

Renewable Diesel Replaces Fossil Fuel For New York City Fleet Trucks

By: Keith T. Kerman



DCAS renewable diesel truck

On November 29, Mayor Adams and DCAS Commissioner Dawn Pinnock [announced](#) that DCAS has completed a first long term contract for renewable diesel (RD) fuel for the City's fleet. The transition to renewable diesel began on September 1. Already, the City has used over 2.5 million gallons. DSNY, NYC Parks, DOT, DOC, and DEP have fully transitioned to renewable diesel, and FDNY, NYPD and our DCAS client fleets have begun the transition.

Fossil fuels are unearthed from underground, introducing long term and harmful greenhouse gas emissions. Biofuels, including biodiesel and renewable diesel, are manufactured and refined using renewable waste and farm feedstocks such as used cooking oil, animal fats, and soy and corn plant oil. These farm stocks are renewable each year and reduce greenhouse gases in the production process over 60% and reduce tailpipe emissions from 15% to 30% for different categories of emissions. The State of California uses the most renewable diesel in the United States and published a comprehensive [report](#) on its environmental benefits.



Fuel comparisons

New York City began using biodiesel in its fleet at NYC Parks in 2005. Parks and then DSNY used 5% to 20% blends of biodiesel through 2013 when Local Law 73 was passed requiring biodiesel use for all non-emergency City trucks. In fact, all agencies, including NYPD, FDNY and DOC, have been using biodiesel in their fleet for a decade, and it is also used on off-road equipment. In FY23, 93% of all diesel fuel used by fleet, on and off road, emergency and non-emergency, included biodiesel.

Biodiesel is also required in blends of 5% in all heating oil for all buildings in New York State. This will increase to 20% by 2030. New York City led the way in implementing biodiesel in heating oil and our government buildings use mostly B10 (10% biodiesel) today. From FY13 to FY23, NYC government operations used over 450 million gallons of fuel blended with biodiesel.

Biodiesel is manufactured to ASTM standard 6751. The process to make biodiesel is called trans-esterification and is relatively simple. However, biodiesel has different operating properties than regular fossil diesel and can gel up in cold weather. For these reasons, biodiesel is generally used in blends of 20% or less with regular fossil diesel.



First donation and use of biofuels at NYC Parks in 2005

Renewable diesel is manufactured in the same process that fossil crude oil is produced, called hydro-treating. The process is more complex but results in a fuel that is identical in its operating properties as regular diesel and meets the ASTM 975 standard for regular diesel. RD can be used to replace 100% of fossil fuel use and works with all makes, models, and types of fleet trucks, off-road equipment, underground storage tanks (USTs), and fuel dispensing tanks. In 2018, DCAS completed a successful [demonstration project](#) of nearly 1 million gallons of renewable diesel and also conducted a full assessment of renewable diesel in partnership with the FDNY Technology Management Unit.

According to the [US Energy Information Administration](#) (EIA), over 1.16 billion gallons of renewable diesel was consumed in the United States in 2021. Almost all use of renewable diesel is in California, Oregon, and Washington where policies called Low Carbon Fuel Standards (LCFS) create a market and incentives for zero and low carbon fuels such as electric vehicles and biofuels. In California, RD can be purchased at the same price as fossil fuels. DCAS and the NY Clean Fuels Alliance posted a [case study](#) about renewable diesel and the LCFS to further help educate about the greener fuel.

During the Paris Climate Accords in 2015, New York City committed to 50% greenhouse gas (GHG) reduction in the City fleet by 2050 and 80% by 2035. The program is outlined in the [DCAS Clean Fleet Plan](#). By contract, DCAS is receiving at least 60% GHG reduction with renewable diesel use. Used cooking oil and animal fats have been the feedstocks for our first two RD barges, totaling over 7.5 million gallons. Along with our continuing fleet electrification, hybrid, and fleet efficiency efforts, RD implementation will enable DCAS to meet 50x25.

As we [recently announced](#), NYC will go to an all-electric fleet with a goal date of 2038. Zero emissions remains the best case scenario for transforming fleet operations. However, as we work towards that transition, DCAS will be able to improve GHG and tailpipe emissions, especially for our heavy duty and emergency trucks, and off-road equipment, where viable electric options do not yet exist.

DCAS has been working on RD for nearly 8 years, and we are the first organization to bring RD to use in scale east of the Rocky Mountains in the United States. This has been a very complex project and procurement and succeeded through the dedication, patience, and persistence of many in City government including Masha Rudina and Alvin Pettway in DCAS Procurement; Dan Calles and Jose Cajas in DCAS BQA; Robina Gumbs, Scott Wagner, and Aparajitha Janardhanan in DCAS Legal; the FDNY Technology Office; the Mayor's Office of Contracts, the Office of Management and Budget; Spiro Kattan of DSNY; and Harris Kaplan, Ramona Ledesma Garrido, and Sherry Lee of DCAS Fleet. Everyone mentioned here and more have spent countless hours developing this initiative.

Even our toy fleet is going electric!

NYC & Co has a licensing agreement with Greenlight and Daron to sell City fleet units from DSNY, NYPD, FDNY, Parks, DOT, TLC, and more.

And, for the first time, our toy fleet is going electric.

Check out the first [electric sanitation truck](#), with safety side-guards, and [EV taxi](#).

More electric toy options are coming soon.

Lots of [City fleet toys](#) are available online at the DCAS CityStore and make great gifts.



Toy Sanitation truck



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Week In Review: November 19 - 25

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[NYC Fleet Newsletter 440, November 3, 2023](#): DCAS and NYCHA Add Sustainability to Fleet Partnership

[NYC Fleet Newsletter 439, October 26, 2023](#): Mayor Adams Signs Fleet Electrification Law

[NYC Fleet Newsletter 438, October 16, 2023](#): Fleet Spotlight: DOT Roadway Repair and Maintenance (RRM)

[NYC Fleet Newsletter 437, September 29, 2023](#): Electric Pickups Will Be NYC Work Truck of the Future

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