

# United Parcel Service Saves Money While Retaining Power and Performance with Renewable Natural Gas

November 2025

United Parcel Service (UPS) has been testing and deploying a variety of transportation energy choices in its fleet for over 20 years, making the company a leader in alternative fuel adoption. The vehicles serve in UPS's "rolling laboratory" that collects data and tests which alternative fuels and technologies work best in certain duty applications, routes, and geographical areas, among other factors. In partnership with organizations such as [Clean Cities and Communities](#) (CC&C) coalitions

and original equipment manufacturers, the rolling laboratory helped UPS identify renewable natural gas (RNG) as a good fit for its Class 8 heavy-duty trucking fleet. RNG currently powers more than 90% of UPS' compressed natural gas (CNG) trucking fleet.

"RNG has proven to be a winning solution," said Ryan Bankerd, UPS global director of sustainability. "RNG is a fuel that gives us the power, performance, and range required by our heavy-duty trucking fleet. In addition to RNG being the right solution today for the communities we serve, it aligns with our corporate goals."

RNG can be produced by capturing and processing gas generated by the decomposition of organic waste from a variety of sources, including landfills, livestock operations, and wastewater treatment plants. The result is a pipeline-quality gas that is fully interchangeable with conventional natural gas. [RNG is a drop-in ready fuel](#) that can be used in CNG or liquefied natural gas vehicles.

"When we set out to develop vehicles that run on CNG, we were pleased to know that an upstream benefit of RNG is helping to recycle methane. This created incentives for other industries to handle their methane waste. Our CNG fleet became a win-win-win," Bankerd said.

## Project at a Glance

**Project type:** Adoption of renewable natural gas in Class 8 heavy-duty trucking fleet

**Strategies:** Public-private partnership and data-driven alternative fuel decision-making

Adopting RNG has helped UPS save money and make progress toward increasing its alternative fuel utilization in both the near- and long-term. Through one project alone, the Mid-Atlantic Nitrogen Oxide Reduction (MANOR) project, UPS expects to reduce diesel fuel consumption by over 474,000 gallons annually and reduce operational



Figure 1. A United Parcel Service vehicle is filled with natural gas at a fueling station  
Photo courtesy of United Parcel Service

fuel costs by over \$1 million per year. These reductions will be achieved by replacing 80 Class 8 short-haul diesel trucks that operate in the Mid-Atlantic region with 50 RNG-powered CNG trucks and 30 clean diesel trucks. In addition to the financial savings, UPS expects to reduce annual nitrogen oxide (NOx) emissions by nearly 50 tons, as well as more than 5,000 tons of carbon per year.

For this project, UPS partnered with two CC&C coalitions—[Virginia Clean Cities](#) (VCC) and [Eastern Pennsylvania Alliance for Clean Transportation](#) (EP-ACT). CC&C is a U.S. Department of Energy partnership that fosters collaboration and innovation to advance transportation energy choices nationwide. As part of this partnership, VCC and EP-ACT work in urban, suburban, and rural areas to deliver objective technical expertise based on a unique understanding of local markets.

VCC served as a critical partner in the effort to secure funding for the MANOR project. UPS wanted to apply to the U.S. Environmental Protection Agency’s Diesel Emissions Reduction Act (DERA) Program but was ineligible to apply directly. They partnered with VCC, who applied on behalf of UPS and acted as the grant administrator and fiscal agent. VCC and EP-ACT also assisted UPS with implementing and documenting the scrapping of the old diesel trucks.

“We consider all potential fleet partnership opportunities carefully. The decision to partner with UPS was a no-brainer for us,” said VCC deputy director Matt Wade. “Clean Cities and Communities coalitions are uniquely positioned to serve in these federal grant administrator roles on behalf of private-sector fleet partners and that really boosts our value. It is a great opportunity for coalitions to attract revenue into their organizations while

simultaneously creating and strengthening relationships with national fleet stakeholders operating in their territory.”

Work on the MANOR project was just beginning when the COVID-19 pandemic broke out across the country, temporarily disrupting the effort. UPS had to temporarily halt their plans to scrap and replace trucks as their operational needs grew and shifted to new routes and

service areas. Significant supply chain delays and delivery issues also impacted their ability to obtain new vehicles. With the MANOR project indefinitely delayed, VCC and EP-ACT adapted by pivoting their focus to non-deployment activities, primarily public education and outreach for heavy-duty alternative fuel vehicles.

As the supply chain issues slowly began to ease, VCC ramped up coordination with UPS to identify the most suitable trucks for replacement across Pennsylvania, Virginia, West Virginia, Delaware, and Maryland. They targeted pre-2009 model year diesel trucks and sought to deploy new CNG trucks that operated in regions in or near nonattainment areas for criteria air pollutants like NOx and particulate matter.

VCC also worked with UPS to select trucks for replacement at depots where UPS had already contracted with several infrastructure providers to develop private, behind-the-fence CNG fueling stations. Collaborating with infrastructure partners can help ensure additional capacity is incorporated as stations are planned and constructed to futureproof these stations. In this way, UPS can grow the CNG fleet without needing costly station upgrades.

“Relationships with local utilities are key,” Bankerd said. “There will always be challenges when you’re advancing new technologies, and these relationships smooth out those challenges. This can be especially helpful when we need to find the most optimal locations for our new CNG fueling stations. In many cases, there is an added benefit when our preferred approach aligns with the local utility’s desire to upgrade gas service on their existing pipelines that serve the community.”

In addition to futureproofing their fueling stations, UPS requires 100% RNG in their fueling contracts to generate Renewable Identification Number (RIN) credits under the Renewable Fuel Standard (RFS) Program. This program sets production targets for renewable fuels used for transportation (including RNG), and RIN credits can be sold to refiners and gas/diesel importers, which can support the business case for RNG truck deployment

## Related Links

- [Learn more about renewable natural gas on the Alternative Fuels Data Center](#)
- [Visit the Virginia Clean Cities website](#)
- [Visit the Eastern Pennsylvania Alliance for Clean Transportation website](#)

projects like MANOR. Fuel providers can use RINs to reduce fuel costs and improve margins. For fleets, the documented environmental attributes from the RINs can count toward organizational goals.

Building on the success of MANOR, UPS and VCC partnered again on MANOR II, which will replace diesel trucks exclusively with trucks fueled by RNG and involve the early retirement of Class 8 short-haul trucks. The pandemic disrupted UPS' vehicle replacement cycles, resulting in fewer trucks that were eligible for replacement based on typical criteria in the Mid-Atlantic project area. However, UPS chose to retire some of their diesel trucks early in favor of RNG trucks. By the time MANOR II wraps up in 2026, the project is expected to deploy 72 RNG trucks, reducing diesel fuel use by over 1.7 million gallons per year with a 41% reduction in NOx. MANOR II is funded through a \$3.5 million DERA award.

“Virginia Clean Cities is a great partner, and we are proud to put our resources into developing these solutions knowing that they benefit the communities we serve,” Bankerd said. “UPS’ efforts to deploy RNG trucks aligns with the Clean Cities and Communities goals to support domestically produced fuels and advance our nation’s energy security and resilience.”