

NYC Dramatically Expands Biofuel Use

NYC Fleet

Presentation to Clean Fuels Alliance

Keith T. Kerman
NYC Chief Fleet Officer
Deputy Commissioner, DCAS
December 16, 2024

NYC Fleet



Nation's Greenest Fleet

NAFA Announces the Winners of its 2024 Green Fleet Awards

Heather Schaefer

August 21, 2024

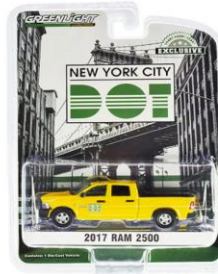
City of New York's Department of Citywide Administrative Services Takes Top Honor

Edison, N.J. (August 21, 2024) – [NAFA Fleet Management Association \(NAFA\)](#), the vehicle fleet industry's largest membership association, proudly announces the winners of its [2024 Green Fleet Awards](#). This prestigious recognition celebrates fleets that have significantly contributed to environmental sustainability.

"We are immensely proud of the strides our winners have made in enhancing fleet sustainability," says Bill Schankel, CAE, CEO of NAFA. "The City of New York's Department of Citywide Administrative Services, along with other awardees, have set exemplary standards in green initiatives that inspire the entire fleet community."

This year's top honor, **Top Green Fleet of 2024**, was awarded to the **City of New York's Department of Citywide Administrative Services**, reflecting its outstanding efforts in reducing environmental impact and promoting sustainability within its fleet operations.

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[Greenlight and Daron Products: HERE](#)

NYC Clean Fleet Plan

NYC commits to GHG reduction
50x25 and 80x35 for City fleet

DCAS is on pace to achieve 50x25 for fleet!

Three basic strategies:

- 1) Replace fossil diesel with biofuels
- 2) Implement hybrids and efficiencies
- 3) Electrify everything we can as soon as we can



[HERE](#)

Biodiesel Beginnings in NYC Government



Volume XX, Number 4362

Tuesday, May 24, 2005

CLEANING UP AT THE ANNUAL FLEET SHOW

Last Wednesday, May 18, Parks & Recreation held its 17th annual vehicle and equipment show at Randall's Island. The trade show was attended by a record-breaking 110 vendors, along with staff from Parks, City and state government, and the non-profit world. Even the Office of Management & Budget (OMB) came by, to scope out the products we spend our equipment monies on.

This year's show highlighted some of Parks' fleet innovations. Marty Borruso from Environmental Alternatives was on hand, displaying vehicles fully powered by bio-diesel. Made from soybean plants, biodiesel is a safe, environmentally friendly, organic fuel source that greatly reduces emissions. Environmental Alternatives is currently partnering with Parks to fuel up to 20 heavy-duty vehicles in Staten Island with biodiesel.

Renewable Diesel Announcement, Nov. 2023

Press Release

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Print

Mayor Adams Unveils Plan To Make NYC First East Coast City To Transition City's Heavy-duty Fleet Vehicles To Renewable Fuel

November 30, 2023

By Mid-2024, All 12,600+ Heavy-Duty Vehicles in City's Fleet Will

Transition to Cleaner, Renewable Diesel

Transition Will Replace Up to 16 Million Gallons of Fossil Fuel Every Year

NEW YORK - New York City Mayor Eric Adams and New York City Department of Citywide Administrative Services (DCAS) Commissioner Dawn M. Pinnock today outlined a plan that will make New York City the first city on the East Coast to transition all heavy-duty vehicles in the city's fleet from fossil to renewable fuel. The city's fleet currently includes more than 12,600 on- and off-road trucks and specialized equipment that operate on diesel fuel - but by the end of Fiscal Year 2024, they will all operate on renewable diesel.

Wednesday, November 29, 2023 5

City switching to diesel fuel that's more enviro-friendly

BY EVAN SIMKO-BEDNARSKI
NEW YORK DAILY NEWS

All 12,600 diesel engines in the city's fleet will be running cleaner by the summer, as the city transitions away from fossil fuels.

Mayor Adams is expected to announce the switch to "renewable diesel" — a fuel chemically similar to conventional diesel — Wednesday morning, making New York the first East Coast city to commit to the alternative fuel source.

"New York City continues to lead the way for the rest of the country by making our vehicles cleaner, greener, and safer," Adams said in a statement. "From our vehicles to our buildings and our food, we are making sustainability a critical component of all the work we do."

The city's diesel engines — which power everything from fire engines, garbage trucks and snowplows to paving machines, generators and wood chippers — have run on a blend of biodiesel since 2013.

Biodiesel, which is made by adding alcohols to a base of vegetable oils or fats to produce chemicals called esters, is a renewable alternative to petroleum diesel, but it requires engine modifications to run and is often blended with its petroleum-based counterpart.

City vehicles typically run a blend of 20% biodiesel and 80% conventional petroleum diesel in the summer. During the winter, the amount of biodiesel in the blend can drop to 5% because biodiesel tends to congeal in low temperatures.

So-called "renewable diesel" starts with the same bases, but adds hydrogen, creating a fuel that is chemically equivalent to petroleum diesel, and can be added to an engine without modification.

"We don't have to touch any of the trucks [to run renewable diesel]," Keith Kerman, the city's chief fleet officer and a deputy commissioner with the Department of Citywide Administrative Services, told the Daily News.

"It is, on an operational level, the exact same fuel" as conventional diesel, he said.

A test run of 1 million gallons in 2018



SAUL LOEB/GETTY IMAGES

found no issues with the fuel in various city vehicles, Kerman added.

Because the new mix doesn't have a petroleum base, it burns cleaner, with 15% to 35% fewer tailpipe emissions, Kerman said.

That's key to meeting the city's emissions goals for vehicles without viable electric alternatives — a category that includes many of the city's heavy machines.

Renewable diesel fuel has been in use on the West Coast for several years, where it powers multiple municipal fleets. San Francisco's city fleet has been powered by the fuel since 2015.

Most of the nation's renewable diesel is manufactured on the West Coast. "The major challenge is getting the renewable diesel to the East Coast," Kerman said.

The city has signed a contract for fuel delivery with a Louisiana-based supplier, which ships the diesel up the coast by barge, said Kerman.

An initial shipment of 3.4 million gallons arrived in New York in August, the fleet czar said, and a second barge containing 4.3 million gallons of winter-blend renewable fuel arrived in the city last week.

The city uses an average of roughly 16 million gallons of diesel fuel per year.

Though the city's official announcement is expected Tuesday, the transition process started in September.

"Every New York City garbage truck is using renewable diesel today," Kerman said.

The city's diesel-powered police and fire vehicles will be the last to transition to the cleaner fuel, but Kerman said he expected both of the emergency fleets to be using the new fuel ahead of the city's July 2024 deadline.

Renewable Diesel Announcement, October 2024

Mayor Adams Announces Full City Fleet Has Completed Transition To Renewable Diesel

October 3, 2024

New York City is First Large-Scale Implementer of Renewable Diesel on East Coast

Transition Will Prevent 162 Million Pounds of Carbon Dioxide Emissions Every Year

NEW YORK - New York City Mayor Eric Adams and New York City Department of Citywide Administrative Services (DCAS) Commissioner Louis A. Molina today announced 100 percent of the city's 12,500 heavy-duty and off-road vehicles have completed the transition to renewable diesel, making New York City the first major East Coast city to implement this green technology at such a large scale. The transition will prevent 162 million pounds of global carbon dioxide emissions from entering the air every year, and it will serve as an important bridge fuel as viable electric versions of these vehicles are developed and placed into the market.

"Building a safer city also means protecting New Yorkers from the dangers posed by carbon emissions and climate change," said **Mayor Adams**. "Transitioning our entire heavy-duty fleet to renewable diesel is an important step on our path to carbon neutrality and a clear indication of our commitment to a cleaner, greener New York City."

"This achievement reflects the Adams administration's unwavering focus on tackling climate change and advancing innovative solutions. By transitioning our fleet to renewable diesel, we are reducing emissions, improving air quality, and solidifying New York City as a national leader in sustainable practices," said **First Deputy Mayor Sheena Wright**. "I am proud of our administration for successfully implementing ambitious policy changes and building a healthier, more resilient city for all New Yorkers."

GREEN FLEET

DCAS Completes Renewable Diesel Rollout for Trucks and Off-Road Equipment

October 15, 2024 • From News/Media Release • [📄](#)



In May 2024, DCAS announced it was on pace to achieve 50% greenhouse gas reduction by 2025.

Photo: DCAS

Renewable Diesel and Vessels, October 2024

Navigating New York City's Waterways to Become Cleaner and Greener as Staten Island Ferries and NYC Ferry Begin Testing Renewable Diesel

October 21, 2024

Renewable Diesel, a Petroleum-Free Alternative to Traditional Diesel Fuels Reduce Carbon Emissions by 60 Percent or More

NYC Ferry Launches Additional Measures To Reduce Engine Emissions and Kickstart of New Sustainability Strategy for the System

NEW YORK - New York City Department of Transportation (NYC DOT) Commissioner Ydanis Rodriguez, New York City Department of Citywide Administrative Services (DCAS) Commissioner Louis A. Molina, and New York City Economic Development Corporation (NYCEDC) President and CEO Andrew Kimball today announced that the Staten Island Ferry and NYC Ferry will begin testing the use of renewable diesel fuel, a petroleum-free alternative to traditional diesel fuel. Renewable diesel reduces carbon emission by 60 percent or more and its use in the ferries will help nearly 30 million annual riders navigate the city's waterways in a more sustainable way. [NYC Ferry](#) will also launch a short-term plan to upgrade engines on its largest vessels to reduce emissions and other pollutants. Use of the fuel in select Staten Island Ferries and NYC Ferry vessels builds on the city's recent announcement that [100 percent of the city's 12,500 heavy-duty and off-road vehicles have completed the transition to renewable diesel](#), making New York City the first major East Coast city to implement this green technology at such a large scale.



NYC Vessel Programs



Status of NYC Fleet Rollout, Since Sept .1, 2023

Please see updated report listing gallons thru 11/29/2024

DSNY RACK – 1,742,094

DOT RACK – 523,081

NYPD RACK – 10,394

DOC RACK – 11,186

FDNY RACK – 44,343

65 - DSNY – 9,330,184

8 - DOT – 1,213,229

9 - DPR – 681,509

12 - DEP – 401,908

1 - DOC – 331,630

20 - NYPD – 493,433

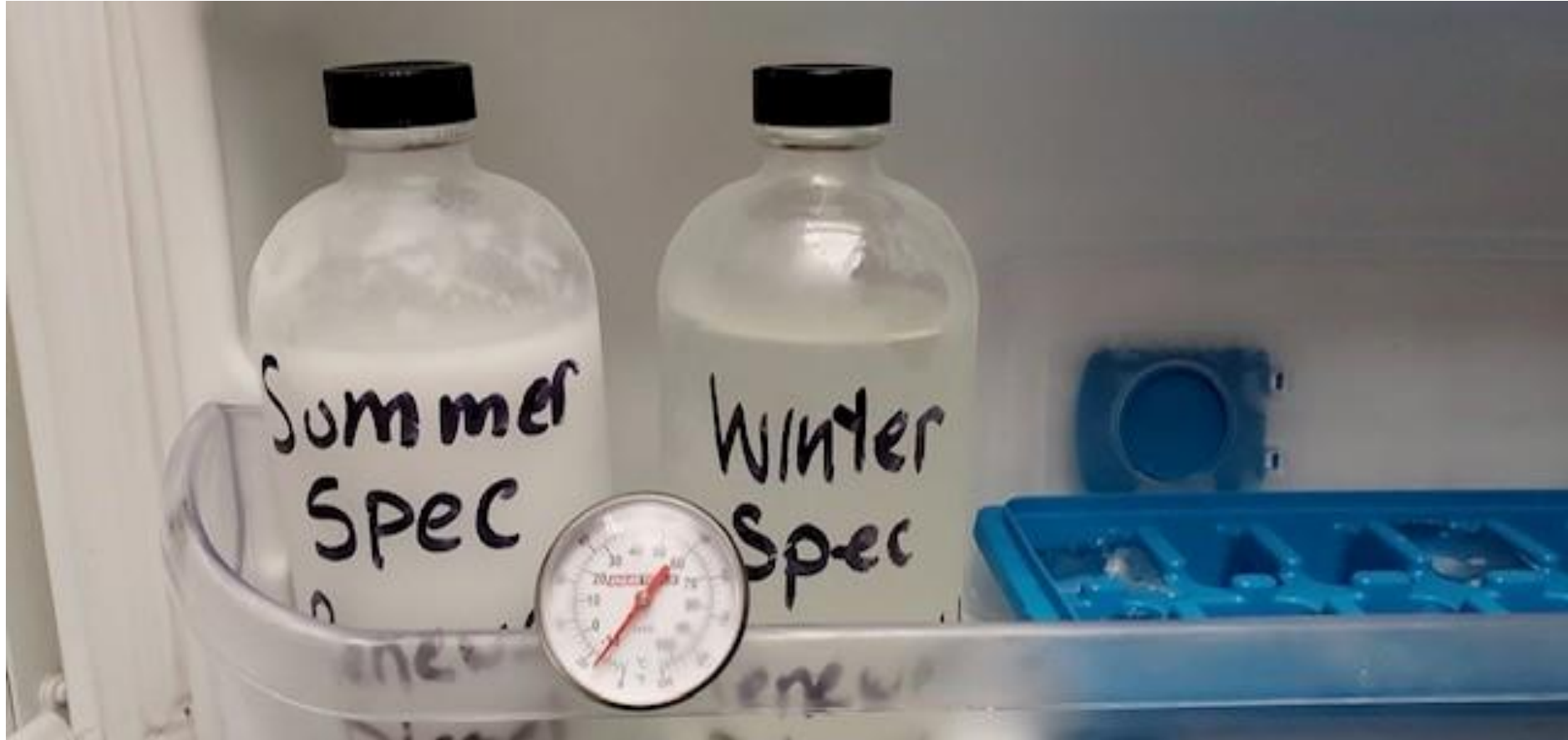
243 - FDNY- 2,363,680

1 – SI FERRY – 940,747

TOTAL – 18,087,418



First Major United States User of Artic Blend

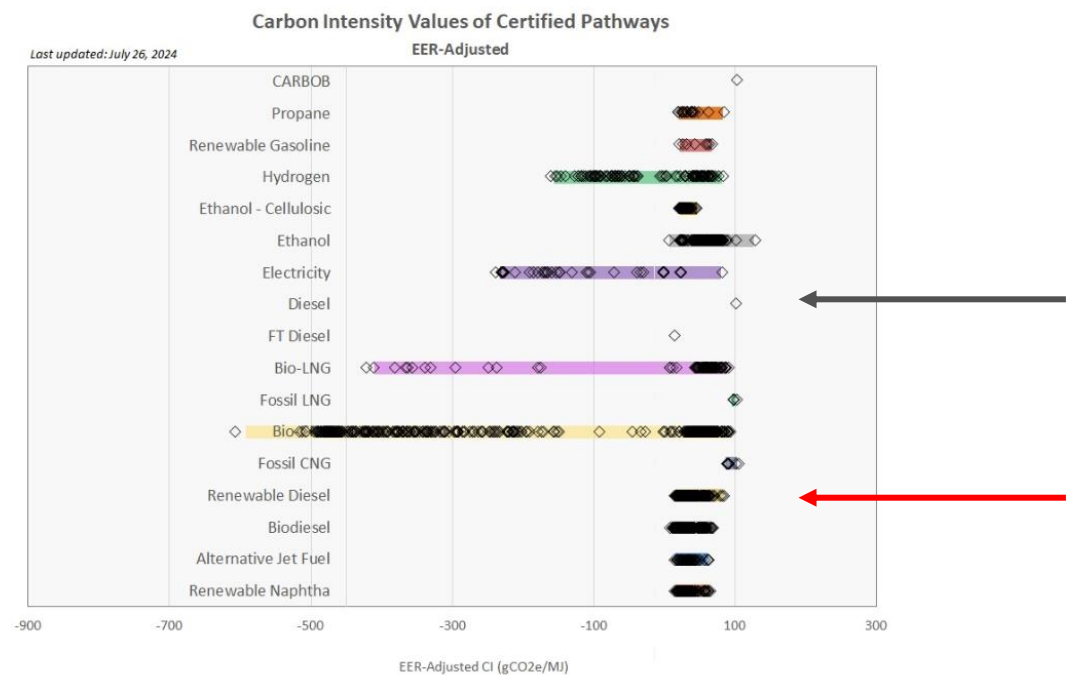


Emission Improvements: 60%+ GHG Reduction

CARB: <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>

The alternative fuel's carbon intensity (CI) value is divided by its Energy Economy Ratio (EER) in order to obtain the EER-adjusted CI value, representing the emissions that occur from the use of alternative fuel per MJ of conventional fuel displaced.

The graph below shows the ranges of CI for each type of fuel compared to the two baseline fuels (gasoline and diesel). Each marker represents an individual certified fuel pathway CI, adjusted by the EER. The length of each bar indicates the range of carbon intensity that may be achieved by a fuel pathway. The wide range of carbon intensities is due to the life cycle emission: methodology of the LCFS, variations in feedstock types, origin, raw material production processing efficiencies, and transportation, all of which contribute to an individual producer's fuel pathway CI. All valid CI values shown are certified including legacy, Tier 1, Tier 2 and Lookup Table pathways.

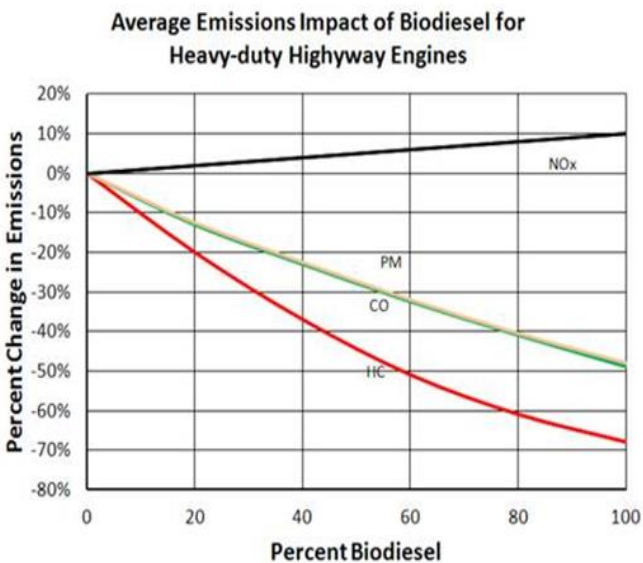


CA EPA: [Renewable_Diesel_Multimedia_Evaluation_5-21-15.pdf](#) (ca.gov)

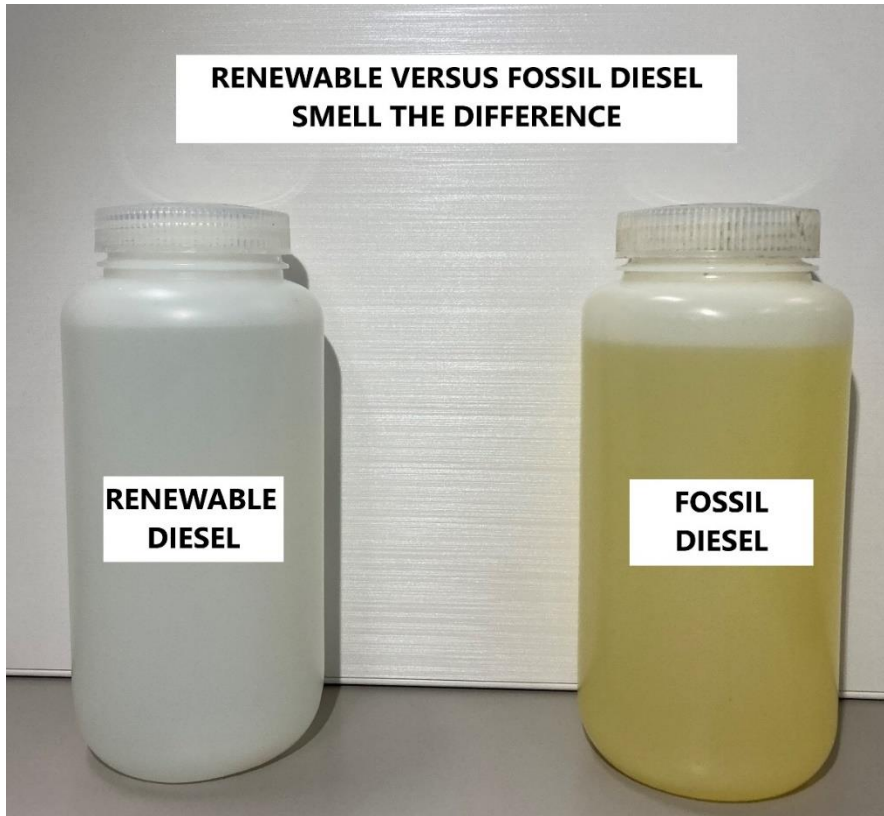
Table 5. Emissions Results on UDDS Cycle

	THC g/bhp-hr	ΔTHC %	CO g/bhp-hr	ΔCO %	NOx g/bhp-hr	ΔNOx %	PM g/bhp-hr	ΔPM %
CARB	0.769	0.0%	2.091	0.0%	5.891	0.0%	0.063	0.0%
R20	0.744	-3.3%	1.753	-16.2%	5.603	-4.9%	0.06	-4.8%
R50	0.726	-5.6%	1.612	-22.9%	5.289	-10.2%	0.055	-12.7%
R100	0.677	-12.0%	1.392	-33.4%	4.825	-18.1%	0.045	-28.6%

US DOE Energy: [Alternative Fuels Data Center: Biodiesel Vehicle Emissions](#) (energy.gov)



Renewable Diesel: Workplace Health and Safety



Anthony Bianculli, DSNY Chief of Support Services

“Twenty-three (23) years ago I first started with DSNY. When all the trucks were started at 6am, you couldn’t even see across the garage due to the diesel smoke and it was difficult to breath until all of the smoke dissipated. Skip forward to today with the total transition over to renewable diesel. At morning roll call you can’t even tell the trucks are running. What a difference it makes. Ultra-low sulfur diesel made a difference as well, but the renewable is a game changer. Any implementation that keeps the DSNY workforce healthy and safe is much appreciated and needed.”

Renewable Diesel: Workplace Health and Safety



[HERE](#)

Growing Commercial Availability of RD



Argus Americas Biofuels

Comprehensive coverage of biofuels in the Americas, as well as renewable feedstock & credit markets

Low Carbon Fuel Standard (LCFS)

Clean Fuel Standard Recommended in New York State

Fuel suppliers could soon be using a new acronym, NYCFS. A proposed New York Clean Fuel Standard recently took an important step forward toward becoming a real and enforceable policy with significant implications for the state's energy and transportation sectors.

On May 10, the New York Climate Action Council's Transportation Advisory Panel **recommended** that the state adopt a Clean Fuel Standard to aid in the transition from fossil fuels to renewable energy. The Climate Action Council is a 22-member committee charged with preparing a Scoping Plan to help the state achieve the goals of the New York Climate Leadership and Community Protection Act (CLCPA). The CLCPA calls for economy-wide greenhouse gas reductions of 40 percent by 2030 and 85 percent by 2050.

Issue 7

**Clean Fuel Standard
Recommended in New York
State**

**Biodiesel Tax Credit
Extension Introduced in
Congress**

**Making a Splash with Marine
Biofuels**

[HERE](#)

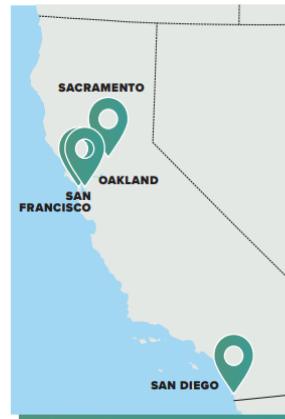
Clean Fuels NY Coalition Case Study, LCFS



CASE STUDY

RENEWABLE DIESEL IN CALIFORNIA

Many cities and private companies have seen the importance and opportunity of replacing fossil diesel fuels with renewable diesel, a next stage biofuel derived from waste cooking oils, animal fat and excess soybean oils. Critically, renewable diesel can be used by a traditional engine and can immediately replace fossil diesel without investing in new or retrofit equipment. **San Francisco, Oakland, Sacramento, and San Diego** have successfully switched to entirely renewable diesel, and UPS, Google and Boeing have also begun to phase in RD in their fleets.



DRIVING THE INITIATIVE FORWARD



2015

*City announced its
"NYC Clean Fleet"
Initiative*



2018

*City successfully
conducted a
demonstration
pilot with nearly
1 million gallons of
renewable diesel*



2025

*50% reduction
of emissions from
fleets by 2025*



2040

*Goal of 100% electric
fleet, according to
Mayor De Blasio's
executive order signed
in February 2020*

Soy Based Tires

Soy Tire Rollout, 2018 to 2024

Agency	Tires
NYPD	1,527
Correction	63
DSNY	84
DOT	56
Parks	674
FDNY	118
Total	2,522



Dawn M. Pinnock, Commissioner
Keith T. Kerman, Deputy Commissioner
and Chief Fleet Officer

NYC Fleet Newsletter

April 27, 2023 - Issue 424

Tackling Tire Emissions

By: Keith Kerman

The City of New York has committed to reducing emissions from vehicles. Of course, that means reducing or eliminating what comes out of tailpipes. With our growing all-electric fleet, we eliminate the tailpipe altogether, but tailpipes aren't the only part of cars spewing harmful emissions. Tires and brakes also have emissions.

If asked, most of us would say tires are made of rubber. This might even appear to be a natural product since a source of rubber is the sap of rubber trees. And, yes, natural rubber is a component of tires. However, tires are mostly made up of a myriad of petroleum products such as synthetic rubber, carbon black, and other chemicals with imposing names like propene, methy-limonene, cyclohexene, ethylbenzene, behenic alcohol, tetradecanol, and hexyne. Not exactly common terms.

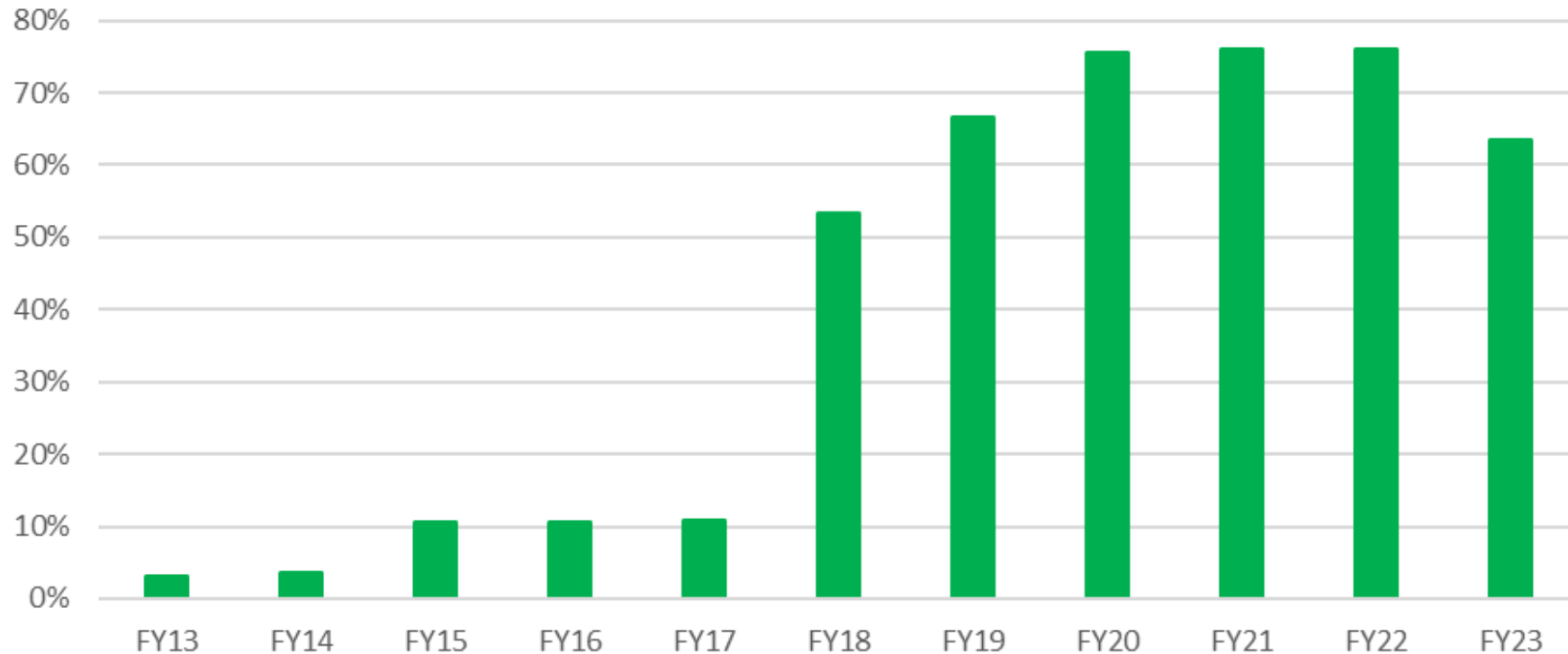
Our fleet vehicles vary from four tires on a sedan to 10 on a garbage truck. We have approximately 140,000 tires on the road supporting our on and off-road fleet. In the fleet world, we teach the penny test to check tire tread. Place a penny into a tire tread on a car, with the Lincoln head first. If you can see Lincoln's entire head, the tread is too thin and the tire needs to be replaced. It's a reasonable way to check the wear on car tires.



The question more rarely asked is what happens to all the particles and tire components as tires wear down mile after mile. These particles end up in our streets, ground, water, and air. Research has been done suggesting there is more particle emissions from tires than from tailpipes.

Biodiesel and Heating Oil

NYC Fleet: Bioheat
B10 Initiative, NYC Government Buildings
Percent of D2 Fuel Blended with B10



Biodiesel and Heating Oil

B10 Heating Oil Initiative

Fiscal Year	Total D2	B10/B20	Percent
FY24	13,744,565	9,754,497	71%
FY23	12,723,584	8,063,493	63%
FY22	12,971,518	9,809,703	76%
FY21	11,107,998	8,455,586	76%
FY20	9,321,511	7,040,263	76%
FY19	11,697,178	7,796,793	67%
FY18	12,853,659	6,841,902	53%
FY17	9,725,733	1,058,160	11%
FY16	9,368,529	993,248	11%
FY15	16,158,605	1,721,645	11%
FY14	15,335,152	565,036	4%
FY13	15,166,406	489,728	3%
<i>All D2 is at minimum B5</i>			

Heating Oil B10 by July 1, 2025, NY State Law

All heating oil sold for use in any building in New York must contain at least 5% biodiesel by July 1, 2022, 10% by 2025 and 20% biodiesel by 2030.

Blending requirements are already in effect in Long Island and New York City. Rhode Island and Connecticut passed biodiesel blending requirements in the summer of 2021.

Biodiesel industry advocates estimate that the fuel will cut New York's annual petroleum diesel consumption by approximately two hundred million gallons per year, cutting the state's annual carbon emissions by approximately 1 million metric tons.

Partnership with NORA, Clean Fuels Alliance



New Opportunities

ENERGY THEORY

FAQs

Glossary

Green

Latest News

Renewable

Reviews & Comparison

Solar

GLOSSARY

What is Renewable Gasoline?

By Elliot Clark — November 17, 2023 3 Mins Read



Renewable gasoline, **also known as green or drop-in gasoline**, is a fuel derived from biomass using diverse biological, thermal, and chemical techniques. This fuel shares the same chemical composition as petroleum gasoline and complies with the ASTM D4814 standard. One of its advantages is that it can be used in current engines and infrastructure. Currently, renewable gasoline is not widely utilized in the United States, as there is a predominant focus on transitioning the light-duty market to electric vehicles.



Contact

For more information, go to the NYC Fleet website:
<http://www.nyc.gov/html/dcas/html/employees/fleet.shtml>

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DCAS

THANK YOU