



March 10, 2023

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Honorable Eric L. Adams
Mayor
The City of New York
City Hall
New York, NY 10007

Re: Local Law Air Reports for Fiscal Year 2022

Dear Mayor Adams:

Attached are the Local Law Air Reports for Fiscal Year 2022 as required by Local Laws 38, 39 as amended by Local Law 73 of 2013, 40, 41, 42 of 2005, 43 of 2010 as amended by Local Law 119 of 2016.

Local Laws 38 through 43 reports document the use of ultra-low sulfur diesel fuel, compliance with biodiesel requirements, as well as best available control technologies to reduce particulate matter and nitrogen oxides in the environment.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rohit T. Aggarwala'.

Rohit T. Aggarwala

- c. Hon. Adrienne E. Adams, Speaker New York City Council
Hon. Brad Lander, Comptroller
Lorraine Grillo, First Deputy Mayor
Dawn M. Pinnock, Commissioner DCAS
David Banks, Chancellor, DOE
Jessica Tisch, Commissioner, DSNY
Peter A. Hatch Commissioner, DCWP
Ydanis Rodriguez, Commissioner, DOT
Susan Donoghue, Commissioner, DPR
Ashwin Vasani, MD, PhD, Commissioner, DOHMH



Local Law 38 Annual Report Fiscal Year 2022

This report details New York City's purchase of fuel-efficient light and medium duty cars (typically, cars and vans respectively). The aim of Local Law 38 of 2005 (LL38) is to achieve a 30% reduction in fuel consumption by Fiscal Year 2021 as compared to baseline fuel efficiency data from Fiscal Year 2005. This drop in fuel consumption would reduce the amount of greenhouse gas being released and would also improve the city's air quality.

The milestones in the legislation are as follows:

- October 1, 2005: The City will complete a fuel economy inventory of all light-duty vehicles purchased by the City during Fiscal Year 2005 and will calculate the average fuel economy of these vehicles.
- July 1, 2006: Each light-duty vehicle and medium-duty vehicle that the City purchases will achieve the highest California LEV II standards. The City will also achieve a 5% increase in average fuel economy in all light duty vehicles.
- January 1, 2007: The City will report for the last time, whether it has complied with the Local Law standard that 80% of the light duty vehicles are alternative fuel vehicles.

Following the July 2006 fuel economy milestone, the City is to achieve an increase of 8% in average fuel economy in 2007; 10% in 2008; 12% in 2009; 15% in 2010; 18% in 2012; 20% for fiscal years 2015 through 2018; 20% in FY 2019; 30% in FY 2020; and 35% in FY 2021 and FY 2022; and thereafter 40%.

As of Fiscal Year 2022, the City achieved the mandated 35% increase in fuel economy for light duty vehicles by achieving a 329% reduction. Gasoline usage by light and medium duty vehicles has decreased from 2005, but diesel consumption increased because emergency services make greater use of the gas card program for diesel fueling. This trend does not represent total fuel use which combines in-house and gas card (private) fueling. The City exceeded the legislative goal that 95% of purchases be of the lowest polluting vehicles in their class, by purchasing 100% of the City's fleet in the lowest polluting class. The City made a policy decision to purchase CNGs which are in a lower polluting category than the non CNG vehicles. However, not all agencies have the capacity for this charging infrastructure.

The answers below describe the status of the City's implementation of the law and respond to the specific questions posed in the legislation.

1. What is the total number of light-duty vehicles and medium-duty vehicles purchased by each agency?

| Agency | Light Duty | Medium Duty | Total |
|--|------------|-------------|------------|
| Dept. of Sanitation (DSNY) | 11 | 0 | 11 |
| Dept. of Environmental Protection (DEP) | 43 | 3 | 46 |
| Dept. of Transportation (DOT) | 20 | 0 | 20 |
| Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS | 264 | 0 | 264 |
| Dept. of Parks & Recreation (DPR) | 22 | 215 | 237 |
| Total | 360 | 218 | 578 |

NB: FDNY and PD are exempt from this reporting requirement as they are emergency vehicles. Agencies not listed did not receive light or medium duty vehicles.

2. What is the total number of light and medium duty vehicles purchased in each rating category, disaggregated by vehicle model?

- The total number of zero emission vehicles (ZEV) purchased;
- The total number of advanced technology partial zero emission vehicles (ATPZEV) purchased;
- The total number of partial zero emission vehicles (PZEV)/(TZEV) purchased;
- The total number of super ultra-low emission vehicles (SULEV) purchased;
- The total number of ultra-low emission vehicles (ULEV) purchased; and
- The total number of low emission vehicles (LEV) purchased.

| Total ZEV | Total ATPZEV | Total TZEV | Total SULEV | Total ULEV | Total LEV | Vehicle Total |
|-----------|--------------|------------|-------------|------------|-----------|---------------|
| 214 | 0 | 136 | 5 | 223 | 0 | 578 |

Note: Please see Attachment A for the breakdown of the above numbers disaggregated by vehicle model. It shows that the vehicles purchased were within the highest fuel efficiency ratings.

3. How many Alternative Fuel Buses were purchased?

Zero buses were purchased.

4. What is the percentage of light and medium duty vehicles purchased as the lowest polluting vehicle in each category? Target of 95%.

| Lowest Category | Other | Vehicle Type |
|--------------------------------|---------------------------|---------------------------|
| 201 | 0 | Medium Size Sedan |
| 136 | 0 | Small-size Sports Utility |
| 5 | 0 | Mid-size Sports Utility |
| 13* | 40 | Medium Duty Van |
| 18 | 0 | Light Duty Pick Up |
| 165 | 0 | Medium Duty Pick Up |
| Total: 538* Vehicles | Total: 40 Vehicles | |
| Total: 100% (see below) | | |

*As per 24-163.1(b)(2), The city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected.

5. *What is the average fuel economy of light duty vehicle purchases?*

The average fuel economy is 85.1 miles per gallon. Please see Attachment B for details.

6. *If a vehicle was not purchased in the highest fuel rating category, what was the basis for purchasing a vehicle in the next highest fuel rating category?*

A waiver is needed from DEP in order to select a vehicle in the next rating category. In FY 2022 DEP issued no waivers.

7. *What is the percentage increase in fuel economy? Target of 35%.*

The average fuel economy was 85.1 miles per gallon, which achieved the required reduction of 35% by Fiscal Year 2021 by obtaining a 273% increase. The baseline 2005 average fuel economy was 31.1 miles per gallon.

*An analysis was completed using the 2022 MPG over the 2005 baseline year.

8. *What is the estimated amount of fuel consumed by motor vehicle, disaggregated by vehicle type?*

The chart below is based on the Gas Card System, which shows an increase in consumption of diesel since 2005. The increase in diesel use is because emergency services make greater use of the gas card program for diesel fueling. There was a decrease in gasoline consumption across the entire city fleet (light and medium duty vehicles) since 2005.

| 2005 Gallons of Diesel | 2022 Gallons of Diesel |
|------------------------|------------------------|
| 337,554 | 1,037,928 |

| 2005 Gallons of Gasoline | 2022 Gallons of Gasoline |
|--------------------------|--------------------------|
| 2,828,217 | 2,076,073 |

9. *What is the estimated total amount of equivalent carbon dioxide emitted for each type of fuel consumed by motor vehicles, disaggregated by fuel type?*

| CO₂ Calculations for Local Law 38 Fiscal Year 2022 | | |
|--|-------------------|---------------------|
| Year | 2005 | 2022 |
| Gasoline Consumed (gal) | 2,828,217 | 2,076,073 |
| CO ₂ Emissions (lbs.) | 54,867,410 | 40,275,816.2 |
| Diesel Consumed (gal) | 337,554 | 1,037,928 |
| CO ₂ Emissions (lbs.) | 7,493,699 | 23,042,001.6 |
| Total CO₂ Emissions (lbs.) | 62,361,109 | 63,317,817.8 |
| Reduction (lbs.) | NA | 956,708.8 |
| Reduction (%) | NA | -1.53% |

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2022

| Vehicle Type | ZEV | TZEV | APTZEV | SULEV | ULEV | LEV |
|--|------------|-------------|---------------|--------------|-------------|------------|
| Light Duty Vehicles | | | | | | |
| Medium Sedan | | | | | | |
| Chevrolet Bolt Crossover | 1* | | | | | |
| Ford Mustang Mach E Crossover | 200* | | | | | |
| Small Size Sport Utility Vehicles | | | | | | |
| Mitsubishi Outlander Plug-in | | 136 | | | | |
| Mid-Size Sports Utility Vehicles | | | | | | |
| Toyota Highlander Hybrid | | | | 5 | | |
| Medium Duty Vans | | | | | | |
| Chevrolet Express XL | | | | | 40 | |
| Ford E Transit | 13* | | | | | |
| Light Duty Pick Up | | | | | | |
| Ford F-150 Hybrid | | | | | 18 | |
| Medium Duty Pick Up | | | | | | |
| Ford F-250 | | | | | 44 | |
| Ford F 250 XL Hybrid | | | | | 121 | |

* As per 24-163.1(b)(2), The city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero-emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected.

Emission Ratings

(As defined by the California Air Resources Board)

www.driveclean.ca.gov

ZEV: Zero Emission Vehicles

ZEVs have zero tailpipe emissions and are 98% cleaner than the average new model year vehicle. These include battery electric vehicles and hydrogen fuel cell vehicles.

TZEV: Transitional Zero Emission Vehicle

TZEV is the new terminology for Enhanced Advanced Technology Partial Zero Emission Vehicle and meet the same requirements of an enhance At PZEV and have additional “ZEV-like” characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards.

AT PZEV: Advanced Technology PZEVs

AT PZEVs meet the PZEV requirements and have additional “ZEV-like” characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards would be an AT PZEV.

SULEV: Super Ultra Low Emission Vehicle

SULEVs are 90% cleaner than the average new model year car.

ULEV: Ultra Low Emission Vehicles

ULEVs are 50% cleaner than the average new model year car.

LEV: Low Emission Vehicle

Minimum rating that will meet California Air Resources Board standards.

Attachment B

| CITYWIDE LIGHT DUTY VEHICLE PURCHASES FISCAL YEAR 2022 | | | | |
|---|---------------------------------|------------------|---------------------|--|
| CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LOCAL LAW 38 REPORTING | | | | |
| VEHICLE TYPE | NUMBER PROCURED IN FY'22 | FUEL TYPE | EPA MPG CITY | WEIGHTED FACTOR (COL. B x COL. C) |
| CHEVROLET BOLT | 1 | ELECTRIC | 131 | 131 |
| FORD F150 HYBRID | 18 | GAS | 25 | 450 |
| FORD MUSTANG MACH-E | 200 | ELECTRIC/GAS | 99 | 19,800 |
| MITSUBISHI OUTLANDER PLUG-IN HYBRID | 136 | ELECTRIC/GAS | 74 | 10,064 |
| TOYOTA HIGHLANDER HYBRID | 5 | ELECTRIC/GAS | 35 | 175 |
| | | | | |
| GRAND TOTALS | 360 | | | 30,620 |
| AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'22 | | | | 85.1 |

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Local Law 39/Local Law 73 Annual Report Fiscal Year 2022

Local Law 39 (LL39) requires all City owned and operated diesel-powered vehicles greater than 8,500 lbs., such as garbage collection trucks and DEP's truck fleet, to use ultra-low sulfur diesel (ULSD) to reduce pollutants. In order to lower the emission of harmful pollutants into the environment, these vehicles also must install emission reduction devices.

All on-road diesel vehicles are powered by ULSD (since the passage of LL39, the EPA has required ULSD to be sold nationwide for the on-road fleet). The City Council passed Local Law 73 of 2013 (LL73) to further strengthen that the City fleet is using the cleanest vehicles. This law requires that as of January 1, 2017, 90% of on-road vehicles are equipped with Diesel Particulate filters. The City met this mandate by achieving a 97.3% compliance rate as shown in the Table for Q1 under the heading 'Percent of all Non-Emergency Vehicles in Compliance'.

The answers below describe the status of the City's implementation of the law and respond to the specific questions set forth in Section 24-163.4 (g)(1) of the Administrative Code.

1. *What is the total number of diesel fuel powered motor vehicles owned or operated by each City agency?
(Ad. Code 24-163.4(g)(1)(i))*

Please see table below for each City agency under the column 'All Non-Emergency Diesel Vehicles'. There are in total 6,789 non-emergency vehicles owned or operated by the City as of the end of FY22..

| AGENCY | TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES WITHOUT DPFs or MISSING DATA (1) | TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES RETROFITTED WITH DPFs | TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES LISTED FOR SALVAGE | IN PROGRESS OF INSTALLATION BY DCAS | TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES | TOTAL NUMBER OF 2007 AND LATER NON-EMERGENCY DIESEL VEHICLES | ALL NON-EMERGENCY DIESEL VEHICLES | PERCENT of All NON-EMERGENCY DIESEL VEHICLES IN COMPLIANCE (2) |
|--|---|--|---|-------------------------------------|--|--|-----------------------------------|--|
| DCAS/DCAS CLIENTS | 1 | 12 | 1 | 3 | 22 | 175 | 197 | 96.59% |
| DEP | 10 | 31 | 7 | 0 | 48 | 536 | 584 | 98.29% |
| DOT | 86 | 62 | 1 | 0 | 150 | 1118 | 1268 | 93.14% |
| PARKS | 4 | 0 | 2 | 0 | 7 | 775 | 782 | 99.36% |
| DSNY | 74 | 8 | 0 | 0 | 82 | 3854 | 3936 | 98.12% |
| DOHMH | 0 | 3 | 0 | 0 | 3 | 19 | 22 | 100% |
| TOTAL | 175 | 116 | 11 | 3 | 312 | 6477 | 6789 | 97.32% |
| '(1) This column includes the 147 Diesel Vehicles that have a Diesel Oxidation Catalyst (DOC) installed. While LL73 calls for the tracking of DPF compliance, the reduction in diesel pollutants by using these devices should be noted. | | | | | | | | |
| '(2) Compliance includes units with retrofit DPFs, units purchased 2007 or later and governed by federal law on DPFs, units currently scheduled for salvage and units currently being retrofitted by DCAS. | | | | | | | | |

2. *What is the number of such diesel fuel powered motor vehicles that used best available retrofit technology (BART) to reduce the emission of pollutants, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iii))*

There are 116 vehicles that used BART. Please refer to the table above for Q1 for the total under the column 'Total Number of Pre 2007 Non-Emergency Diesel Vehicles retrofitted with DPFs'.

The Table below shows a sample breakdown by vehicle model, type and technology.

| Agency & Vehicle | BART Manufacturer | BART Type |
|------------------------|------------------------|---------------------------------|
| DSNY Collection Truck | Clearie | Diesel Particulate Filter (DPF) |
| DSNY Collection Truck | Fleetguard | DPF |
| DSNY Mechanical Truck | Engine Control Systems | DPF |
| DPR 16 Yard Dump Truck | OEM | DPF |
| DOT Utility Truck | ESW Thermacat | DPF |
| DOT Mack Dump Truck | Clearie | DPF |
| DOT Collection Truck | Engine Control Systems | DPF |
| DEP Mack CV713 | Clearie | DPF |
| DEP Freightliner FL 70 | HUG | DPF |
| DEP Sterling Acterra | HUG | DPF |
| DEP CAT L9500 | Engine Control Systems | DPF |
| DEP Heavy Duty | ESW ThermaCat | DPF |

Note: For a complete list of diesel equipment, engine details, and agency-specific vehicle counts, please contact DEP.

3. *What is the number of such diesel fuel powered motor vehicles that used other authorized technology in accordance with this section, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iv))*

The table below shows a sample breakdown by vehicle model, type and technology.

| Agency & Vehicle | BART Manufacturer | BART Type |
|---------------------------|-------------------|--------------------------------------|
| DPR 16 Yard Packer | Donaldson | Diesel Oxidation Catalyst (DOC) |
| DOT Dump Truck Crew Cab | Nelson | DOC |
| DOT International 4700 LP | Cummings | DOC w/o CCV (technological concerns) |

Note: For a complete list of diesel equipment, engine details, and agency-specific vehicle counts, please contact DEP.

4. *What were the number of such motor vehicles equipped with the applicable 2007 EPA standard for particulate matter as set forth in §86.007-11 of title 40 of the CFR? (24-163.4(g)(1)(v))*

6,477

Refer to Table above for Q.1 under the column 'Total Number of 2007 and Later Non-Emergency Vehicles'.

5. *Were any findings made or waivers issued pursuant to §24-163.4(g)(1)(vii)?¹*

No waivers were issued.

¹These waivers are granted for vehicles that do not use ultra-low sulfur diesel fuel. These waivers were contemplated during the enactment of this legislation, as it was uncertain a sufficient supply of vehicles that run on ULSD fuel would be available.

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Local Law 40 Annual Report Fiscal Year 2022

Local Law 40 (LL40) requires all contractors managing the City’s solid waste disposal program or recycling program for the Department of Sanitation to use ultra-low sulfur diesel fuel (ULSD). It also requires these vehicles to be equipped with emissions reduction technology to reduce the pollutants their vehicles emit into the environment.

As of Fiscal Year 2022, all contractor vehicles were in compliance with this legislation.

Below are answers to the questions posed in the legislation describing the City’s status in achieving these milestones. The data for these questions was provided from the Department of Sanitation and their contractors.

1. *What is the total number of diesel fuel-powered motor vehicles and diesel-powered off-road vehicles, respectively, used in the performance of solid waste contracts or recyclable materials contracts? (Ad. Code 24-163.5(j)(1)(i))*

There was total of seventy-two vehicles used for these contracts and all of these vehicles are diesel fuel-powered on road and off-road vehicles.

| Action Environmental Systems, LLC. | | | | | | |
|--|-------------|-----------------|-------------|------------|------|---------------------------|
| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
| 1 | 1 | Loader | Caterpillar | 980M | 2017 | Tier 4 Final |
| 2 | 2 | Excavator | Caterpillar | 336GC | 2019 | Tier 4 Final |
| 3 | 3 | Loader | Caterpillar | 906M | 2021 | Tier 4 Final |
| 4 | 4 | Loader | Caterpillar | 966M | 2021 | Tier 4 Final |
| 5 | 5 | Excavator | Caterpillar | 336CGI | 2021 | Tier 4 Final |
| 6 | 6 | Excavator | Caterpillar | 336CGI | 2022 | Tier 4 Final |
| 7 | 7 | Loader | Caterpillar | 938K | 2014 | Tier 4 Final |
| 8 | 8 | Excavator | Caterpillar | 320L | 2018 | Tier 4 Final |
| American Recycling Management, LLC. | | | | | | |
| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
| 9 | 1 | Front Loader | Komatsu | WA-500-3LE | 1997 | DLT4MINEX |
| 10 | 2 | Excavator | Komatsu | PC-200-6LE | 1998 | DLT4MINEX |
| 11 | 3 | Front Loader | Komatsu | WA-500-8 | 2017 | Tier 4 Final |
| 12 | 4 | Excavator | Sennebogen | 818-R-HD | 2018 | Tier 4 Final |

Covanta Sustainable Solutions LLP

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|-------------|--------------|-------------|----------------------------------|
| 13 | 1 | Skid Steer | Bobcat | S550 | 2015 | Tier 4 Interim |
| 14 | 2 | Skid Steer | Bobcat | S530 | 2014 | Tier 4 Interim |

Pratt Industries

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|-------------|--------------|-------------|----------------------------------|
| 15 | 1 | Loader | Caterpillar | 938M | 2017 | Tier 4 Final |
| 16 | 2 | Loader | Komatsu | WA380-7 | 2012 | Tier 4 Interim |

Sims Municipal Recycling of New York LLC. (3 Locations)

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|-------------|--------------|-------------|----------------------------------|
| 17 | 1 | Loader | Volvo | L150G | 2013 | Tier 4 Interim |
| 18 | 2 | Loader | Volvo | L150H | 2020 | Tier 4 Final |
| 19 | 3 | Material Handler | Sennebogen | 840E | 2021 | Tier 4 Final |
| 20 | 4 | Material Handler | Sennebogen | 840E | 2021 | Tier 4 Final |
| 21 | 5 | Loader | Komatsu | WA470-SHL | 2019 | Tier 4 Final |
| 22 | 6 | Material Handler | Sennebogen | 835ME | 2018 | Tier 4 Final |
| 23 | 7 | Loader | Caterpillar | 962M | 2018 | Tier 4 Final |
| 24 | 8 | Material Handler | Fuchs | MHL360 | 2016 | Tier 4 Final |
| 25 | 9 | Material Handler | Sennebogen | 840ME | 2013 | Tier 4 Interim |
| 26 | 10 | Loader | Volvo | L150H | 2020 | Tier 4 Final |
| 27 | 11 | Material Handler | Fuchs | MHL370 | 2016 | Tier 4 Final |

Tully Environmental Inc.

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|-------------|--------------|-------------|----------------------------------|
| 28 | 1 | Waste Handler | Komatsu | WA470-7 | 2014 | Tier 4 Final |
| 29 | 2 | Waste Handler | Komatsu | WA470-8 | 2017 | Tier 4 Final |

Waste Connections Inc. (2 Locations)

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|-------------|--------------|-------------|----------------------------------|
| 30 | 1 | Front Loader | Caterpillar | 966G | 2002 | CCRT/DPF |
| 31 | 2 | Front Loader | Caterpillar | 966H | 2008 | CCRT/DPF |
| 32 | 3 | Skid Steer | Caterpillar | 262D | 2017 | Tier 4 Final |
| 33 | 4 | Front Loader | Caterpillar | 962G | 1999 | DLT4MINE |
| 34 | 5 | Front Loader | Caterpillar | 966H | 2010 | CCRT/DPF |
| 35 | 6 | Front Loader | Caterpillar | 966H | 2010 | CCRT/DPF |
| 36 | 7 | Skid Steer | Caterpillar | 262D | 2017 | Tier 4 Final |

Waste Management of NY LLC. (4 Locations)

| Total No. | Company No. | Type of Vehicle | Make | Model | Year | EPA Certified Engine/BART |
|------------------|--------------------|------------------------|---------------|--------------|-------------|----------------------------------|
| 37 | 1 | Wheel Loader | Volvo | L70H | 2016 | Tier 4 Final |
| 38 | 2 | Wheel Loader | Volvo | L180H | 2016 | Tier 4 Final |
| 39 | 3 | Wheel Loader | Volvo | L70H | 2015 | Tier 4 Final |
| 40 | 4 | Wheel Loader | Volvo | L180H | 2022 | Tier 4 Final |
| 41 | 5 | Excavator | Volvo | EC300 | 2015 | Tier 4 Final |
| 42 | 6 | Excavator | Volvo | EC300 | 2018 | Tier 4 Final |
| 43 | 7 | Reach Stacker | Taylor | TL9972 | 2020 | Tier 4 Final |
| 44 | 8 | Reach Stacker | Taylor | TS9972 | 2020 | Tier 4 Final |
| 45 | 9 | Rail Switcher | Shuttle Wagon | NVX6030 | 2020 | Tier 4 Final |
| 46 | 10 | Rail Switcher | Shuttle Wagon | NVX6030 | 2020 | Tier 4 Final |
| 47 | 11 | Wheel Loader | Volvo | L180H | 2016 | Tier 4 Final |
| 48 | 12 | Wheel Loader | Volvo | L180H | 2022 | Tier 4 Final |
| 49 | 13 | Excavator | Volvo | EC250EL | 2017 | Tier 4 Final |
| 50 | 14 | Wheel Loader | Volvo | L180H | 2020 | Tier 4 Final |
| 51 | 15 | Wheel Loader | Volvo | L180H | 2022 | Tier 4 Final |
| 52 | 16 | Excavator | Volvo | EC300 | 2019 | Tier 4 Final |
| 53 | 17 | Excavator | Volvo | EC300 | 2021 | Tier 4 Final |
| 54 | 18 | Wheel Loader | Volvo | L70H | 2020 | Tier 4 Final |
| 55 | 19 | Wheel Loader | Volvo | L120H | 2018 | Tier 4 Final |
| 56 | 20 | Wheel Loader | Volvo | L120H | 2022 | Tier 4 Final |
| 57 | 21 | Container Handler | Taylor | TLX330S | 2018 | Tier 4 Final |
| 58 | 22 | Container Handler | Taylor | 9972 | 2017 | Tier 4 Final |
| 59 | 23 | Rail Switcher | Shuttle Wagon | SWX 525 | 2020 | Tier 4 Final |
| 60 | 24 | Rail Switcher | Shuttle Wagon | SWX | 2020 | Tier 4 Final |
| 61 | 25 | Wheel Loader | Volvo | L180H | 2019 | Tier 4 Final |
| 62 | 26 | Wheel Loader | Volvo | L60H | 2018 | Tier 4 Final |
| 63 | 27 | Excavator | Volvo | EC300 | 2018 | Tier 4 Final |
| 64 | 28 | Excavator | Volvo | EC300 | 2016 | Tier 4 Final |
| 65 | 29 | Compactor | Caterpillar | 826K | 2018 | Tier 4 Final |
| 66 | 30 | Wheel Loader | Volvo | L180H | 2017 | Tier 4 Final |
| 67 | 31 | Wheel Loader | Volvo | L180H | 2018 | Tier 4 Final |
| 68 | 32 | Wheel Loader | Volvo | L90H | 2019 | Tier 4 Final |
| 69 | 33 | Compactor | Caterpillar | 826K | 2022 | Tier 4 Final |
| 70 | 34 | Wheel Loader | Volvo | L180H | 2019 | Tier 4 Final |
| 71 | 35 | Rail Switcher | Shuttle Wagon | NVX8040 | 2020 | Tier 4 Final |
| 72 | 36 | Rail Switcher | Shuttle Wagon | NVX8040 | 2020 | Tier 4 Final |

2. *What is the number of such vehicles that were powered by ultra-low sulfur diesel fuel (ULSDF)? (Ad. Code 24-163.5(j)(1)(ii))*

All seventy-two vehicles used for these contracts were powered by ULSDF.

3. *What is the number of such vehicles that used the best available retrofit technology (BART), including a breakdown of such vehicles by model, engine year, and technology? (Ad. Code 24-163.5(j)(1)(iii))*

The above chart shows that out of the seventy-two vehicles, seven of these vehicles used Classification Level IV Diesel Particulate Filters (BART). Five vehicles are equipped with OEM Tier IV Interim EPA Certified Engines. Sixty vehicles are equipped with Certified Tier IV Final Engines. Certified Tier IV Final Engines are the most effective way to decrease pollutants as they use PM reduction technology along with NOx reduction technology reduce Nitrogen Oxide.

4. *What is the number of such vehicles that used other authorized technology? (Ad. Code 24-163.5(j)(1)(iv))*

No technology, other than those presented above, were used.

5. *What is the number of vehicles equipped with an engine certified to the applicable 2007 EPA standard for particulate matter as set forth in section 86.007-11 of title 40 of the Code of Federal Regulations (CFR)? (Ad. Code 24-163.5(j)(1)(v))*

There are Sixty-Seven vehicles certified to comply with section 86.007-11 of Title 40 of the CFR, as they are model engine year 2007 or later.

6. *What were the locations where such vehicles were used? (Ad. Code 24-163.5(j)(1)(vi))*

The locations were as follows:

- | | |
|---|--|
| 1). Action Environmental Systems, LLC 300 Frank W. Burr Blvd – Suite 39 Teaneck, NJ 07666 | 8). Tully Environmental Inc. 127-50 Northern Blvd Flushing, NY 11368 |
| 2). American Recycling Management, LLC 172-33 Douglas Ave Jamaica, NY 11433 | 9). Waste Connections Inc. 577 Court Street Brooklyn, NY 11231 |
| 3). Covanta Sustainable Solutions LLP 445 South Street Morristown, NJ 07960 | 10). Waste Connections Inc. 110 50 th Street Brooklyn, NY 11232 |
| 4). Pratt Industries 4435 Victory Blvd Staten Island, NY 10314 | 11). Waste Management of NY LLC 38-22 Review Avenue Long Island City, NY 11101 |
| 5). Sims Municipal Recycling of New York LLC 472 2 nd Ave Brooklyn, NY 11232 | 12). Waste Management of NY LLC 475 Scott Ave Brooklyn, NY 11222 |
| 6). Sims Municipal Recycling of New York LLC 850 Edgewater Road Bronx, NY 10474 | 13). Waste Management of NY LLC 221 Varick Street Brooklyn, NY 11237 |

7). Sims Municipal Recycling of New York LLC
3027 Greenpoint Ave
Long Island City, NY 11101

14). Waste Management of NY LLC
98 Lincoln Ave
Bronx, NY 10474

7. *What waivers were issued for ULSDF (Ad Code 24-163.5(j)(1)(vii))*

There were no waivers issued.

8. *What waivers were issued for the use of other authorized technology in lieu of the best available technology (Ad. Code 24-163.5(j)(1)(viii))*

There were no waivers issued because Local Law 74 of 2013 states that, *the Commissioner shall not renew any waiver issued pursuant to this subdivision after January 1, 2014.*

Local Law 73 of 2013 states, as of January 1, 2017, all diesel fuel-powered motor vehicles used in the performance of such contract shall utilize the best available retrofit technology that meets the level 4 emission control strategy or be equipped with an engine certified to the applicable 2007 United States Environmental Protection Agency standard. Therefore, contractors had to replace their older vehicles with newer ones that comply with current EPA standards.

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Local Law 41 Annual Report Fiscal Year 2022

Local Law 41 (LL41) requires all City-licensed sightseeing diesel buses to use Ultra Low Sulfur Diesel (ULSD) to reduce pollutants. In addition, to lower the emission of harmful pollutants into the environment, these vehicles must install emission reduction devices (BART).

As of Fiscal Year 2022, 100% of the required vehicles are complying by use of classification level 4 (BART) or equipped with 2007 or newer certified engines. Also, all diesel vehicles are powered by ULSD (since the passage of LL41, the EPA has required ULSD to be sold nationwide).

LL41 codified at Section 24-163.6 (g) (1) of the Administrative Code, sets forth seven questions to be answered in the Annual Report. The questions and the charts below summarize those responses from Sightseeing Bus Companies and City Agencies.

1. What is the total number of diesel fuel-powered sightseeing buses licensed pursuant to Subchapter 21 of Chapter 2 of title 20 of the Administrative Code? (Ad. Code 24-163.6(g) (1)(i))

There are 78 sightseeing buses licensed pursuant to *Subchapter 21 of Chapter 2 of Title 20 of the Administrative Code. (Ad. Code 24-163.6(g) (1) (i))* in which 78 buses are equipped with diesel engines.

2. What is the number of such buses that utilized the best available retrofit technology? (24-163.6(g) (1) (ii))

Thirty vehicles utilize BART (See table below)

| Sight Seeing BusCompany | Number Licensed by DCA | Number with OEM | Number with BART | Type of Technology |
|-------------------------------------|------------------------|-----------------|------------------|---|
| Go New York Tours Inc. | 44 | 29 | 15 | There are Seven CDTI Active Electrical Regeneration units, Eight CDTI Passive units and twenty-nine are certified 2009-2014 model year engines (Equipped with OEM Installed Technology). |
| Taxi Tours D.B.A. Big Bus Tours NYC | 30 | 16 | 14 | There are Eight Classification Level IV CDTI (DPF)'s and Six Cummins (DPF)'s. Sixteen are certified 2012,2013, 2014 and 2015 model year engines (Equipped with OEM Installed Technology). |
| Experience the Ride Inc | 3 | 3 | 0 | There are three bus certified model year engines (Equipped with OEM Installed Technology). |
| Gray Line New York Tours Inc. | 1 | 0 | 1 | There is one Classification Level IV JM CRTDM (DPF)'s. |

* Pursuant to EPA regulations, all 2007 and later model engine years are certified to be at least or more stringent as “BART” requirements because the manufacturer (OEM) pre-retrofits the majority of them with DPFs. These are EPA Certified engines, therefore, meet LL41 requirements.

2007 and newer engines meet applicable United States Environmental Protection Agency (EPA) standards for Particulate Matter (PM) as set forth in *Section 86.007-11 of Title 40* of the Code of Federal Regulations. (2010 or newer Certified Engines gives NOx benefit in addition to PM).

According to Local Laws no.73 and no.74 of the City of New York for the year 2013. None of these buses from the above list are under any waiver provisions and they all meet level 4 emission control strategy.

3. *What is the number of such buses that utilized other authorized technology? (24-163.6(g)(1)(iii))?*

Not applicable. All were either Level IV (DPF's)/ BART or equipped with 2007 or newer model year engine/OEM Technology.

4. *What is the number of such buses that are equipped with engines certified to the applicable 2007 USEPA standard for Particulate Matter as set forth in §86.007-11 of Title 40 of the CFR? (24-163.4(g)(1)(iv))*

There are Forty-Eight such buses out of the Seventy-Eight that are certified to the applicable 2007 USEPA standard, the other Thirty buses are equipped with BART (DPF).

5. *What were the locations where such buses utilized the best available retrofit technology? (24-163.6(g)(1)(v))*

These buses tour all of New York City, and as a result, this report provides the permanent addresses for the sightseeing companies.

| Sight Seeing Bus Co. | Permanent Address | Mailing Address |
|-------------------------------------|--|--|
| Go New York Tours Inc. | 74 Onderdonk Avenue Ridgewood, NY 11385 | 2 East 42 nd Street New York, NY 10017 |
| Big Bus Tours NYC / Taxi Tours Inc. | 723 7 th Avenue - 5 th Floor New York, NY 10019 | Same |
| Experience the Ride Inc | 545 8 th Avenue - Suite 14S New York, NY 11108 | Same |
| Gray Line New York Tours Inc. | 43 2 nd Avenue Brooklyn, NY 11215 | 1430 Broadway New York, NY 10018 |

6. *What was the age of the engine that did not utilize BART? (§ 24-163.6(g)(1)(vi))?*

All were equipped with BART classification level 4 device or were certified to 2007 and later model year engines, which are exempt from BART pursuant to 40 C.F.R. § 86.007-11.

7. *Were any waivers issued for failure to use BART? (§24-163.6(g) (1)(vii))?*

No waivers were issued.

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Local Law 42 Annual Report Fiscal Year 2022

§24-163.7 of NYC Administrative Code required that by September 1, 2006, certain General Education (GE) diesel fuel-powered school buses be powered by a specific diesel fuel, ultra-low sulfur diesel fuel (ULSD). In addition, §24-163.7 required that by September 1, 2007, all of these school buses use best available retrofit technology (BART) to reduce emissions.

Finally, §24-163.7 requires the DOE to submit a report each year regarding the use of ultra-low sulfur diesel fuel and the use of the best available retrofit technology by school buses during the immediately preceding fiscal year and answering the specific questions below.

Of NYC DOE's contracted GE diesel fueled fleet, 99% of the vehicles are using emission control devices. There are currently Eight active or spare vehicles that require retrofitting. DOE continues its ongoing work with the vendors to complete these retrofits.

Below are answers to the specific questions posed in Ad. Code 24-163.7(j)(1):

- 1. What is the total number of school buses used to fulfill the requirements of school bus contracts? (Ad. Code 24-163.7(j)(1)(i))*

There is a fleet of 1,712 diesel powered Type C and D, general education school buses used to fulfill the requirements. (In total, there are currently 9,725 active or spare vehicles listed by vendors in OPT's system.)

- 2. What is the total number of such buses that were powered by ULSD? (Ad. Code 24.163.7(j)(1)(ii))*

All the above buses are powered by ULSD.

- 3. What is the number of such buses that used BART, including a breakdown by vehicle model, engine year, and the type of technology used for each vehicle? (Ad. Code 24.163.7(j)(1)(iii))*

323 buses used this technology. Aggregate of DPF only and DPF and CCVS from table 1 below.

Table 1. Pre 2007 school buses by type of particulate reducing technology and manufacturer year.

| Technology | Manufacturer | Engine-Type | USLD | 2003 | 2004 | 2005 | 2006 | Total |
|---|----------------------|---|------|------|------|------|------|-------|
| Diesel Particulate Filter (DPF) Only | IC, Bluebird, Thomas | Cummins/ IC-Navistar/ Caterpillar/ Freightliner/Ford | Yes | 0 | 7 | 22 | 22 | 29 |
| Diesel Particulate Filter (DPF) with Closed Crankcase Ventilation System (CCVS) | IC, Bluebird, Thomas | Cummins/ IC-Navistar/ Caterpillar/ Freightline/Ford | Yes | 0 | 8 | 47 | 239 | 294 |
| Diesel Oxidation Catalyst (DOC) with CCVS | IC, Bluebird, Thomas | Cummins/ IC-Navistar/ Caterpillar/ Freightliner/ Ford | Yes | 0 | 0 | 0 | 0 | 0 |
| DOC Only | IC, Bluebird, Thomas | Cummins/ IC-Navistar/ Caterpillar/ Freightliner/ Ford | Yes | 0* | 0* | 0* | 0* | 0* |
| CCVS Only | IC, Bluebird, Thomas | Cummins/ IC-Navistar/ Caterpillar/ Freightliner/ Ford | Yes | 0* | 0* | 0* | 2* | 2* |
| None | IC, Bluebird, Thomas | Cummins/IC-Navistar/ Caterpillar/ Freightliner/ Ford | Yes | 0* | 0* | 0* | 8* | 8* |

*Not required to retrofit as buses are part of 5-year waiver from the Mayor's Office

4. *What is the number of such buses that used other authorized technology in accordance with the law, including a breakdown by model and engine age technology? (Ad. Code 24.163.7 (j)(1)(iv))*

Please see Table 1 for the breakdown.

5. *What is the number of such buses that are equipped with an engine certified to the applicable 2007 EPA standard for particulate matter in accordance with the law? (Ad. Code 24.163.7(j)(1)(v))*

1,712 buses are equipped with the applicable 2007 EPA standard engines.

Table 2. Post 2007 school buses by year of manufacture.

| Year | Manufacturer | Engine-Type | ULSD | Number of Buses |
|-------------|----------------------|--|-------------|------------------------|
| 2007 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 90 |
| 2008 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 206 |
| 2009 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 157 |
| 2010 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 76 |
| 2011 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 260 |
| 2012 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 101 |
| 2013 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 57 |
| 2014 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 145 |
| 2015 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 158 |
| 2016 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 120 |
| 2017 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 50 |

| Year | Manufacturer | Engine-Type | ULSD | Number of Buses |
|------------------------|----------------------|--|------|-----------------|
| 2018 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 82 |
| 2019 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 72 |
| 2020 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 43 |
| 2021 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 38 |
| 2022 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 21 |
| 2023 | IC, Bluebird, Thomas | Cummins/IC- Navistar/Caterpillar/Freightliner/Ford | Yes | 36 |
| Post-2007 buses | - | - | - | 1712 |

6. *Where were the locations of the school districts where such buses were powered by ULSD, used BART or other authorized technology in accordance with this section, or were equipped with an engine certified to the applicable 2007 EPA standard for particulate matter? (Ad. Code 24.163.7(j)(1)(vi))*

All Thirty-Two community school districts within the five boroughs of New York City used these buses as well as school districts in Westchester, Rockland, Nassau, and Suffolk counties in New York.

7. *Were any waivers granted pursuant to 24-163.7(h) of this law? (Ad. Code 24.163.7(j)(1)(vii))*

No waivers were granted.



Local Law 43 / 2010 as Amended by Local Law 119 / 2016 **Fiscal Year 2022 Annual Report**

Introduction:

The environmental and public health benefits of blending biodiesel into heating oil are substantial. Unlike petroleum diesel, biodiesel is non-toxic and biodegradable, making it less of a threat to human health and the environment than petroleum-based fuels in instances of spills, and other direct exposure scenarios. Blending biodiesel into home heating oil leads to reductions in emissions, like particulate matter (PM), sulfates and air toxics that are harmful to public health, reductions in lifecycle carbon dioxide (CO₂) emissions, reductions in agricultural and food waste, and increased sustainability in fuel production practices.

Biodiesel is a blend stock commodity primarily used as a value-added blending component with diesel fuel. Biofuels are a renewable energy source derived from organic material either directly from plants, or indirectly from agricultural, commercial, domestic, and industrial wastes. Over the past decade, public policy at the federal level, as well as in some states, is requiring the use of biofuels to displace petroleum-based fossil fuels as a way to reduce emissions of greenhouse gases and to enhance energy security by reducing dependence on foreign oil.

Laws and Regulations:

Effective in 2012, New York City local law has required all heating oil dealers in the city to sell a B2 biodiesel blend in place of traditional heating oil. We expect this trend to continue as evidenced by the introduction of a local laws (LL43/2010 and amended by LL 119/2016), that would increase the requirement in heating oil from B2 to B5 for all buildings in New York City by October 1, 2017, and with the potential to increase the percentage blended over the next 20 years.

§ 3. Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York, as amended by local law number 38 for the year 2015, is amended to read as follows:

(h) The Commissioner shall have the authority to sample, test and analyze heating oil supplied to buildings in the city to determine compliance with this section.

% Bio-Diesel Blend in Heating Oil Program:

The DEP laboratory is determining the level of % Biodiesel in heating oil collected from the building's storage oil tanks, major oil companies' terminals, and oil trucks delivering oil to residential and commercial buildings. If a sample result is found to be below the regulated % Bio-Diesel Blend levels in heating oil, then summonses are issued by the Bureau of Environmental Compliance's (BEC) Enforcement group.

Data Discussion:

July 1st, 2021 to June 30, 2022 BEC's Enforcement inspectors collected oil samples totaling 213 from the buildings.

610 attempts were made during July 1st, 2021 to June 30th, 2022 with no super on site at the building or no entry to the building. Notice of no entry and pending appointment letters were left at each building for the building owners to call the inspector back for a revisit.

Of 213 samples examined for the percentage of biodiesel mixture in heating oil, 0 samples required corrective steps needed by the Enforcement Unit of BEC.