative change that by bringing new investment, clean energy, and good-paying jobs to disadvantaged communities."

"President Biden believes that every person has the right to drink clean water, breathe clean air, and to live in a healthy community," said Brenda Mallory, Chair of the White House Council on Environmental Quality. "Through the President's Justice40 Initiative and the Inflation Reduction Act – the largest investment in clean

energy and climate action ever – we are delivering on that commitment and making a positive difference in communities that have been left behind for too long.”

“President Biden’s Inflation Reduction Act is delivering the largest climate and clean energy investment in history while lowering costs for families,” said Nani Coloretti, Deputy Director of the White House Office of Management and Budget. “The Administration is ensuring that this landmark legislation advances the President’s Justice40 Initiative, benefitting communities across the country that have borne the brunt of environmental injustice and historic disinvestment.”

The White House Council on Environmental Quality (CEQ) also announced it is taking the next step to update the Biden-Harris Administration’s [Environmental Justice Scorecard](#), a first-of-its-kind accountability tool launched in April 2023 that assesses progress federal agencies are making to advance environmental justice, including through the Justice40 Initiative. CEQ is [seeking public input](#) to inform future versions of the Environmental Justice Scorecard, which will provide additional information and updates on the benefits of Justice40 covered programs. Comments will be accepted until 11:59 p.m. ET on January 19, 2024.

Disadvantaged communities across the

country are already seeing the benefits of the Inflation Reduction Act’s historic investments. A [new analysis](#) from the Rhodium Group and MIT’s Center for Energy and Environmental Policy Research found that 44.5% of clean investment in the year following the passage of the Inflation Reduction Act occurred in disadvantaged communities as defined by CEQ’s [Climate and Economic Justice Screening Tool](#). In August, the Treasury Department [also found](#) that low-income communities are benefitting disproportionately from IRA-related investments—with 65% going to counties with higher poverty rates and nearly 90% going to counties with lower wages.

Other highlights of Inflation Reduction Act programs covered by Justice40 include:

The U.S. Department of Agriculture’s [Urban and Community Forestry Program](#) is [investing \\$1 billion](#) to plant and maintain trees, combat extreme heat and climate change, and improve access to nature in disadvantaged communities. In support of the Justice40 Initiative, all 385 awardees are working to increase equitable access to trees and nature, and the benefits they provide for cooling city streets, improving air quality, and promoting food security.

The U.S. Department of Housing and Urban Development’s (HUD) [Green and Resilient Retrofit Program](#) has

awarded \$100 million for energy efficiency and climate resilience renovations for 1,500 low-income households. These investments will directly benefit residents of HUD-assisted housing, each in a disadvantaged community in alignment with the Justice40 Initiative, by making homes more resilient to extreme weather events and enhancing communities' ability to more quickly respond to and recover from such events.

The U.S. Environmental Protection Agency launched the Greenhouse Gas Reduction Fund program, which will ultimately award \$27 billion for clean energy and clean air investments across the country. At least \$18.6 billion will be dedicated to low-income and disadvantaged communities in support of the Justice40 Initiative. These competitive grant opportunities will mobilize private capital into clean technology projects to create good-

paying jobs and lower energy costs for families while cutting harmful pollution to protect people's health and tackle the climate crisis.

A full list of federal programs covered by the Justice40 Initiative can be found here.

The public can submit input to inform future versions of the Environmental Justice Scorecard for 60 days following publication of the request for information in the Federal Register at docket CEQ-2023-0005 at www.regulations.gov.

More information on President Biden's Justice40 Initiative can be found on the Justice40 Initiative page of the White House website. More information on the Inflation Reduction Act's climate and clean energy programs, including open funding opportunities, can be found at www.cleanenergy.gov and www.grants.gov.

BIDEN-HARRIS ADMINISTRATION FINALIZES GREENHOUSE GAS EMISSIONS REDUCTION TOOL, MOVES CLIMATE CHANGE PERFORMANCE MEASURE FORWARD

Whole-of-Government Approach to Tackling Climate Change Provides States and Metropolitan Planning Organizations a Clear Framework, Flexibility, and Funding

The U.S. Department of Transportation's Federal Highway Administration (FHWA) announced a finalized performance measure that will provide State Departments of Trans-

portation (DOTs) and Metropolitan Planning Organizations (MPOs) a national framework to track transportation-related greenhouse gas emissions (GHG), along with the flexibility to set their own targets for reduction.

“Every state has its own unique climate challenges, and every state ought to have the data, funding, and flexibility it needs to meet those challenges head on,” said U.S. Transportation Secretary Buttigieg. “This new performance measure will provide states with a clear and consistent framework to track carbon pollution and the flexibility to set their own climate targets—which we will also help them meet with more than \$27 billion in federal funding through President Biden’s Investing in America agenda.”

In support of President Biden’s whole-of-government approach to cutting carbon pollution in half by 2030, FHWA is taking two important steps toward addressing the impacts of climate change with the announcement:

1) Adding a new greenhouse gas performance management measure to the existing FHWA national performance measures to establish a national framework to help states track performance and make more informed investment decisions; and,

2) Creating a flexible system under which state DOTs and MPOs will set their own targets for reducing greenhouse gas emissions from road-

way travel.

“Transportation is the leading source of greenhouse gas emissions in the U.S. and reducing emissions from that sector while ensuring our economy works for everyday Americans is critical to addressing the climate crisis,” said Federal Highway Administrator Shailen Bhatt. “We don’t expect state DOTs and MPOs to solve a problem this large on their own, which is why this performance measure does not impose penalties for those who miss their targets.”

The Bipartisan Infrastructure Law (BIL) includes more than \$27 billion in funding across various programs that Federal agencies are using to support carbon pollution reduction projects. Here are some examples:

- The **Carbon Reduction Program** provides \$6.4 billion in formula funding to State and local governments to develop carbon reduction strategies and fund a wide range of projects – including eligible assets owned by local governments, counties and Tribes – designed to reduce carbon emissions from on-road highway sources.

- The **National Electric Vehicle Infrastructure (NEVI)** formula program provides \$5 billion to states, primarily through a statutory formula, to build out a [national electric vehicle charging network](#), an important step towards making electric vehicle charging accessible to all Americans.

- The **Charging and Fueling Infra-**

structure (CFI) discretionary grant program provides \$2.5 billion in competitive funding to states, local governments and Tribes to deploy electric vehicle charging and hydrogen, propane, and natural gas fueling infrastructure along designated alternative fuel corridors and in communities.

- The **Congestion Relief Program** provides \$250 million in competitive funding to advance innovative, multimodal solutions to reduce congestion and related economic and environmental costs in the most congested metropolitan areas of the U.S.

- The **Reduction of Truck Emissions at Port Facilities Program** provides \$400 million in competitive funding to reduce truck idling and emissions at ports, including through the advancement of port electrification.

- The **Low or No Emission Vehicle Program** provides \$5 billion to replace transit buses with zero emission electric buses and other low or zero emission technologies, adding even greater emissions reductions benefits to transit systems that lower emissions at a baseline compared to the many passenger cars they replace.

- The **Transportation Alternatives Set-Aside** program provides \$7.2 billion to help state and local governments carry out environmentally friendly pedestrian and bicycle infrastructure projects.

- The **Transit Oriented Development (TOD) Program** provides \$69 million in funding to local communities to

integrate land use and transportation planning with new fixed guideway or core capacity transit capital investment projects. BIL also expands TOD financing opportunities through the Transportation Infrastructure Finance and Innovation Act (TIFIA) and Railroad Rehabilitation & Improvement Financing (RRIF) programs.

In addition to the programs above that have specific eligibilities for projects that will reduce carbon pollution, federal aid highway formula programs like the National Highway Performance Program (NHPP) and the Surface Transportation Block Grant (STBG) include broad eligibilities that allow states the flexibility to pursue projects that will reduce carbon pollution.

These formula and discretionary funding sources from the Bipartisan Infrastructure Law and additional funding from the Inflation Reduction Act provide State, local and Tribal governments critical resources for a wide variety of projects that reduce carbon pollution. Additionally, the Bipartisan Infrastructure Law provides the largest Federal investment in public transportation ever, which will increase transportation options for all Americans and reduce carbon pollution from single-occupancy vehicles.

Combined, these investments will support State and local governments in meeting the emissions reduction targets that they will set using the new FHWA performance measure.

PRCC AND CENTRE COUNTY NAMED TO THE DOE'S CLEAN ENERGY TO COMMUNITIES (C2C) PEER LEARNING COHORTS PROGRAM

Leaders from 46 Local, Regional, and Tribal Organizations to Join Peer-Learning Cohorts on Emerging Clean Energy Strategies and Best Practices - Participants from 28 States and Territories will Convene for 6 Months to Learn about Energy Resilience, Buildings Efficiency, and Electric Vehicle Infrastructure from Each Other and National Laboratory Experts

The U.S. Department of Energy (DOE) announced leaders from 46 entities who will collaborate on common clean energy opportunities and challenges through the [Clean Energy to Communities \(C2C\) Peer-Learning Cohorts program](#). These participants—including county and local governments, tribes, community-based organizations, and utilities—will convene regularly from January to July 2024 to exchange strategies and best practices, learn in a collaborative environment from each other and DOE's national laboratory experts, and workshop policy and program proposals across specific energy resilience, buildings efficiency, and electric vehicle topics.

Pittsburgh Region Clean Cities (PRCC) is

pleased to announce that it will continue to work with Centre County Metropolitan Planning Organization - who is among the awardees for the Spring 2024 program. Local municipality Crafton Borough was also named a recipient for the program's buildings efficiency component.

"C2C's Peer-Learning Cohorts facilitates new connections and collaborations between communities from across the United States and also provides them with access to top clean energy experts from DOE's national laboratories," said Alejandro Moreno, Associate Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy. "By hearing about successful plans from their peers, as well as their challenges and questions, participants gain ideas, tools, and confidence to accelerate their own clean energy transitions."

"Through this round of cohorts, participants will gain cutting-edge information and tools to help them achieve their clean energy goals," says Juan Torres, Associate Lab Director, Energy Systems Integration at the National Renewable Energy Laboratory.

"Some participants will leave with an understanding of which municipal buildings to prioritize for energy efficiency and decarbonization investments and others will be prepared to tackle a solar plus storage or microgrid project at a local critical facility."

Through the program, technical experts convene up to 16 communities dedicated

to a single clean energy-related topic with educational resources, case studies, analysis and modeling tools, templates, trainings, and facilitated collaboration to enable accelerated clean energy progress. This is the third round of C2C's Peer-Learning Cohorts program. Previous cohorts have covered topics including financing for equitable clean energy transitions, municipal clean energy procurement, planning for electric vehicle charging infrastructure, and more.

Entities joining the three latest cohorts are:

Evaluating and Prioritizing Municipal Buildings for Energy Efficiency and Decarbonization Investment:

Ames, Iowa
Baltimore, Maryland
Boca Raton, Florida
Cincinnati, Ohio
Colorado Springs, Colorado
Crafton Borough, Pennsylvania
Hailey, Idaho
Howard County, Maryland
Key West, Florida
Mount Vernon, New York
Reading, Pennsylvania
Salem, Oregon
Skokie, Illinois
Washtenaw County, Michigan
Windham, Maine

Enhancing Resilience at Critical Municipal Facilities Through Solar, Storage, and Microgrids:

Albemarle County, Virginia
Bellevue College, Washington

Cook County, Illinois
Detroit, Michigan
Edmond Electric, Oklahoma
Lander, Wyoming
LUMA Energy, Puerto Rico
Mesa, Arizona
Miami, Florida
Morris, Minnesota
Penobscot Indian Nation
Philadelphia, Pennsylvania
Santa Monica, California
Sipayik Resilience Committee, Maine
Stowe Electric Department, Vermont
Tulsa, Oklahoma

Integrating Community Priorities into Electric Vehicle Plans and Projects:

Bellevue, Washington
Bronzeville Partners, Illinois
Centre County Metropolitan Planning Organization, Pennsylvania
Durham, North Carolina
Fort Collins Utilities, Colorado
Greater Portland Council of Governments, Maine
Ithaca, New York
Missoula, Montana
North Miami, Florida
Salt Lake County, Utah
San Jose, California
SEED, Inc., Tennessee
Sovereign Energy, New Mexico
Vancouver, Washington

Peer-Learning Cohorts are one of three technical assistance programs within the C2C program. C2C also provides communities with expertise and tools to achieve clean energy goals across a range of technologies through 3-month and

multiyear offerings.

PRCC's Rick Price said that organizations interested in applying for the C2C Program may need to partner with an existing Clean Cities Coalition to participate. "We're happy to be a partner and support organizations in Western Pennsylvania who are interested in applying to the C2C Program," he said. "By being part of the Peer Learning Cohorts, we gain experience and insight that can benefit the entire region."

Centre County Metropolitan Planning Organization first partnered with PRCC for the Fall 2023 C2C Program to plan for EV infrastructure. The ongoing project marks a response to growing interest observed in the middle of the state in EV adoption. Together with PRCC, Centre County Metropolitan Planning Organization will seek to build interest in addressing charging deserts in communities surrounding the State College area.

C2C is funded by DOE's [Office of Energy Efficiency and Renewable Energy](#) and managed by the [National Renewable Energy Laboratory](#) with support from [Argonne National Laboratory](#), [Lawrence Berkeley National Laboratory](#), [Oak Ridge National Laboratory](#), and [Pacific Northwest National Laboratory](#). The [World Resources Institute](#) also supports C2C Peer-Learning Cohorts.

[Learn more about C2C's three different technical assistance programs](#) and find out how to apply.

PRCC SELECTED FOR UNIVERSITY OF PITTSBURGH NONPROFIT CLINIC

Pittsburgh Region Clean Cities (PRCC) has been selected for the 2024 Nonprofit Clinic by the Johnson Institute for Responsible Leadership at the Graduate School of Public and International Affairs (GSPIA) at the University of Pittsburgh. Out of 40+ nonprofit projects, PRCC has been selected to receive pro bono consulting from advanced graduate students at GSPIA.

The project will continue phase two of work begun by University of Pittsburgh graduate students in the Spring of 2023 to assess Diversity, Equity and Inclusion (DEI) concerns with PRCC's Board of Directors. PRCC Board Member William Sapon will oversee the project.

"This collaboration presents a fantastic opportunity for these students to directly contribute to our mission of advancing clean transportation solutions. They will be working diligently to provide invaluable recommendations aimed at enhancing the diversity of our board in alignment with our strategic plan," he said. "This initiative not only highlights the importance of our mission but also emphasizes the recognition we've received from the University of Pittsburgh."

SPOTLIGHT ON THE PRCC INTERNSHIP EXPERIENCE: A LOOK BACK ON THE FALL SEMESTER

By Divya Singh

Position: Clean Cities University Workforce Development Program Communications and Outreach Intern

Internship Duration:

September 11 - December 22, 2024

My internship at Pittsburgh Region Clean Cities (PRCC) has been a transformative journey, providing me with a profound understanding of alternative fuels and the extensive benefits of electric vehicles. I had the opportunity to learn about various grants, including the Clean School Bus Program Rebates and the Alternative Fuels Incentive Grant (AFIG) Program. This knowledge has been instrumental in broadening my perspective on the sector's funding and support mechanisms.

Also, I learned about the use of Constant Contact. This tool enables us to send messages and updates to all our subscribers efficiently. I am particularly excited about working with this platform in the future, as it represents a vital aspect of our communication and outreach strategy.

The support and mentorship provided by Rick and Kristen have been pivotal to my learning experience. They have

been exceptionally supportive, always ready to assist and facilitate my involvement in various projects. Their willingness to implement my suggestions, such as holding weekly meetings instead of bi-weekly ones, has significantly enhanced the efficiency and progress of my projects. Moreover, establishing a dedicated Google Drive folder for my work streamlined the review process, allowing for more effective collaboration.

This experience has not only been foundational in my career development but also in shaping my approach to the key responsibilities entrusted to me at PRCC. Among them:

Research and Legislative Outreach:

Researched Pennsylvania senators and representatives and conducted cold email campaigns to garner support for a new initiative focused on educating workers and the public about the benefits of workplace charging (WPC) for electric vehicles (EVs).

Social Media and Content Creation:

Managed and created content for various social media platforms, including Instagram, LinkedIn, and Facebook, regularly posting every Wednesday and Friday to increase engagement and awareness.

Newsletter and Contact List Manage-

ment: Assisted in creating the monthly newsletter and updated the Constant Contact list for PRCC. Additionally, compiled separate educational and medical contact lists for targeted outreach.

Event Participation: Actively participated in events like Odyssey Day and Ride-n-Drive Events, promoting sustainable transportation options and networking with industry stakeholders.

Community Outreach and Engagement: Involved in organizing community outreach program (Odyssey Day) to educate the public on clean energy and sustainable transportation options.

Additionally, skills I developed included:
Stakeholder Engagement and Legislative Outreach: Enhanced experience

in engaging with various stakeholders, including policymakers and community members.

Research and Analysis: Refined research capabilities, particularly in identifying key legislative contacts and developing outreach strategies.

Communication and Social Media Expertise: Improved communication skills, both written and verbal, and developed effective social media strategies.

I am really excited to keep working with PRCC in the spring semester and even after that. This will be a great chance for me to use what I've learned and help out more. I'm looking forward to being part of the team and making a difference in sustainable transportation.



PRCC Intern Dlvya Singh shares pictures from the vehicle display at Odyssey Day.

UPCOMING EVENTS:

BOARD OF DIRECTORS MEETING SCHEDULE FOR 2024:

The PRCC Board of Directors meeting schedule is as follows:

January 18, 2024
10:00 a.m. - 11:30 a.m.
Southwestern PA Commission (SPC)

March 6, 2024
May 1, 2024
July 10, 2024
September 4, 2024
November 6, 2024

OTHER UPCOMING EVENTS:

EV Committee Meeting

January 16, 2024
11 a.m. - 12 p.m.

Transportation Energy Partners Energy Independence Summit

February 11-14, 2024
Washington D.C.

Pittsburgh International Auto Show

February 16-19, 2024
David Lawrence Convention Center

THREE RIVERS EVA CLUB MEETINGS:

January 20, 2024
February 17, 2024
March 16, 2024
April 20, 2024
10 a.m. @ Laird Hall, Murrysville

For details, contact Jonathan and
Bonnie Belak, 724-387-8210.



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.

PALMER BUS SERVICE LAUNCHES ENVIRONMENTALLY FRIENDLY ALTERNATIVE FUEL PROGRAM

Palmer Bus Service Inc., a family-owned school bus contractor, is setting a new standard of going green by piloting the first school bus in Minnesota to use the Demi-NeuFuel school bus platform. Aptly branded as the “CowFartBus,” the technology will enable the school district to power buses using renewable natural gas (RNG) which reduces greenhouse gas (GHG) emissions by over 85%.

Palmer Bus, which serves multiple Minnesota-based school districts, outfitted two diesel school buses with Ingevity’s NeuFuel™ low-pressure adsorbed natural gas system, a technology that enables the use of a small, low-cost fueling appliance, and American CNG’s DEMI Diesel Displacer™ system. The Demi-NeuFuel-powered buses run on diesel and RNG blend that ensures no disruption to operations throughout the school day and no compromise to the vehicle functionality, range or performance.

“The DEMI-NeuFuel system is aligned with our focus on operational excellence and environmental stewardship by offering a cost-effective plat-



form to reduce fuel costs and emissions as well as providing a solution for our in-service diesel school buses where one previously did not exist,” said Shane Johnson, Chief Operating Officer of Palmer Bus. “We are excited with this technology and the early results we are experiencing.”

Alternative fuel options have been available for the school bus industry for many years, however on a relative cost-basis, the renewable natural gas solution allows for conversion of 26 existing in-use diesel school buses to 1 new BEV bus or 12 RNG buses to 1 new propane powered school bus, all with very limited infrastructure required.

“Both Ingevity and American CNG share in Palmer Bus’ passion to bring to market a solution that protects the environment while providing greater operational efficiencies and without vehicle or fleet compromise,” said Russell Schindler, Sales and Business Development Manager with Ingevity’s NeuFuel™ team. “We are proud to have the opportunity work with industry thought leaders and include Palmer Bus Service alongside our other nationally-recognized fleet partners embracing RNG as transportation fuel.”

COWFARTBUS 2023

As 2023 winds down, Ingevity is gaining market momentum and receptivity with its diesel displacement Demi-NeuFuel school bus platform. Overall, 2023 was a terrific one with multiple fleets recognizing the cost-effectiveness and affordability to realize both lower fuel costs and diesel emissions for in-service school buses. Here are some highlights:

- Palmer Bus Service, the first independent contractor in the nation to pilot the school bus solution, held a media day to showcase the early success and excitement for their evaluation of the DEMI-NeuFuel platform. Palmer operates nearly 800 buses servicing over 30 districts in Minnesota.

- A Colorado-based school district with 100 vehicles having converted 6 school buses with the Demi-NeuFuel platform, gave an indication for an incremental 18-bus conversion for a total of 24 buses.

- Orange Grove Charter School is converting a majority of their fleet following a successful pilot program.

- Ingevity welcomes several other fleet customers that signed on to evaluate the Demi-NeuFuel platform in the last few weeks, adding to the growing list of those fleets already in the evaluation process.



In 2023, Ingevity saw increasing support for the CowFartBus platform from a subset of customers representing 3rd party operators, school districts and charter schools.



Clean Fuels Conference
February 5-8, 2024
Fort Worth, TX

The Clean Fuels Conference connects key players of the biodiesel, renewable diesel and sustainable aviation fuel industry for one can't-miss event. Clean fuels for land, sea and sky come together for a week of expert sessions, exhibits and showcases.

[Learn More](#)



Bradford Area School District finds success with propane school buses.

PENNSYLVANIA SCHOOL DISTRICT OPERATES PROPANE BUSES FOR A DECADE

Located in a mountainous region in northern Pennsylvania surrounded by the Allegheny National Forest, [Bradford Area School District](#) transports about 2,500 students to school on 18 daily bus routes that cover an attendance area spanning about 250 square miles.

Ten years ago, the district embarked on a forward-thinking initiative to replace its aging diesel buses with a cost-efficient and environmentally friendly fuel: propane autogas. The propane buses have successfully managed the weather, terrain, and wear and tear of daily operations in Pennsylvania and provided the district with significant cost savings. Today, the district

operates 100% of its routes using propane school buses.

“Over my 40-year career, in which I have overseen the purchase and maintenance of hundreds of buses, I have never seen a bus design that saves over \$3,000 per year,” said Barry Bryan, director of transportation for the district. “This is a huge number for any contractor or school district. I’m surprised we’re not seeing more of these units rolling down the road.”

Abundant Propane Supply

More than 90% of the United States propane autogas supply is produced domestically using materials that would go to waste if they were not

salvaged from other energy processes. According to the Propane Education & Research Council, the Marcellus shale, which is located in the Appalachian Basin, can supply more than 2 billion gallons of propane per year.

“Our area has an abundance of propane due to local Marcellus and shallow wells, so we are doing our part to support local industry and the community,” said Bryan, who holds a degree in environmental science. “And because of my background, I have a strong interest in green energy.”

Lowered Emissions

The district’s [Blue Bird Vision](#) buses, which are equipped with [ROUSH CleanTech](#) propane autogas engines, dramatically reduce nitrogen oxide emissions and virtually eliminate particulate matter — substances identified by the Environmental Protection Agency as harmful to students and the environment.

“The biggest thing we’ve noticed is that the clean operation of the propane buses has reduced the emissions in our garage and around our schools,” said Bryan. “There is far less crude build-up on our computer screens inside of our maintenance bays, which is obviously a plus for our lungs.”

The school district’s newest propane buses, which arrived in 2023, are cert-



ified to 0.02 g/hphr NOx. They’re 90% cleaner in NOx than the EPA and California Air Resources Board (CARB) regulations set to take effect in 2027.

Operational Benefits

“Our propane buses greatly reduce the time spent in maintenance when compared to the maintenance required to keep the emission equipment on a diesel bus operational,” said Bryan. “Thus, our mechanics have been very happy.”

The buses run quieter than their diesel counterparts and allow the drivers to more easily interact with passengers. Buses fueled by propane reduce noise levels by about half compared to a diesel engine. “Every driver of our propane buses has expressed a preference of the propane model over the diesel due to reduced cabin noise and increased power on hills,” Bryan said.

“The Bradford area saw temperatures of negative 25 degrees Fahrenheit in 2015, and our propane buses ran without missing a beat,” said Bryan.

The propane autogas fuel system used in the Blue Bird Vision heats the buses quickly and provides unaided cold weather starts at negative 40 degrees Fahrenheit.

Immediate and Long-Term Savings

Leadership was thrilled that the district saw a return on its investment within the first year of operation. Propane buses offer the lowest total cost of ownership compared with other alternative fuels.

On average, propane autogas costs about 50% less than diesel. Currently, the district is paying \$4.70 per gallon of diesel versus \$1.50 for propane. The district received a \$5,000 rebate on the cost of each initial bus in 2013, and has subsequently accessed funding from Pennsylvania's Alternative Fuel Incent-

ive Grant program as well as the Environmental Protection Agency's Clean School Bus Program. Propane also qualifies for a \$0.37 per gallon government incentive through the alternative fuel tax credit.

All savings from the operation of propane buses have been allocated back into the district's general budget, including the savings in fuel costs.

Positive Performance and Feedback

Bryan and the transportation staff have only positive feedback about their decade-long experience operating propane school buses. "Our propane buses are easy to maintain, create less pollution, increase financial savings and operate on a local fuel," said Bryan. "I can't express how pleased I am with the performance of our propane fleet."

RENEWABLE PROPANE INFORMATION ADDED TO AFDC

The Alternative Fuels Data Center (AFDC) now includes [information about renewable propane](#) as a commercial fuel.

Renewable propane is an alternative fuel made from non-petroleum feedstocks such as natural fats, vegetable oils, and various types of grease. It is chemically identical to conventional propane and can be used as a drop-in replacement fuel in all propane applications.

Similar to the [renewable natural gas page](#), the renewable propane content can be found in the propane pages under "propane basics." The new page includes information about renewable propane production, benefits, research and development, and links to more information.

Other questions about this alternative fuel? Let us know! The Technical Response Service (TRS) Team is available to help.

12 TRUTHS YOU SHOULD KNOW ABOUT PROPANE AUTOGAS:

By Todd Mouw, ROUSH CleanTech

In the ongoing conversation about clean transportation, we continue to see pushback from various players on the true value of anything but electric vehicles as the right choice for businesses and schools to green their fleets.

At Roush, we are heavily involved with all emerging clean mobility options from battery electric vehicles, hydrogen fuel cell, propane, natural gas and a variety of hybrids. From a technical and engineering perspective, we're in a great position to understand and share the pros and cons of each fuel type.

I can tell you with confidence that the false sweeping statements about propane autogas don't hold up. With that in mind, I think it's important to share 12 truths that fleet operators working directly with Class 4 to 7 vehicles should know about propane autogas.

#1: Propane is affordable. It costs about 50% less than diesel and 40% less than gasoline per gallon.

#2: Propane loves cold weather. With propane autogas, there is no risk of "gelling" like with diesel.

#3: Propane vehicles, such as school buses, can have a range of up to 400 miles on a single fueling without sacrificing towing capacity or reliability.

#4: Propane vehicles fuel up at a similar rate to gasoline and diesel vehicles — about eight gallons per minute.

#5: Propane is classified as a clean alternative fuel. Propane vehicles reduce smog-producing emissions, virtually eliminate particulate matter and lower nitrogen oxides by 95% compared with diesel.

#6: Vehicles powered by propane are safe to maintain. In fact, the American Federation of State, County and Municipal Employees recommends replacing diesel-fueled engines with propane-fueled engines to improve the safety of work environments.

#7: Propane is popular around the world and has staying power. There are currently 27 million propane-powered vehicles operating across the globe.

#8: Propane vehicles offer the lowest total cost of ownership of any fuel — conventional or alternative.

#9: The purchase price of a propane vehicle isn't much higher than a diesel

vehicle. The initial additional expense is quickly recuperated through fuel and maintenance savings as well as access to incentive programs including the 2021 infrastructure bill, government grants, VW settlement funding, market-based incentives and alternative fuel tax credits.

#10: Propane autogas has an established public fueling infrastructure across the country, with fueling stations in every state. Onsite and mobile fueling options are also available at low- and no-cost.

- #11: Finding a technician for propane vehicles is easy. There are more than 750 service centers across the United States and Canada.

- #12: Maintenance teams can easily be trained to work on propane vehicles. Many technicians who work on propane vehicles report a more enjoyable work experience compared with diesel.

I truly believe that most emerging fuel types should and will play a vital role in transforming the future of the transportation landscape and creating energy resiliency. But when we talk about the most important step we can take right now, it's this: remove as many outdated diesel vehicles from the roads as soon as possible. Propane can help us take that next step — today. Propane is a readily available, affordable and uncomplicated vehicle fuel solution for today's economy.

LARGEST E-BIKE PILOT PROGRAM FINDS NUMEROUS BENEFITS

Thinking about stashing an e-bike under the Christmas tree this year? You probably aren't alone!

This year, the Colorado Energy Office, in partnership with NREL, concluded the largest e-bike pilot in the nation. The project included collecting holistic travel data via NREL's Open Platform for Agile Trip Heuristics (NREL OpenPATH) for nearly 2 years. NREL authored a key findings report based on the data, highlighting how [e-bikes can serve unmet transportation needs](#) while providing a cost-effective and energy efficient alternative to other modes of transportation.

The summary report, ["Freewheeling: What Six Locations, 61,000 Trips, and 242,000 Miles in Colorado Reveal About How E-Bikes Improve Mobility Options,"](#) was authored by NREL in partnership with the University of Washington. The brief introduced the CanBikeCO initiative, which provided low income users across Colorado with electric bicycles to study the access, energy and emissions benefits of privately owned electric bicycles.

Findings suggest positive impacts to travel behavior, such as favoring electric bicycles to cars for trips less than five miles.

FROM RECREATION TO EVERYDAY TRANSPORT: THE GROWING APPEAL OF E-BIKES

By Plug In America, November 2023

Imagine a transportation option that has the fun and flexibility of a bike, is a fraction of the price of a car, can park almost anywhere for free, and produces almost zero climate-changing emissions. Sounds too good to be true, right? Think again. Meet the e-bike.

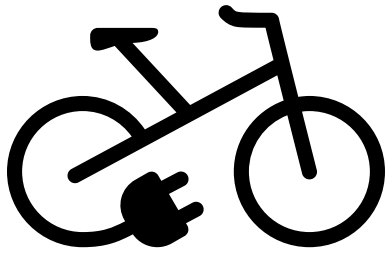
A battery and small electric-assist motor on a bike frame allows riders to climb hills and reach higher speeds with each boosted pedal for less effort than a regular bike. E-bikes can reach speeds of up to 28 mph and can go [20-100 miles on a single charge](#). The US Department of Energy confirms that around [50% of all car trips](#) in the US are less than three miles. In many locations and situations, e-bikes can replace a significant number of trips that are usually made in cars. RMI estimates if the top 10 most populous cities shifted just a quarter of their short vehicle trips to e-bikes, they would save over 1.8 million metric tons of CO2 equivalent (CO2e) in one year — equivalent to avoiding the use of 208.5 million gallons of gasoline or 4.2 million barrels of oil.

Not only do e-bikes make sense from

an environmental perspective, they are an excellent transportation option financially. The cost of an e-bike ranges from \$500 to thousands of dollars, with the average [price](#) around \$2,500, according to the National Conference of State Legislatures. That may seem expensive for a recreational bike, but replacing your car, a second car in your household, or using an e-bike for a daily commute can save you thousands on fuel, auto insurance, registration, maintenance, and parking.

E-bikes sales are [growing](#) exponentially and cities and states are responding. As the e-bike market rises in popularity within the U.S., several jurisdictions have unveiled different incentives to make e-bikes more affordable. For example, [California's E-Bike Incentive Project](#) offers vouchers for low-income households to use towards the purchase of an e-bike. Voucher amounts increase for the purchase of cargo or adaptive e-bikes.

Another two-wheeled option for a different type of travel: zero-emission motorcycles. Just like traditional four-wheeled electric vehicles, electric motorcycles are quieter, smoother and more comfortable. Electric motorcycles of today offer riders the choice to ride electric in style. Another plus: no tailpipe pollution. While traditional gas motorcycles use less gasoline and thus have lower emissions than passenger cars, motorcycle exhaust is higher in smog-forming pollutants and poisonous carbon monoxide, meaning



that electric motorcycles (and EVs in general) are a great option to significantly improve air quality.

While e-bikes are great for getting around town for shorter trips, electric motorcycles offer greater speed and distance capabilities, which make them a great choice for longer journeys or commutes. Many electric motorcycles have ranges between 90-185 miles on a single charge and can achieve speeds of up to 120mph.

What's more is that electric motorcycles, like other EVs, require far less maintenance than their gas counterparts. With fewer moving parts, electric motorcycles can save riders significant time and money. Though upfront costs for an electric motorcycle are higher than for a gas motorcycle, the market is trending towards price parity as material costs fall and technology is improved. Some states are making real efforts to support the growing zero-emission motorcycle market. Currently, a [proposal](#) in California would create a substantial incentive for consumers to apply to the purchase of an electric motorcycle and reduce their out-of-pocket costs. So, if you're in the market for a fun new ride, an electric motorcycle or an e-bike are best-in-class options.

STUDY USES HIGH-RESOLUTION MICROMOBILITY DATA TO ANALYZE E-SCOOTER USAGE PATTERNS

Transportation Research Part A: Policy and Practice published the article, ["Why Do People Take E-Scooter Trips? Insights on Temporal and Spatial Usage Patterns of Detailed Trip Data."](#)

The study analyzes the usage patterns of electric scooters in Nashville, TN using high-resolution data on time, location, and weather attributes. More than one million e-scooter trips from September 1, 2018, to August 31, 2019 were studied. The researchers developed five distinct usage patterns, including morning work/school trips, daytime short errands, social outings, nighttime entertainment district trips, and utilitarian trips.

The most common use of e-scooters in Nashville was daytime short errand trips, contributing to 29% of all e-scooter trips. Overall, the findings can prove to be insightful for city planners and e-scooter operators as they make data-driven decisions to improve safety, sustainability, and mode substitution in micromobility systems.

NATIONWIDE ELECTRIC MOUNTAIN BICYCLE POLICY DATABASE TOOL AVAILABLE

PeopleForBikes launched the [Electric Mountain Bike Policy Database](#), a tool to provide users with access to existing electric bicycle policies across the United States. The database includes policies relating to electric bicycle use on trails, multi-use paths, and other multimodal infrastructure, and offers a view into the varying policy approaches across geographies.

Currently, different regions and jurisdictions each have their own patchwork of rules regarding e-bike usage on trails, multi-use paths, and other recreational and transportation infrastructure. This lack of consistent policies can create confusion for trail users who may not be aware of the differences in regulations from place to place.

PeopleForBikes encourages users to explore the database and provide feedback or updates as regulations surrounding electric bicycles evolve.

NEW E-BIKE ENVIRONMENTAL AND ECONOMIC IMPACT CALCULATOR

The Rocky Mountain Institute [released](#) an [E-Bike Environment and Economics Impact Assessment Calculator](#) geared towards policymakers, advocates, and other stakeholders seeking to assess the impact of electric bicycles as a substitute for short vehicle trips.

The calculator analyzes the environmental and economic impacts that e-bikes could have from two impact assessment scenarios:

- 1 Assessing the citywide impact of replacing a percentage of short vehicle trips with e-bike trips, and
- 2 Assessing the impact specifically derived from a city e-bike incentive program.

Data spans reductions in greenhouse gas emissions and air pollutants; reductions in vehicle miles traveled for short vehicle trips and total trips within a given city; and consumer economic savings due to reduced driving.



SUSTAINING MEMBERS

PLATINUM LEVEL MEMBERS:



GOLD LEVEL MEMBERS:



SILVER LEVEL MEMBERS:





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UNITED WE STAND:
REMEMBERING SEPTEMBER 11, 2001