

DELAWARE CLEAN CITIES CONNECTIONS

Fall 2023

Message from the Delaware Clean Cities Director

The Delaware Clean Cities Coalition is up for re-designation in January 2024, a process that occurs every four years. The redesignation process gives the Department of Energy (DOE) the opportunity to interact with Clean Cities Coalitions to reaffirm the commitment to the mission of the coalition and to determine if they are achieving their goals.

The process of re-designating will include an interactive webinar between the coalition members and DOE staff to showcase all of the work we've done over the last four years, as well as providing opportunities to discuss any challenges, new ideas for support and needs the coalition may have.

In the coming weeks, I will be reaching out to coalition members to begin preparing for the redesignation process and to schedule the webinar. Stay tuned!

- Breanne, DE Clean Cities Director

Federal Funding Opportunities



2023 Clean School Bus (CSB) Rebate Program Now Open

The U.S. Environmental Protection Agency (EPA) recently announced the opening of the 2023 Clean School Bus (CSB) Rebate Program, offering at least \$500 million in rebate funding for clean school buses and zero-emission school buses. Funding may also be used to subsidize the cost of vehicle charging infrastructure, workforce training, and other expenses.

Through this rebate competition, each applicant can request up to 25 buses, and choose between battery-electric, compressed natural gas (CNG), and propane buses.

Eligible Applicants Include:

- Public School Districts (local or state governmental entities, and public charter schools)
- Tribal Applicants (an Indian Tribe, Tribal organization, or Tribally-controlled school)
- Third Parties (nonprofit school transportation associations and eligible contractors)

Applications for the program are now open until <u>4 p.m. ET on January 31, 2024.</u>

More Information

To learn more about the program including important dates, questions and answers, and available funding, visit the EPA <u>web page</u>.

The EPA will also be hosting several online presentations and activities related to the Clean School Bus Program in the coming months. Click the link below to sign up for the webinars, intended to guide applicants throughout the process of participating in the program.



Register for Upcoming EPA Events



The U.S. Department of Transportation's **Clean Energy to Communities (C2C) program is** accepting applications!

C2C connects local governments, tribes, electric utilities, and planning and community-based organizations with national laboratory experts and customized, cutting-edge analysis to achieve clean energy systems that are reflective of local and regional priorities. C2C can help close the gap between clean energy ambitions and real-world deployment. C2C further fosters community-led innovation with tailored support, from goal-setting and project development to technology deployment.

The program offers three types of support to communities with varying time commitments, eligibility, application cycles, project types and funding amounts. They are:

- 1. In-Depth Partnerships
- 2. Peer-Learning Cohorts
- 3. Expert Match

Applications for Peer-Learning Cohorts are now open through **Oct. 31, 2023** for the upcoming January 2024 launch. C2C's cohorts convene sets of up to 15 communities around a common clean energy topic over 6 months.

Applications for Expert Match are accepted on a rolling basis. The Expert Match program provides 40–60 hours of technical assistance over the course of 3 months to help communities address short-term energy goals through tailored strategic support.

More Information

To learn more about the C2C program, including how to apply, check out the recorded webinar hosted by the National Renewable Energy Laboratory and the World Resources Institute, or visit their <u>web page.</u>

View the Webinar

Check out a C2C Success Story!

C2C Helps Working-Class Community with Floating Solar System and Historic Building Retrofits

The C2C expert match pilot helped Cohoes, NY investigate the first municipally owned and operated floating solar installation and retrofits to historic buildings.

Read the full article.

Watch the video.



Delaware Updates!

Delaware Clean Cities Hosts "EV Ready" Workshop

On September 21st, 2023, the Delaware Clean Cities Coalition hosted the "Ready for EVs" Workshop, presented by the National Fire Protection Association (NFPA).

Attendees, including representatives of local governments from across the State of Delaware, gathered to learn about EVs, create connections with others, and discuss the steps needed for EV adoption and implementation with subject matter experts.

Representatives from the NFPA and DE Clean Cities shared information on the function, performance, and safety of EVs, community stakeholder involvement in EV adoption, barriers to electrification, and potential EV adoption strategies.

Transportation TidBit

As of October 1st, 2023, the following alternative fuel vehicles are registered in Delaware:

- 23,395 hybrid and plug-in hybrid
- 7,597 battery-electric
- 300 propane
- 210 liquified gas
- 189 compressed natural gas

Electric Vehicle Charging Equipment Rebates

The Delaware Clean Transportation Incentive Program recently extended its Electric Vehicle Charging Equipment Rebate through April 30th, 2024.

On May 1st, 2023, the program reallocated its funding to prioritize multi-family residents and expanded funding to include coverage of both the purchase and installation of charging stations for existing multi-family dwellings. Additionally, the program provides greater funding opportunities for buildings located in historically disadvantaged communities.

Multi-Family Dwelling Rebates

Multi-Family Dwelling Rebates	Rebate (% of Cost)	Installation Reimbursement (% of Eligible Costs)
New Multi-Family Dwellings	75%	n/a
New Multi-Family Dwellings in Priority Areas	90%	n/a
Existing Multi-Family Dwellings	75%	60%
Existing Multi-Family Dwellings in Priority Areas	90%	80%

Rebates of up to 80% of the cost of the charging station continue to be available for commercial properties, workplaces, and fleets.

Data provided by the Department of Transportation, Division of Motor Vehicles.

For full program details, visit de.gov/cleantransportation

Stakeholder Highlight: ROUSH CleanTech

Check out this article from DE Clean Cities Coalition stakeholder, ROUSH CleanTech, detailing the success of propane use in school buses in nearby New Jersey!

To learn more about ROUSH CleanTech, call 800.59.ROUSH or visit ROUSHcleantech.com.

New Jersey School District Runs Propane on All Routes

Todd Mouw

Randolph Township School District serves about 4,300 New Jersey students with its 36-bus fleet. In 2011, John Aymil, Randolph Township's transportation director, started investigating alternatively fueled buses to address concerns of new diesel emissions standards.



"Our mechanics had questions about the upcoming diesel emissions on diesel school buses," said Aymil. The district's bus dealer, Hoover Bus Sales, recommended propane autogas. That initial research led to the district being the first to purchase propane buses in the state of New Jersey. Now, the district operates 100% of its route buses on propane.

Budget Benefits

On average, propane autogas costs about 50% less than diesel. Maintenance service and costs are reduced due to propane's clean operation. The savings help Randolph Township operate leaner.

Randolph Township did not take advantage of grant funding to purchase the buses, although state and federal funding is available. For example, the Environmental Protection Agency's Clean School Bus Program provides \$5 billion between 2022 and 2027 to replace existing school buses with low- and zero-emission school buses, including propane.

Hundreds of school districts across the nation have reported savings of up to \$3,700 per bus per year due to lower fuel and maintenance costs compared with diesel.

Driver Feedback

Aymil noted that it took the drivers a little time to get used to the propane buses. "Our older diesel buses are transit style and the drivers had to adjust to driving the conventional-style school bus," Aymil said. "But after the break-in period, there were no issues."

The bus drivers appreciate the unexpected benefit of a quieter ride. "The propane buses are much quieter —which is great because of the number of residential houses in our staging area," Aymil said. "Drivers can hear the students onboard while still focusing on the road."

Also pleasing to those around the buses, including bus drivers and technicians, is the lack of diesel odors in the shops. "The propane fuel does not smell bad in the garage like the other fuels," Aymil said.

Straightforward Maintenance

With propane autogas, no exhaust after-treatment or diesel emissions fluids are required to meet today's strict emissions regulations. Plus, propane uses less engine oil. Additionally, propane bus maintenance including parts and oil changes are significantly less expensive.

The techs also noticed that the propane buses do not need heat in the engine block during the winter months noting, "The warmup time is almost non-existent on the propane".

The technicians received training from Hoover Bus Sales, along with bus manufacturer Blue Bird and propane fuel system manufacturer **ROUSH CleanTech**. Aymil also regularly trains the drivers on propane fueling safety.

Emission Benefits

School buses that run on propane emit fewer greenhouse gases, smog-producing hydrocarbons, nitrogen oxides and virtually eliminate particulate emissions compared with conventional fuels. According to a West Virginia University study released in 2019, propane autogas school buses reduce nitrogen oxides by at least 95%.

Lower bus emissions also can help inside the classroom, according to a 2019 Georgia State study, which shows how diesel school bus fumes drive down test scores. The study correlated increased academic performance when children were exposed to lower levels of school bus emissions. Student test scores improved in both math and English.

Turnkey Solution

What started with Randolph Township addressing emission requirements led to myriad benefits for the district, including student health, reduced costs, ease of maintenance, less noise and no harsh odors. Propane is also a domestically produced fuel, with more than 90% of the United States propane autogas supply produced in the U.S., and an additional 7% from Canada.

More than 1.3 million students across the nation ride to school in propane autogas school buses each day.

Helpful Resources and Events



Save the date! **The National E-Mobility Diversity Equity and Inclusion Conference** presented by EVNoire returns in October! This conference brings together industry experts, grassroots advocates, and everyday EV drivers from various communities. The collection of panels and keynote speakers will facilitate conversation about strategies and best practices for engaging and working alongside diverse communities.

- Oct 25th Day 1 held online to provide community access nationwide.
- Oct 26th Day 2 held in Washington, D.C George Washington University

Fuels Fix

Fuels Fix features stories about alternative fuels and advanced vehicle technologies successes in the United States. The site is powered by news from the US DOE Clean Cities Program as well as our working partners in the alternative fuels industry.

On-the-Go Podcast

On the Go is a podcast on alternative fuels, advanced vehicles, and emerging transportation technologies that are transforming mobility as we know it.

Tune into the latest episode to hear how NREL technical assistance empowers Clean Cities coalitions to engage fleets and fuel providers in deploying alternative fuel vehicles and technology!

Get tickets here

EV Hub Live Podcast

EV Hub Live is a first-of-itskind video podcast recorded live and distributed for free to the public policy community working to advance transportation electrification.

Alternative Fuel Highlights

Biodiesel Handling and Use Guide: Sixth Edition

The National Renewable Energy Laboratory (NREL) has recently published the latest edition of the Biodiesel Handling and Use Guide.

This document serves as a comprehensive manual for those involved in the blending, distribution, and utilization of biodiesel and biodiesel blends. Its main objective is to provide essential information about the proper and secure application of biodiesel and its blends in engines and boilers.

The guide is intended to support various stakeholders, including fleets, individual users, blenders, distributors, and individuals engaged in related activities, by offering clear guidance on the processes involved in handling and utilizing biodiesel fuels.

Want to learn more? Find the Sixth Edition of the Biodiesel Handling and Use Guide <u>here</u>.

DID YOU KNOW?

In 2022, state and alternative fuel provider fleets used more than 12 million gallons of biodiesel.

Check out the newly updated Maps and Data Chart from the Alternative Fuel Data Center to see how this number compares to previous years!

AFDC Chart

The First Hydrogen Planes are Taking Flight



The quest for carbon-free aviation inches closer to reality as hydrogen fuel cells take flight. In recent months, small planes equipped with this groundbreaking technology have embarked on their inaugural test flights over the U.S. West Coast and the English countryside.

In an article for Canary Media, energy reporter Maria Gullucci covers the progress of aviation startups, ZeroAvia and Universal Hydrogen, who now claim that their innovative aircrafts could be ready for commercial use as early as 2025. To read the full article, click the button below.

Read More

Article Summary:

The Potential Impact

Retrofitting propeller planes with fuel cells and liquid-hydrogen tanks could lead to nearly 90% lower life-cycle emissions, provided the hydrogen is produced solely from renewable electricity - a departure from the majority of current hydrogen production methods.

How It Works

Fuel cells act much like batteries in powering aircraft. Hydrogen enters the fuel-cell system, igniting an electrochemical reaction that

generates electricity, driving electric motors and propellers.

The Road Ahead

Hydrogen, particularly the "green" variety, is costlier to produce and purchase than conventional kerosene. However, the superior energy efficiency of fuel-cell systems means less fuel is required for flight, potentially making hydrogen a more economical option. As hydrogen production scales up, refueling with H2 could become cheaper than fossil jet fuel by 2050.

Coalition Spotlight - East Tennessee Clean Fuels



East Tennessee Clean Fuels, in collaboration with industry partners, recently launched EMPOWER (Equitable Mobility Powering Opportunities for Workplace Electrification Readiness) – a workplace charging initiative that prioritizes equity and accessibility.

With electric vehicle (EV) sales in the United States skyrocketing by 40% since 2016, affordable EVs are no longer a luxury item. However, the lack of charging

infrastructure remains a deterrent to many potential EV adopters.

EMPOWER addresses this challenge by offering invaluable support to up to 24 different Tennessee workplaces. Applicants can receive up to \$2,000 in free technical assistance and consulting for installations. ETCleanFuels, housed within the University of Tennessee, also partners with local power companies, offering additional guidance on workplace EV charging, including infrastructure assessment and permitting requirements.

By bringing EVSE ports to work and where people are, EMPOWER TN is simplifying the transition to EVs and making charging convenient and easy, especially for those without access to chargers at home.

EMPOWER is also committed to Justice40 principles, meaning that 40% of the EV charging stations installed at workplaces will serve historically underserved demographics, promoting inclusivity.

To read more about the EMPOWER program, click here.



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