

Fleet



# **De-carbonizing Fleet**

## **NYC Fleet**

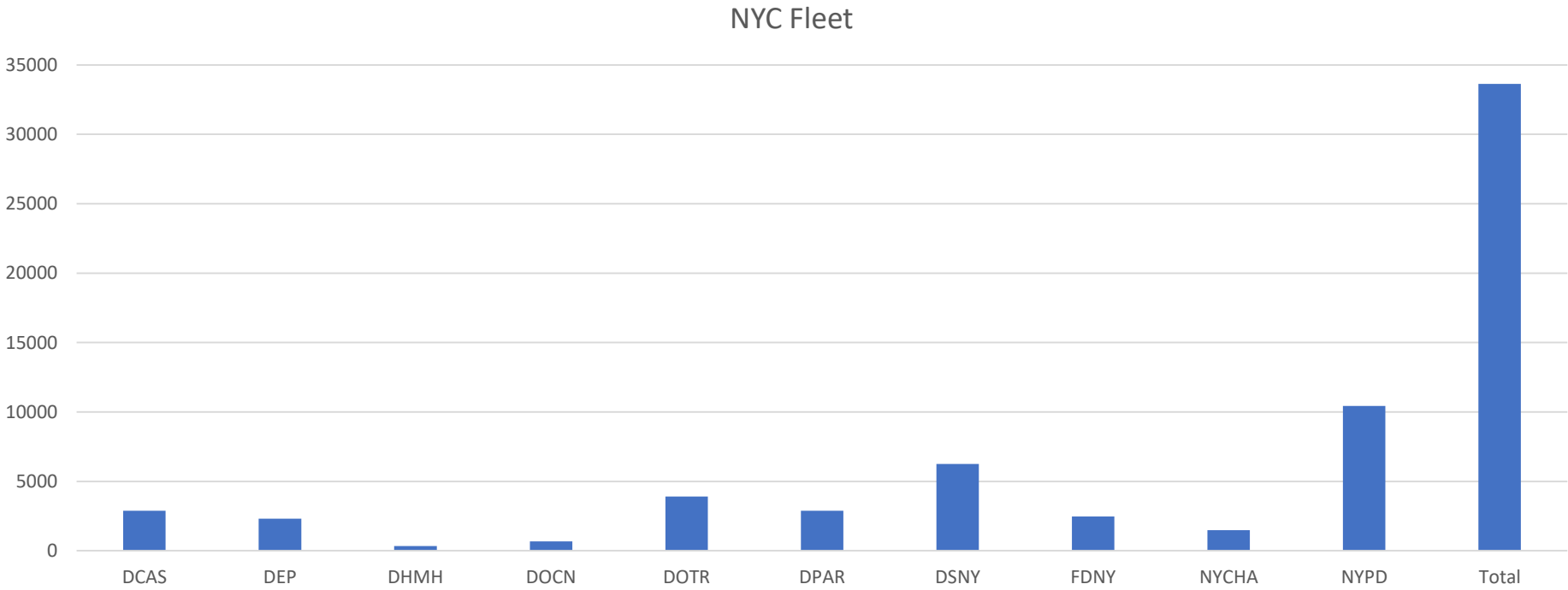
**Keith T. Kerman, NYC Chief Fleet Officer**  
**NY Energy Summit, Albany NY**  
**October 15, 2019**

# NYC Fleet: Who are we?

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# NYC Fleet























# Fleet's Day Job



## New York City Fleet Daily Service Report

New York City operates over 30,000 vehicles, the largest municipal fleet in the country. Each day, police cars, fire engines, sanitation waste units, forestry bucket trucks, street paving units and other equipment pieces play critical roles supporting the provision of essential public services. NYC Fleet, a line of service at the Department of Citywide Administrative Services (DCAS), manages the City fleet in conjunction with the 10 major fleet operating agencies and 60 fleet agencies in total. In April 2012, NYC Fleet developed a daily morning report on the readiness and condition of the City's fleet.

This daily fleet report is distributed to agencies each day and is also available to the public on the internet. The report includes an Agency Summary that provides overall unit availability for each of nine agencies and the "DCAS Managed" fleet, which serves the other Mayoral agencies. It also includes the Critical Fleets Summary, which tracks availability for groups of vehicles assigned to key programs or functions identified by agencies.

## Fleet Availability for Tuesday, May 28, 2019

The report format is as follows:

- Fleet Roster:** the total size of each fleet.
- Target Daily In Service:** the number of vehicles that the agency would like to see available – i.e., not down for repair – on any given day.
- Actual In Service:** the number available today. A cell is shaded:
  - Green and marked with a green plus sign if the target has been met,
  - Yellow and marked with a brown less-than sign if availability is within 10% of the target, or
  - Red and marked with a red minus sign if availability is more than 10% below target.
- Average Over FY 18 to Date:** the average daily availability for the fiscal year, which runs from July 1st to June 30th, to date.

[Download the report](#)

### NYC Fleet Daily Service Report: Agency Summary

Agency	Fleet Roster	Target Daily In Service	Actual In Service	Average Over FY 18 to Date
DCAS Managed	2497	2347	2474 +	2492
DEP	2321	2089	2116 +	2132
DOC	725	653	666 +	638
DOE	347	326	344 +	347
DOHMH	335	315	333 +	338
DOT	4001	3401	3712 +	3814
DSNY	6220	4852	4973 +	5130
FDNY	2427	1942	2002 +	2010
NYPD	10419	9377	9867 +	9726
Parks	2855	2570	2715 +	2734
Citywide	32147	28932	29232 +	29166

### NYC Fleet Daily Service Report: Critical Fleets Summary

Agency	Critical Fleet	Fleet Roster	Target Daily In Service	Actual In Service	Average Over FY 18 to Date
DCAS	Mayoral fleet	56	53	54 +	57
DCAS	OEM	147	138	147 +	154
DCAS	Sheriff	115	108	115 +	115
DEP	Customer service	108	102	105 +	102
DEP	Environmental compliance	89	84	89 +	86
DEP	Police	147	138	139 +	140
DEP	Sewer and water	1201	1081	1068 -	1073
DOC	Buses	128	115	115 +	116
DOC	Sedans	117	105	114 +	115
DOC	Vans	128	115	124 +	113
DOE	Food services	40	36	40 +	39
DOT	Asphalt plant	48	41	44 +	42
DOT	HIQA	170	153	170 +	166
DOT	Material hauling	387	329	336 +	322
DOT	Meters	157	133	148 +	157
DOT	Paving	440	374	396 +	362
DSNY	Collection trucks	1377	1170	1030 -	1104
DSNY	Dual bin collection trucks	652	554	506 -	436
DSNY	Sweepers	447	380	310 -	344
FDNY	Ambulances	605	454	404 -	421
FDNY	Ladders	212	159	163 +	158
FDNY	Pumpers	274	206	226 +	228
NYPD	Traffic	701	631	659 +	638
Parks	Forestry	162	146	141 -	126
Parks	Packers	109	98	95 -	90
Total	-	8017	6903	6738 -	6715



# Mayor de Blasio: One NYC Plan

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December 2015

## NYC Clean Fleet

New York City will lead by example in pursuing 80×50 transportation emissions reductions by improving the sustainability of its municipal vehicle fleet

# NYC Clean Fleet: EV

NYC Fleet On-Road Electric Vehicles



Image from vecteezy.com

NYC Fleet





# NYC Clean Fleet: EV

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*For Immediate Release*



**Media Contact:**  
Nick Benson  
Deputy Communications Director  
[nbenson@dcas.nyc.gov](mailto:nbenson@dcas.nyc.gov)  
646-832-6533

## City to Double its Use of Electric Vehicles, Hits New Milestone

*NYC's Government Vehicle Fleet Has Replaced 2,200 Gas-Powered Vehicles and will Reach 4,000 by 2025*

**NEW YORK** – The New York City Department of Citywide Administrative Services (DCAS) today announced that it has replaced 2,200 gas-powered on-road fleet vehicles with plug-in electric models. This milestone was achieved six years ahead of a 2025 target set by Mayor Bill de Blasio in the *NYC Clean Fleet Plan*, announced in 2015. Building upon this success, the City will now double its goal and will have at least 4,000 on-road electric vehicles in use by 2025. When Mayor Bill de Blasio took office in 2014, the City had only 211 electric vehicles in its fleet. The announcement was made at the 31st Annual Fleet Show hosted by DCAS and the NYC Parks Department in Flushing Meadows Corona Park. Many of the City's newest fleet models were on display at the show.

"It's time to say goodbye to fossil fuels and say hello to an emissions-free future," said **Lisette Camilo, Commissioner of the NYC Department of Citywide Administrative Services**. "The cars we buy directly impact the air we breathe and how we impact our climate. That is why we're shrinking the size of City government's vehicle fleet and using cleaner fueling options."

The 2,200 plug-in electric vehicles that have been introduced to the City's fleet have reduced annual CO2 emissions by nearly 9,000 metric tons, the equivalent of burning 1 million gallons gasoline. In addition to the environmental benefits of electric vehicles, their use has reduced fueling and maintenance costs. The average all-electric sedan costs 65% less to maintain, saving over \$550 per year for each vehicle. In total, one-third of the City's sedans, excluding police cars, are now electric-powered.

The City has undertaken a rapid phase-out of traditional vehicles for electric models. Under Mayor de Blasio's *NYC Clean Fleet Plan*, DCAS has also:

# NYC Clean Fleet: EV

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**Seth Stein** @SethStein · Jan 16

What's got 4 wheels, gets 82MPGe, all-electric 32 mi range & sleek [#dadcore](#) styling? The Mayor's new hybrid minivan



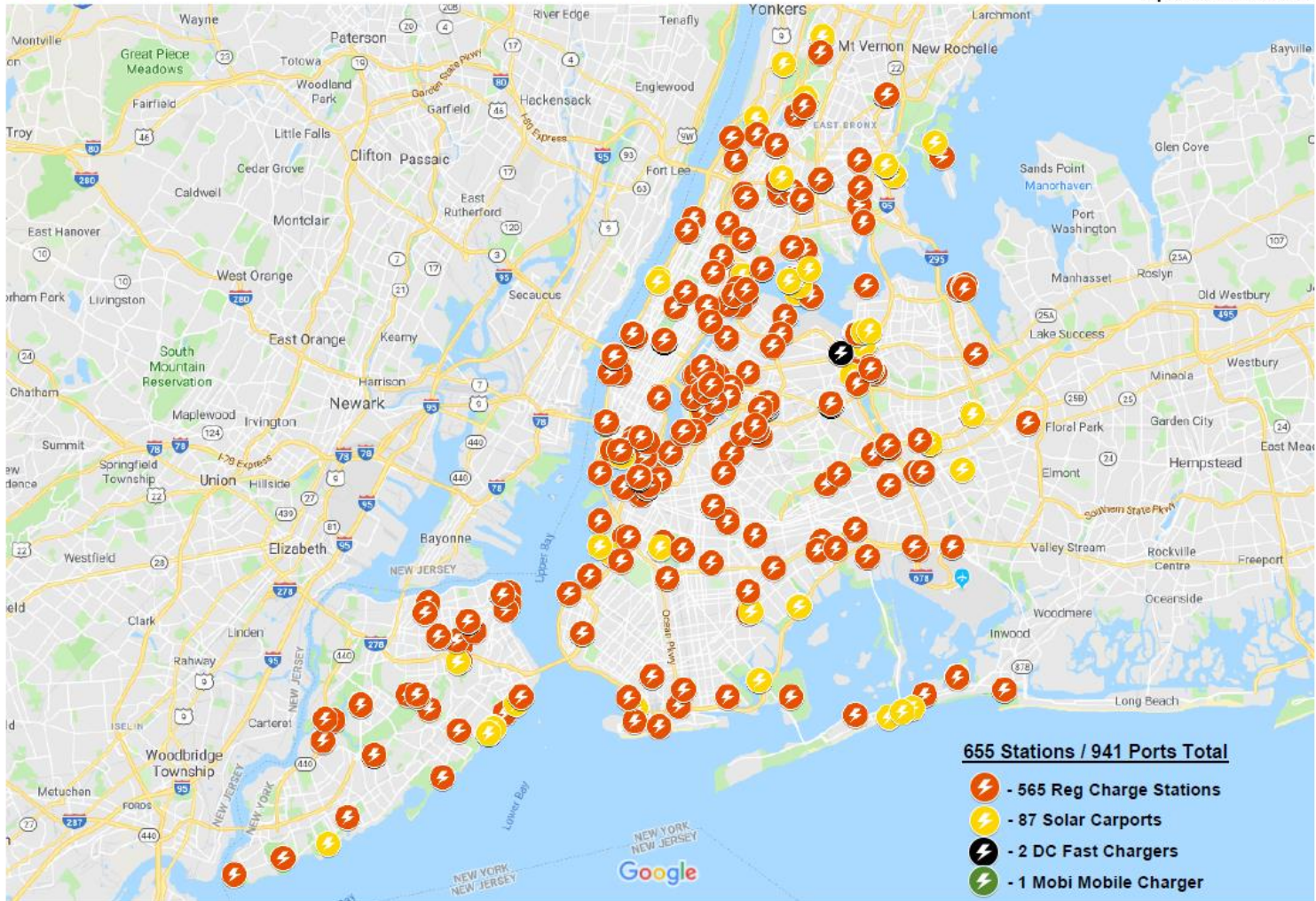


# EV Charging Network

Google Maps

NYC Fleet EV Charging Network as of 9/11/19

**NYC DCAS**  
Citywide Administrative Services



# Solar

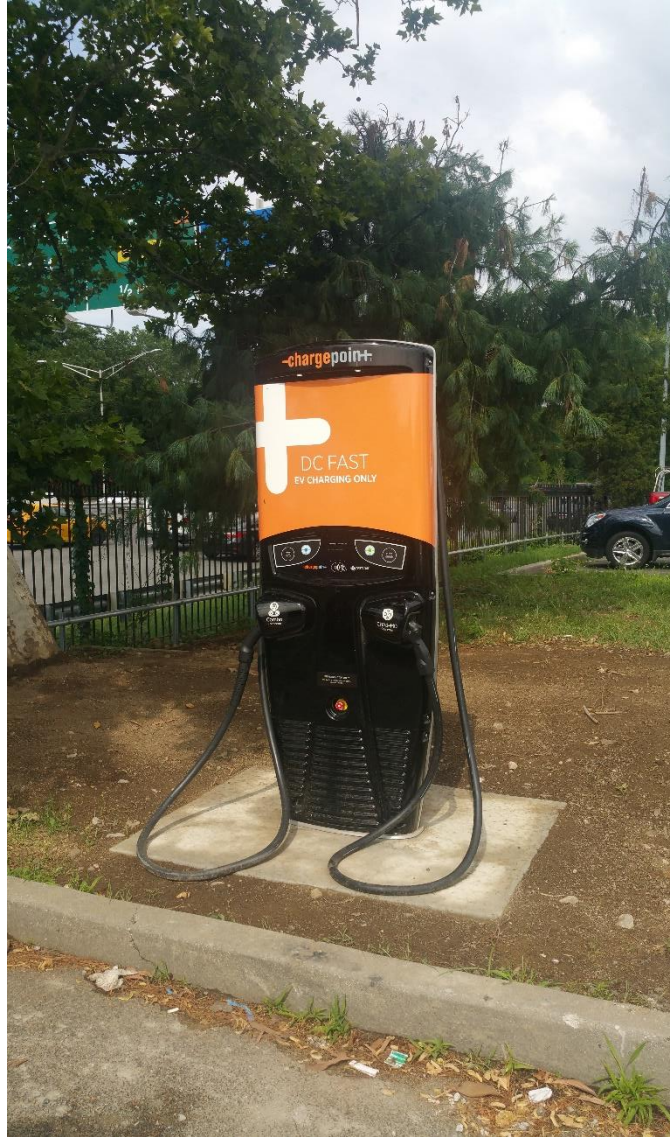
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# Fast charging

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# Mobile charging

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# EV/Solar Off-Road Equipment

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# EV Training



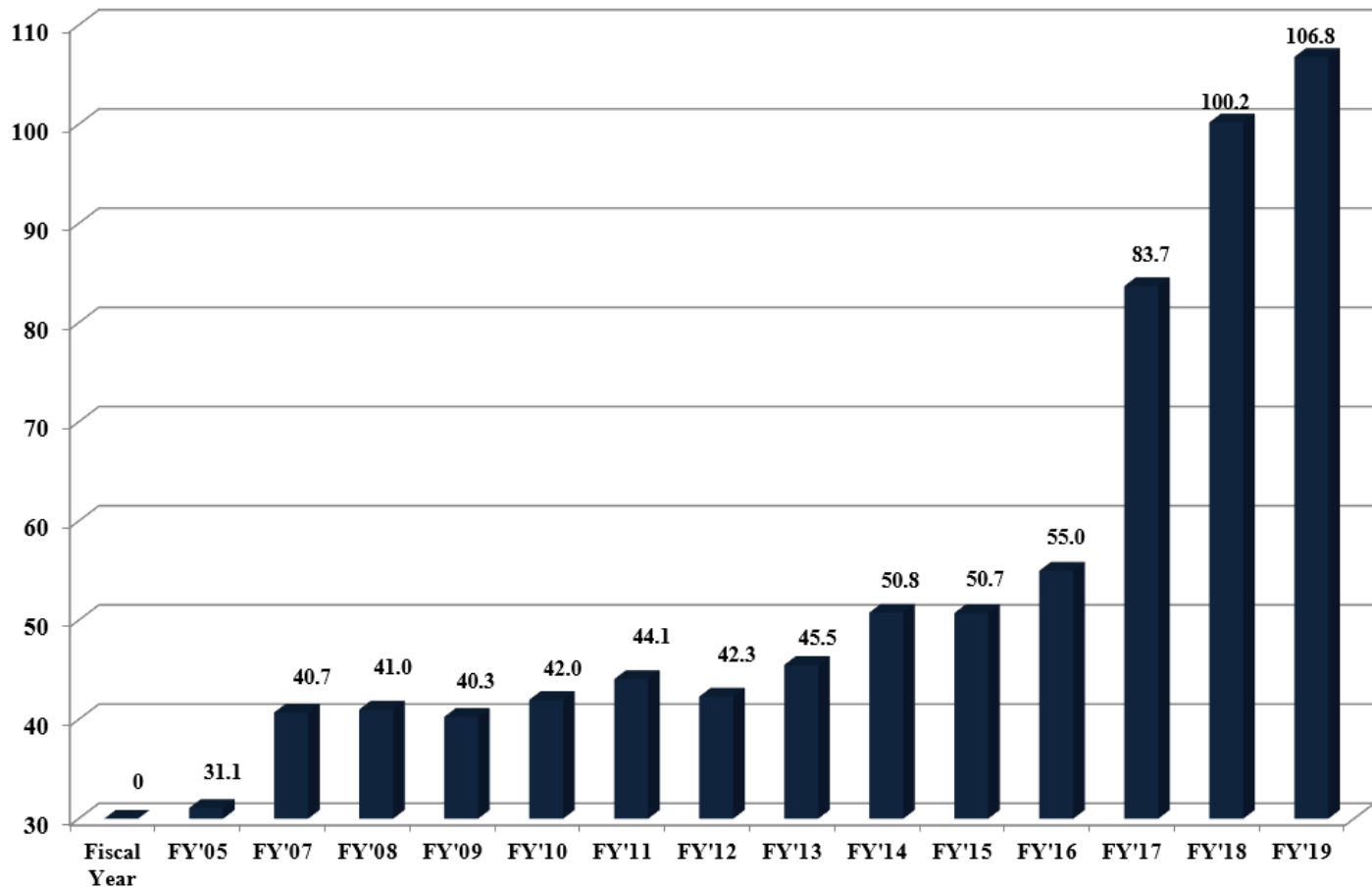
**NYC DCAS** @NYCDCAS · 9 Aug 2018

DYK we operate 520 electric vehicle chargers across NYC? One of the largest charging networks in the country. This week we organized **training** on **EV** systems for City electricians from **DCAS** @NYPDnews @NYCSchools @nycHealthy @NYCWater & @FDNY. Thanks to @NYCsanitation for hosting!



# Fuel Efficiency

NYC Fleet: Light Duty Fuel Economy by Fiscal Year  
Local Law 38 of 2005



# Fuel Efficiency

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## For Immediate Release

October 5, 2017

Cathy Hanson, [chanson@dcas.nyc.gov](mailto:chanson@dcas.nyc.gov)

### FACING THREATS FROM WASHINGTON, NEW YORK CITY PROVES CORPORATE AVERAGE FUEL ECONOMY STANDARDS WORK

*Department of Citywide Administrative Services submits comments to EPA protesting roll-back of standards, citing NYC's record 83.7 MPG average for newly purchased City vehicles in FY17 as proof of success*

**NEW YORK** – New York City submitted comments to the Environmental Protection Agency (EPA) today, protesting any roll-back of the Corporate Average Fuel Economy (CAFE) standards of 54.5 MPG by 2025. Disproving the EPA's theory that these goals may be too ambitious or not achievable, NYC achieved a record 83.7 miles per gallon (MPG) on average for newly purchased light and medium duty units in Fiscal Year 2017, outpacing last year's previous record of 55 MPG.

In 2005, led by then Council Member Bill de Blasio, the New York City Council passed Local Law 38, which requires the City fleet to report annually its CAFE equivalent each year for new light and medium duty fleet units and to purchase fuel efficient new vehicles. The fleet started in FY05 at 31 MPG on average and has now nearly tripled the fuel economy of its new vehicles. NYC has found this type of regulation leads to better, cheaper, more reliable, and more fuel efficient vehicles. In just the last four years, New York City demonstrated a 28 percent improvement in actual fuel economy, with a savings of more than \$600 dollars per vehicle.

"NYC has shown that ambitious CAFE standards work. For Washington to rollback these standards shows a disregard for what cities can and should achieve to help combat climate change," said **Mayor Bill de Blasio**. "We all have a responsibility to do our part. Washington should be looking to increase the standards, not do away with them. "

"In 2016, NYC matched the 2025 federal CAFE goal of 54.5 miles per gallon for its City fleet," said **Department of Citywide Administrative Services Commissioner Lisette Camilo**. "In 2017 we did even better thanks to our investment in hybrid and electric vehicles. We've shown the



# Hybrid Police Cars



# Hybrid and Plug in Ambulances

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# Alternative Fuel Vehicle Marketplace

## NYC Fleet Alternative Fuel Models

MAKE	MODEL	COUNT	FUEL TYPE
CHEVROLET	BOLT	230	ELECTRIC
CHEVROLET	EXPRESS	39	ELECTRIC GAS HYBRID
CHEVROLET	EXPRESS	73	CNG
CHEVROLET	SILVERADO HY	23	ELECTRIC GAS HYBRID
CHEVROLET	TAHOE HYBRID	74	ELECTRIC GAS HYBRID
CHEVROLET	VOLT	104	PLUG-IN
CHRYSLER	PACIFICA	8	PLUG-IN
CRANE	LT25232B012	1	CNG
CRANE	LT2523ZB004	16	CNG
FORD	C-MAX HYBRID	120	ELECTRIC GAS HYBRID
FORD	ESCAPE HYBRD	401	ELECTRIC GAS HYBRID
FORD	FOCUS ELEC	16	ELECTRIC
FORD	FUSION ENERG	401	PLUG-IN
FORD	FUSION HYBRD	1,377	ELECTRIC GAS HYBRID
FORD	TRANSIT CONN	4	ELECTRIC
FORD	TRANSIT VAN	5	ELECTRIC GAS HYBRID
GLOBAL	M4	117	DIESEL HYBRID
GMC	YUKON HYBRID	9	ELECTRIC GAS HYBRID
HONDA	ACCORD HYBRD	6	ELECTRIC GAS HYBRID
HONDA	CIVIC	36	CNG
HONDA	CIVIC HYBRID	19	ELECTRIC GAS HYBRID
IC CORP	PC105	3	DIESEL HYBRID
JOHNSTON	VANGUARD	2	CNG
KENWORTH	MT45 CHASSIS	1	DIESEL HYBRID
KENWORTH	T270	11	DIESEL HYBRID
KENWORTH	T300	16	DIESEL HYBRID
KENWORTH	T370	17	DIESEL HYBRID
MACK	LEU633	23	CNG
MERCURY	MARINER HYBD	2	ELECTRIC GAS HYBRID
NAVISTAR	ESTAR	3	ELECTRIC
NISSAN	ALTIMA HYBRD	50	ELECTRIC GAS HYBRID
NISSAN	LEAF	267	ELECTRIC
TOYOTA	AVALON HYBRD	12	ELECTRIC GAS HYBRID
TOYOTA	CAMRY HYBRID	302	ELECTRIC GAS HYBRID
TOYOTA	HIGHLAND HYB	194	ELECTRIC GAS HYBRID
TOYOTA	PRIUS	2,249	ELECTRIC GAS HYBRID
TOYOTA	PRIUS PLUGIN	399	PLUG-IN
TOYOTA	RAV4 HYBRID	479	ELECTRIC GAS HYBRID
<b>TOTALS</b>	<b>38</b>	<b>7,109</b>	



[Find a Car](#)[Save Money & Fuel](#)[Benefits](#)[My MPG](#)[Advanced Cars & Fuels](#)[About EPA Ratings](#)[More](#)[Q](#)

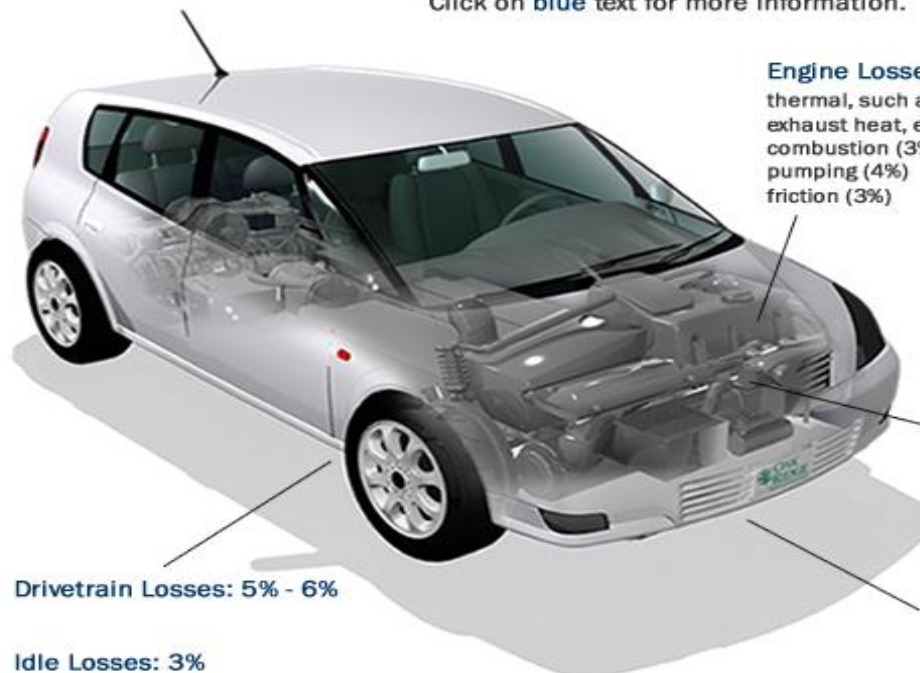
## Where the Energy Goes: Gasoline Vehicles

Only about 12%–30% of the energy from the fuel you put in a conventional vehicle is used to move it down the road, depending on the [drive cycle](#). The rest of the energy is lost to engine and driveline inefficiencies or used to power accessories. Therefore, the potential to improve fuel efficiency with advanced technologies is enormous.

[Combined](#)[City](#)[Highway](#)

### Energy Requirements for Combined City/Highway Driving

Click on blue text for more information.



#### Engine Losses: 68% - 72%

thermal, such as radiator,  
exhaust heat, etc. (58% - 62%)  
combustion (3%)  
pumping (4%)  
friction (3%)

#### Auxiliary Electrical Losses:

0% - 2%

(e.g., climate control fans,  
seat and steering wheel  
warmers, headlights, etc.)

#### Parasitic Losses: 4% - 6%

(e.g., water, fuel and oil  
pumps, ignition system,  
engine control system, etc.)

#### Power to Wheels: 16% - 25%

Dissipated as  
wind resistance: (8% - 12%)  
rolling resistance (4% - 7%)  
braking (4% - 7%)

#### Drivetrain Losses: 5% - 6%

#### Idle Losses: 3%

In this figure, they are accounted for as part of the engine and parasitic losses.

Some percentages may not add to 100% due to rounding.

# Biofuels

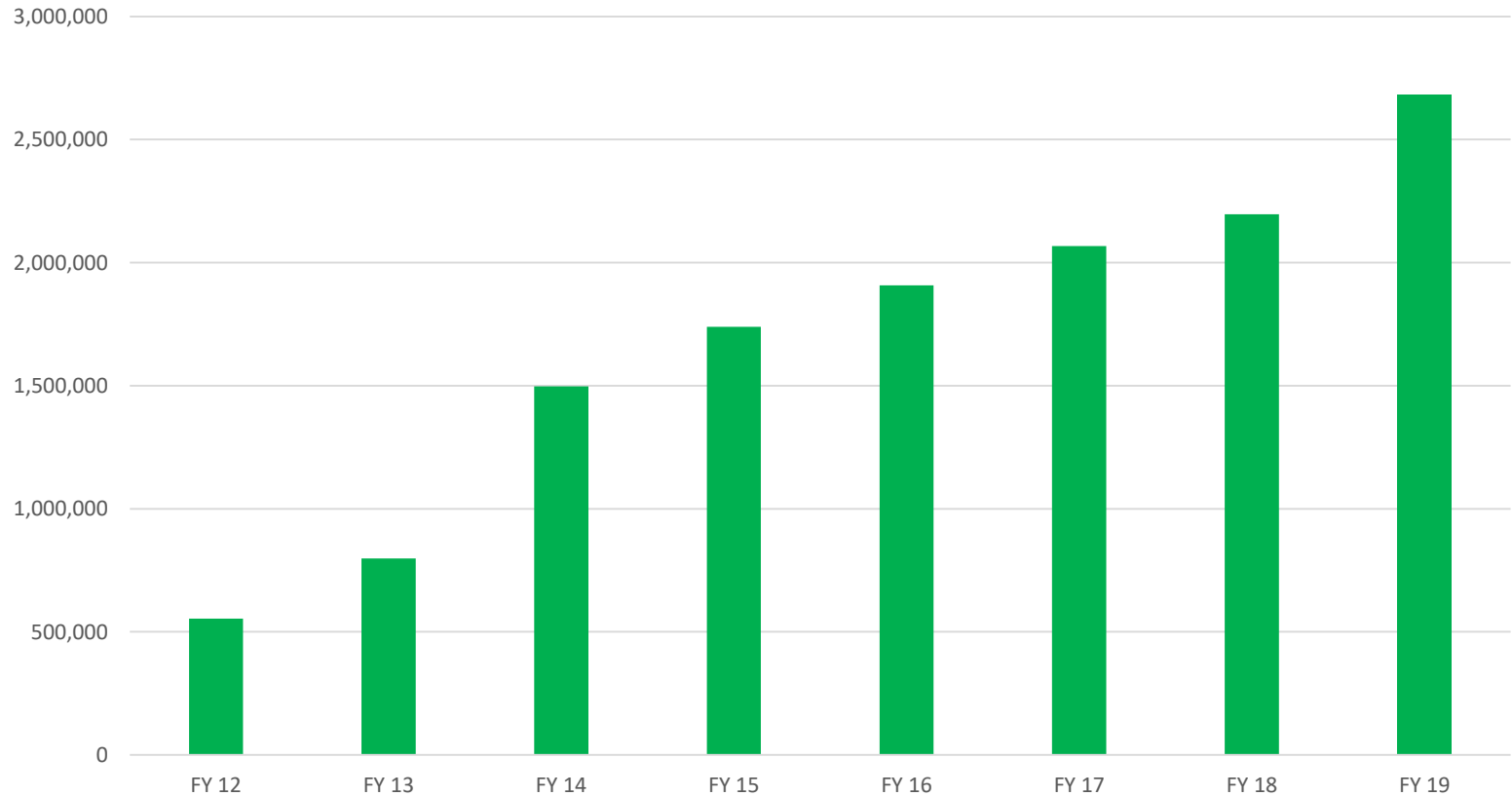
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# Biofuels

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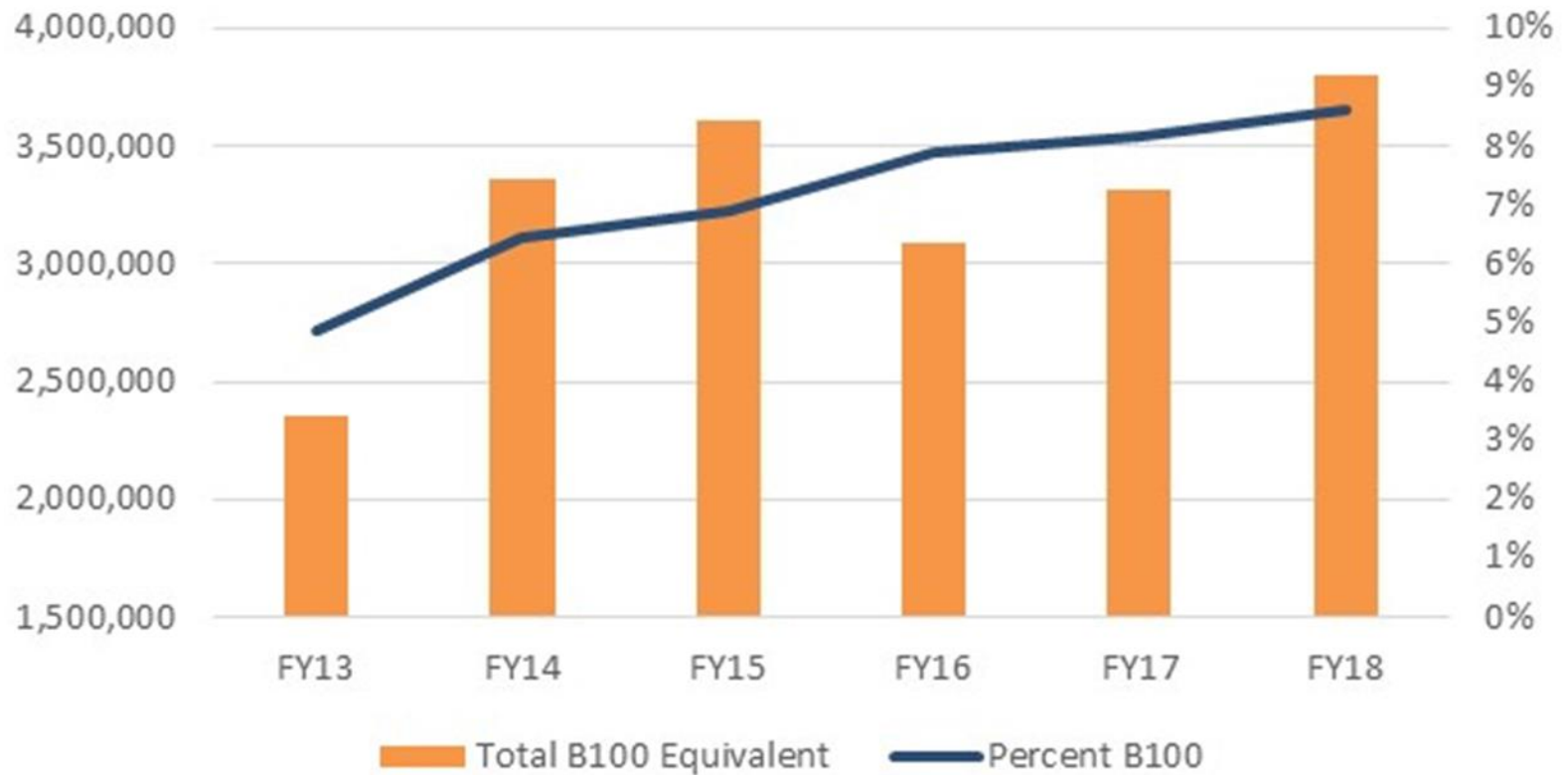
NYC Fleet: Biofuel Use Up Each Year  
(in gallons of B100)





# Biofuels

## Biodiesel Use in NYC Fleet and Buildings



# Biofuels

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## For Immediate Release

October 19, 2017

Cathy Hanson, [chanson@dcas.nyc.gov](mailto:chanson@dcas.nyc.gov)

### **PUSHING BACK AGAINST WASHINGTON'S THREATS TO REDUCE ENVIRONMENTAL STANDARDS, NEW YORK CITY SUPPORTS AMERICA'S FARMERS AND BIODIESEL SUPPLIERS**

*Department of Citywide Administrative Services submits comments to EPA protesting roll-back of national renewable fuel standards and announces further expansion of use of biodiesel for fleet and buildings.*

**NEW YORK** – New York City submitted comments to the Environmental Protection Agency (EPA) today, protesting any roll-back of the Renewable Fuel Standards (RFS) which call for minimal use levels for renewable fuels like biodiesel. Biodiesel has proven a reliable and effective fuel for NYC fleet and buildings and has helped reduce air pollution in the City while lowering greenhouse gas emission. NYC continues to grow its implementation of biofuels in buildings and fleet and calls on Washington to do the same nationally.

Biofuels can be produced in many ways including recycling of used grease from restaurants and the use of farm products such as soy plants.

Already a leader in biodiesel use, NYC is set to expand the use of biofuels:

- **Mayor de Blasio signed Local Law 119 of 2016, one of the most ambitious biofuels laws in the country.** This law will transition all fuel oil used in heating to B20 by 2034. The first stage of the expansion is happening now with all NYC public and private buildings transitioning from B2 to B5 effective October 1, 2017.
- NYC owned government buildings will meet this goal **eight years before the law requires**, going from B5 to B10, effective the winter of 2017/2018,
- NYC will also introduce the use of **renewable diesel (RD) for the first time** with a 1 million-gallon purchase scheduled for use by City agency fleets in spring, 2018. Like biodiesel, RD uses renewable and natural feedstock's to replace fossil fuels.

**These efforts require a healthy and growing national biodiesel industry and set of suppliers. We object to any effort to roll-back the Renewable Fuel Standards on the part of**

# Biofuels

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*For Immediate Release*



**Media Contact:**  
Nick Benson  
Deputy Communications Director  
[nbenson@dcas.nyc.gov](mailto:nbenson@dcas.nyc.gov)  
646-832-6533

## **DCAS to Expand Use of 99% Petroleum-Free Renewable Diesel in City Vehicles**

*City Aims to Phase Out Use of Traditional Diesel Fuel*

**NEW YORK** – The NYC Department of Citywide Administrative Services (DCAS) today announced that it will expand use of renewable diesel fuel, a 99% petroleum-free alternative to traditional diesel fuel. The fuel reduces CO2 emissions by 65% compared to the petroleum-based version. This move is part of the City's efforts to phase out its use of regular diesel.

The City plans to bid a long-term contract to purchase renewable diesel following a successful six-month demonstration period in which the City tested nearly one million gallons of renewable diesel in City fleet vehicles. Each year, City fleet units use up to 17 million gallons of diesel that could be displaced through this initiative.

"The climate crisis is real and it's urgent, and that is why the City of New York is leading the way on reducing carbon emissions," said **Lisette Camilo, Commissioner of the NYC Department of Citywide Administrative Services**. "Renewable diesel is 99% petroleum-free and helps keep fossil fuels in the ground and emissions out of our air."



# Biofuels

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MEDIA | NEWS RELEASES

## GOODYEAR USING SOYBEAN OIL-BASED RUBBER IN TIRES

AUGUST 29, 2017

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AKRON, Ohio, August 29, 2017 – The Goodyear Tire & Rubber Company is harvesting some unique “seeds” of innovation as it introduces a new tire technology with support from the United Soybean Board (USB).

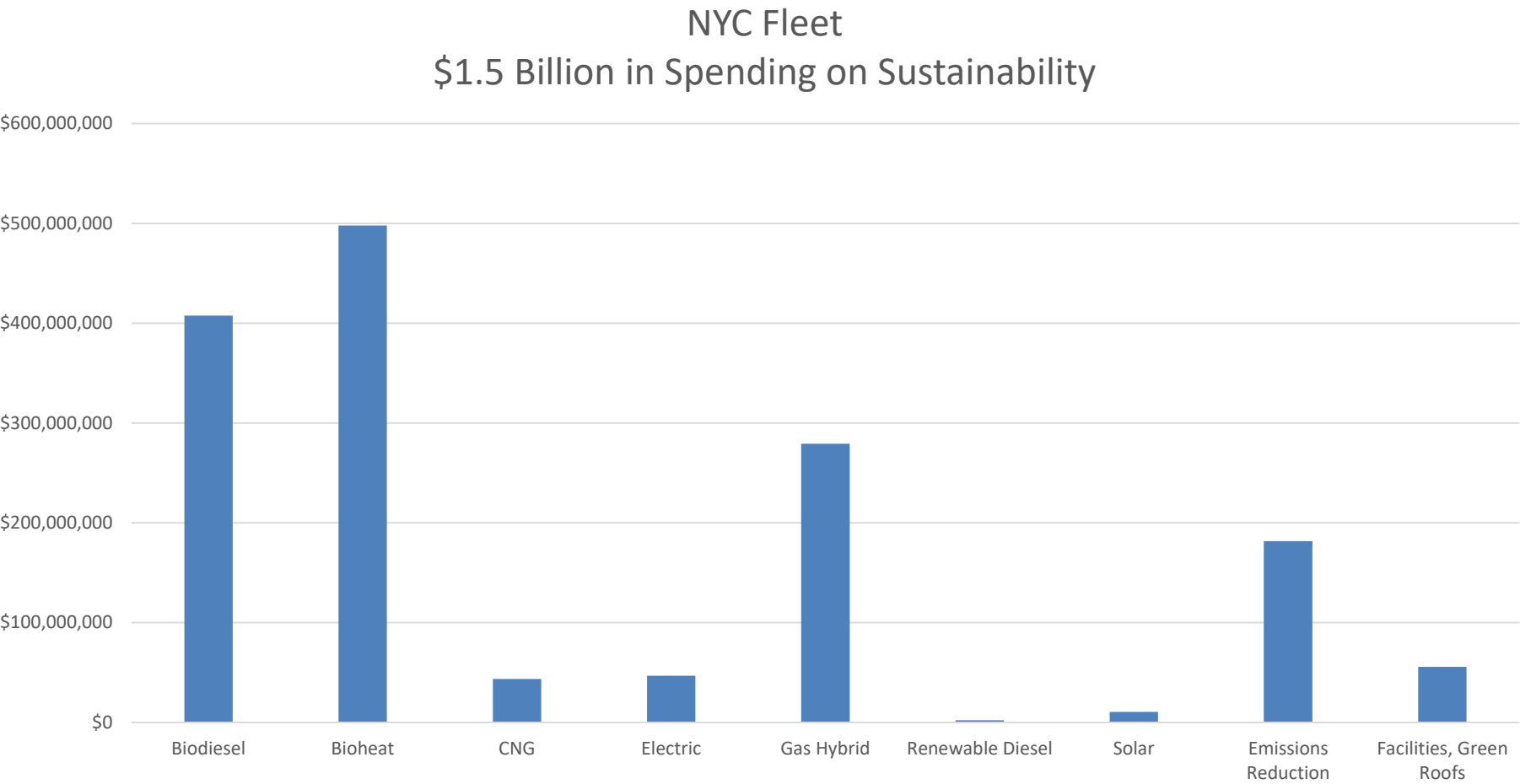
The first commercial use of a new soybean oil-based rubber compound is helping Goodyear enhance tire performance in dry, wet and winter conditions. A Goodyear team of scientists and engineers created a tread compound, or formulation, using soybean oil, which is naturally derived, cost-effective, carbon-neutral and renewable.

“Goodyear’s legacy of innovation drives us to continue to apply new technology solutions, developing superior performing tires that meet consumer demands,” said Eric Mizner, Goodyear’s director of global materials science.

By employing soybean oil in tires, Goodyear found a new way to help keep the rubber compound pliable in changing temperatures, a key performance achievement in maintaining and enhancing the vehicle’s grip on the road surface.

Goodyear’s tests have shown rubber made with soybean oil mixes more easily in the silica-reinforced compounds used in manufacturing certain tires. This also improves manufacturing efficiency and reduces energy consumption.

# Investment: Sustainable Technology



# Executive Order on Fleet Reduction



*Executive Order will help reduce congestion and furthers City's commitment to use alternative fuels to continue increasing fuel economy*

**NEW YORK**— Mayor Bill de Blasio signed an [executive order](#) today that will reduce the size of the City's on-road vehicle fleet, deepening its commitment to address climate change and reduce emissions 80 percent by 2050. The City will eliminate at least 1,000 vehicles from its fleet by June 2021 – about the same number of cars parked on the street of eight Manhattan blocks. The order will also reduce the number of take-home vehicles by at least 500 vehicles, curtail the reliance on SUVs in the City fleet and promote greater vehicle efficiency by using advanced data collection. With the order, the City estimates 10 million fewer miles will be driven by City vehicles each year, resulting in reduced congestion, cutting the City's annual fuel consumption by 500,000 gallons, and decreasing annual emissions by 6,300 metric tons of CO<sub>2</sub>, the equivalent of burning nearly seven million pounds of coal. The City's fleet currently has 25,690 on-road vehicles.

"Sustainability isn't about maintaining the status quo, it's about changing the way we live and get around," said **Mayor Bill de Blasio**. "Eliminating unnecessary vehicles from our streets and replacing gas-guzzling SUVs with electric cars will bring us one step closer to our carbon emission reduction goals, which means a cleaner New York City for all."

"The climate crisis is real and it's urgent, and that is why we are scaling back and greening up the City's vehicle fleet," said **Lisette Camilo, Commissioner of the NYC Department of Citywide Administrative Services**. "To support Mayor de Blasio's vision for a cleaner and safer New York, we are using new technology to right-size the City's fleet and to more efficiently use the cars we do need."

"Leading the charge against climate change means constantly finding new ways to increase efficiency and decrease emissions," said **Mark Chambers, Director of the Mayor's Office of Sustainability**. "This executive order uses a thorough, data-driven approach to make the nation's greenest fleet even greener."

This executive order is based on a data-driven approach. By removing 1,000 vehicles under the order, the City will review every agency's fleet to ensure the vehicles are being used efficiently and will reduce the fleet size as needed. The City will increase its goal for daily vehicle usage rate from 67 percent to 80 percent. This means at least 80 percent of the City's fleet should be used daily, except for certain emergency, specialized, or seasonal vehicles.





# Fleet Sharing

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## OPERATIONS

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### New York City Doubles Car Sharing Use

March 6, 2018 • by Staff [f](#) [t](#) [in](#) [e](#)



Photo via [Open Grid Scheduler / Grid Engine](#)/Flickr

New York City fleet drivers increased their use of car sharing significantly in 2017, the city's Department of Citywide Administrative Services (DCAS) reported in its second annual report on car sharing.

# Savings

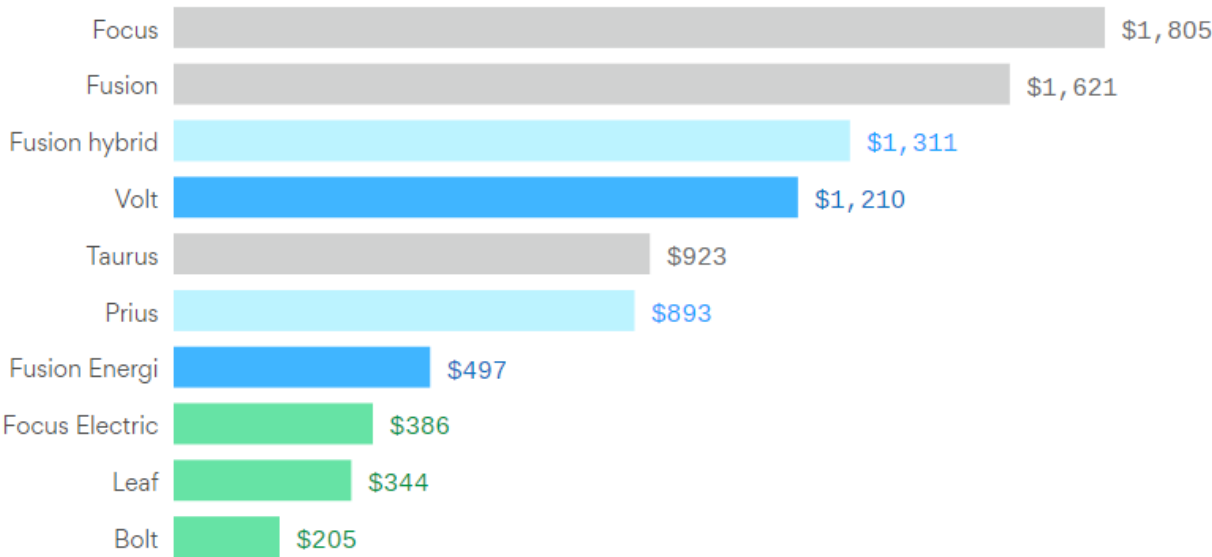
Citywide Savings Program	City Personnel as of 6/30/18 Increase/ (Decrease)	FY17	FY18	FY19	FY20	FY21
<b>November Plan</b>						
<b><u>Fleet Optimization</u></b> Savings will be achieved through City fleet reduction, the reduction of rentals and increased use of the Citywide car-sharing program, continued auction of salvaged vehicles, downsizing larger vehicles to sedans, and capitalizing large vehicle purchases.		-	(10,000)	(13,000)	(11,000)	(7,000)
Citywide Initiatives	City Personnel as of 6/30/19 Increase/ (Decrease)	FY18	FY19	FY20	FY21	FY22
<b><u>Preliminary Plan</u></b>						
<b><u>Agency Phone Plan Review</u></b> DoITT will review phone plans to ensure competitiveness, improve billing, and upgrade technology.		-	(1,575)	(3,500)	(3,500)	(3,500)
<b><u>Electric Vehicles</u></b> The City will transition to purchasing battery powered electric vehicles (BEVs) in order to decrease fuel and maintenance costs.		-	(1,938)	(2,263)	(2,589)	(2,914)
<b><u>Fleet Legal Coordination</u></b> DCAS will share information with Law related to the defense of automobile-related claims made against the City.		-	(4,800)	(4,800)	(4,800)	(4,800)
<b><u>Paper Reduction</u></b> City agencies will phase out the creation and storage of most types of paper documents, which will reduce storage costs.		-	(250)	(800)	(3,000)	(4,500)
<b><u>Standardize Travel Policies</u></b> Review agency travel requests to promote cost-effectiveness.		-	(1,000)	(1,000)	(1,000)	(1,000)

# Savings

## 2. Chart of the day: Saving money with EVs

Average maintenance cost for NYC municipal vehicles in 2018

By car energy type: ● Gasoline ● Hybrid ● Plug-in hybrid ● Electric



Data: [NYC Department of Citywide Administrative Services](#); Chart: Andrew Witherspoon/Axios

The New York City government's maintenance costs for its electric vehicle fleet were much less per automobile than its gasoline-powered cars, city data released this month shows.

**Why it matters:** Municipal and corporate vehicle fleets are a growth area for EVs, and not just for environmental reasons.



# Partnering



NYC Parks

## 31<sup>ST</sup> ANNUAL EQUIPMENT & VEHICLE SHOW

Thursday, May 16, 2019, 9am to 2pm

Rain Date: Friday, May 17

Flushing Meadows Corona Park, Queens, by the Unisphere

NYC Fleet

**NYC DCAS**  
Citywide Administrative Services

This show highlights vendors who support NYC's Clean Fleet and Vision Zero initiatives, as well as daily operations. We will have vendors offering a wide array of products to improve vehicle safety including cameras, truck side guards, systems to track and manage fleets, and systems to avoid or mitigate collisions. The show also highlights vehicles and equipment with alternative fuels and emissions reducing technologies, along with the latest in light and heavy-duty vehicles, trucks, horticultural equipment, tools, fleet services, and more.

**Free to all exhibitors and attendees.**

- RSVP Exhibitors at: <https://goo.gl/forms/XBQBFhYHZVvqxJlb2>
- RSVP Attendees and Exhibit Staff at: <https://goo.gl/forms/YvVB9EZQ6uy3d8qu1>
- RSVP Vehicles at: <https://goo.gl/forms/bfzpoDUliPwheXxE3>

For any questions, please call (212) 386-0377 or email [dkrantr@dcas.nyc.gov](mailto:dkrantr@dcas.nyc.gov)



Accessibility Questions?  
Contact DCAS Accessibility at 212-386-0256, or [accessibility@dcas.nyc.gov](mailto:accessibility@dcas.nyc.gov) by May 9, 2019.

**#01ENYC**

**VISION ZERO**  
nyc.gov/visionzero

## Impulsion MTL – International Fleet Forum

June 3, 2019 - June 4, 2019



Future Fleet Forum 2020  
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# Thank you!

## NYC Fleet