



March 16, 2018

Honorable Bill de Blasio
Mayor
The City of New York
City Hall
New York, NY 10007

Vincent Sapienza, P.E.
Commissioner

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-6565
Fax (718) 595-3525
vsapienza@dep.nyc.gov

Re: Local Law Air Reports for Fiscal Year 2017

Dear Mayor de Blasio:

Attached are the Local Law Air Reports for Fiscal Year 2017 as required by Local Laws 38, 39 as amended by local law 73 of 2013, 40, 41 and 42 of 2005. These reports document the use of ultra-low sulfur diesel fuel and the best available control technologies to reduce particulate matter and nitrogen oxides in the environment.

Also included this year is the report for Local Law 43 of 2010 as amended by Local Law 119 of 2016 that documents compliance with biodiesel requirements.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vincent Sapienza', written over the printed name.

Vincent Sapienza, P.E.

- c. Hon. Corey Johnson, New York City Council
- Hon. Scott Stringer, Comptroller
- Dean Fuleihan, First Deputy Mayor
- Lisette Camilo, Commissioner DCAS
- Richard Carranza, Chancellor, DOE
- Kathryn Garcia, Commissioner, DSNY
- Lorelei Salas, Commissioner, DCA
- Polly Trottenberg, Commissioner, DOT
- Mitchell Silver, Commissioner, DPR
- Mary Bassett, Commissioner, DOHMH



Local Law 38 Annual Report Fiscal Year 2017

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 (LL38) is to achieve a 25% reduction in fuel consumption by Fiscal Year 2017 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% by 2012; and 20% for fiscal year 2015 and 2016, and 25% in 2017 and 2018.

As of Fiscal Year 2017, the City exceeded the mandated 25% increase in fuel economy for light duty vehicles. Gasoline usage by light and medium duty vehicles has decreased from 2005, but diesel consumption increased because emergency services makes 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 answers below describe the status of the City's implementation of the law and respond to the specific questions posed in the legislation.¹

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

¹Section 24-163.1 (e)(1) of the Administrative Code sets forth seven questions to which the Annual Report is required to provide an answer.

Agency	Light Duty	Medium Duty	Total
Dept. of Health & Mental Hygiene (DOHMH)	101	18	119
Dept. of Environmental Protection (DEP)	103	40	143
Dept. of Transportation (DOT)	92	0	92
Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS	218	13	231
Dept. of Sanitation (DSNY)	95	25	120
Dept. of Parks & Recreation (DPR)	15	13	28
Dept. of Education (DOE)	5	0	5
Total	629	109	738

NB: FDNY and PD are exempt from this reporting requirement as they are emergency vehicles.

2. What is the total number of light and medium duty vehicles purchased in each rating category, disaggregated by vehicle model?
 - a. The total number of zero emission vehicles (ZEV) purchased;
 - b. The total number of advanced technology partial zero emission vehicles (ATPZEV) purchased;
 - c. The total number of partial zero emission vehicles (PZEV/TZEV) purchased;
 - d. The total number of super ultra-low emission vehicles (SULEV) purchased;
 - e. The total number of ultra-low emission vehicles (ULEV) purchased; and
 - f. The total number of low emission vehicles (LEV) purchased.

Total ZEV	Total ATPZEV	Total PZEV/TZEV	Total SULEV	Total ULEV	Total LEV	Vehicle Total
99	4	302	128	205	0	738

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
405*	0	Medium Size Sedan
66	0	Regular Size Van
123	0	Small-size Sports Utility
5	0	Mid-size Sports Utility
30	0	Light-duty Pick-ups
67	0	Medium Duty Vans
41	0	Medium Duty Pick-ups
1	0	Heavy Duty Pick-ups
Total: 738* vehicles	Total: 0 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 83.7 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 2017, DEP issued no waivers.

7. *What is the percentage increase in fuel economy? Target of 5% to 25%.*

The average fuel economy was 83.7, which exceeds the required reduction of 25% by Fiscal Year 2017 by obtaining a 37% increase. The baseline 2005 average fuel economy was 31.1 miles per gallon.

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 makes 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	2017 Gallons of Diesel
337,554	906,314

2005 Gallons of Gasoline	2017 Gallons of Gasoline
2,828,217	2,570,704

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 LL38 Fiscal Year 2017		
Year	2005	2017
Gasoline Consumed (gal)	2,828,217	2,570,704
CO ₂ emissions (lbs)	54,867,410	49,871,657.6
Diesel Consumed (gal)	337,554	906,314
CO ₂ emissions (lbs)	7,493,699	20,120,170.8
Total CO ₂ Emissions (lbs)	62,361,109	69,991,828.4
Reduction (lbs)	NA	(7,630,718.8)
Reduction (%)	NA	(12.24%)

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2017

Vehicle Type	ZEV	TZEV	APTZEV	SULEV	ULEV	LEV
Light Duty Vehicles						
Medium Sedan						
Toyota Prius, Prime		124				
Toyota Prius			4			
Ford Fusion, Energi		178				
Nissan Leaf	12*					
Chevrolet Bolt Crossover	87*					
Regular Size Van						
Ford Transit 150					18	
Ford Transit Connect					33	
Dodge Grand Caravan					15	
Small-Size Sports Utility Vehicles						
Toyota Rav 4 Hybrid				123		
Mid-size Sport Utility Vehicles						
Toyota Highlander Hybrid				5		
Light Duty Pickups						
Chevrolet Colorado					3	
Ford F-150					27	
Medium Duty Vehicles						
Medium Duty Vans						
Chevrolet Express Van					67	
Medium Duty Pickups						
Ford F-250					41	
Heavy Duty Vehicles						
Dodge Ram					1	

* 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 enhanced 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 FY'17
CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LL38 REPORTING**

TYPE VEHICLE	NUMBER PROCURED IN FY'17	FUEL TYPE	EPA MPG CITY	WEIGHTED FACTOR (COL. B x COL. C)
CHEVROLET COLORADO	3	GAS	17	51
CHEVROLET BOLT	87	ELECTRIC	128	11,136
DODGE GRAND CARAVAN	15	GAS	17	255
FORD F150	27	GAS	17	459
FORD FUSION ENERGI, PLUGIN	178	ELECTRIC/GAS	97	17,266
FORD TRANSIT 150	18	GAS	15	270
FORD TRANSIT CONNECT	33	GAS	20	660
NISSAN LEAF	12	ELECTRIC	124	1,488
TOYOTA PRIUS HYBRID	4	ELECTRIC/GAS	54	216
TOYOTA PRIUS PRIME, PLUGIN	124	ELECTRIC/GAS	133	16,492
TOYOTA HIGHLANDER HYBRID	5	ELECTRIC/GAS	29	145
TOYOTA RAV4 HYBRID	123	ELECTRIC/GAS	34	4,182
GRAND TOTALS	629			52,620
AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'17				83.7



Local Law 39/Local Law 73 Annual Report Fiscal Year 2017

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 Jan 1, 2017, 90% of on-road vehicles are equipped with Diesel Particulate filters. The City met this mandate by achieving a 91.3% 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 6241 non-emergency vehicles owned or operated by the City.

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	0	25	6	0	35	114	149	97.32%
DEP	11	83	50	0	145	388	533	97.75%
DOT	339	123	26	0	497	547	1044	66.67%
PARKS	10	27	16	0	53	534	587	98.30%
DSNY	175	176	0	0	351	3625	3976	95.60%
DOHMH	0	3	0	0	3	9	12	100.00%
TOTAL	535	437	98	0	1084	5217	6301	91.29%
'(1) This column includes the 468 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))*

437

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	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))*

5217

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)?²*

No waivers were issued.

²These 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 would be available.



Local Law 40 Annual Report Fiscal Year 2017

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 2017, 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 were 78 vehicles used for these contracts and all of them are off road/on road vehicles. Unavailability waivers expired could not renew because of Local Law 74 of 2013, therefore, contractors have to replace their older equipment’s with newer ones which complies with current EPA standards.

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
1	Loader	Caterpillar	CAT 966	1996	ESW/Thermacat ADPF
2	Loader	Caterpillar	CAT 950	1994	ESW/Thermacat ADPF
3	Loader	Caterpillar	CAT 966M	2014	Tier 4 Final
4	Front E. Loader	Komatsu	WA-500	1996	DCL MINE-X Sootfilter
5	Front E. Loader	Komatsu	WA-500	1997	DCL MINE-X Sootfilter
6	Excavator	Komatsu	PC 200	1998	DCL MINE-X Sootfilter
7	Excavator	Komatsu	PC 300	1998	DCL MINE-X Sootfilter
8	Front E. Loader	Komatsu	WA-500-8	2017	Tier 4 Final
9	Waste Handler	Komatsu	WA470	2014	Tier 4 Interim
10	Waste Handler	Komatsu	WA-470	2017	Tier 4 Final
11	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
12	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
13	Forklift	Hyster	H80FT	2007	HUSS/ADPF
14	Wheel Loader	Volvo	L70	2009	HUSS/ADPF
15	Excavator	Volvo	EC300	2014	Tier 4 Final
16	Container Handler	Taylor	SK1	2008	HUSS/ADPF
17	Container Handler	Taylor	975	2012	Tier 4 Interim
18	Switcher	Shuttle Wagon	SWX525BE	2010	HUSS/ADPF
19	Switcher	Shuttle Wagon	SWX465	2002	HUSS/ADPF
20	Wheel Loader	Volvo	L120	2015	Tier 4 Final

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
21	Wheel Loader	Volvo	L180	2012	Tier 4 Interim
22	Wheel Loader	Volvo	L 60	2012	Tier 4 Interim
23	Excavator	Volvo	330	2007	HUSS/ADPF
24	Excavator	Volvo	EC300EL	2016	Tier 4 Final
25	Compactor	Caterpillar	826K	2014	Tier 4 Final
26	Wheel Loader	Caterpillar	L180H	2016	Tier 4 Final
27	Wheel Loader	Volvo	L 180 G	2013	Tier 4 Interim
28	Wheel Loader	Volvo	L 180 G	2014	Tier 4 Interim
29	Skidsteer	Volvo	M135C	2017	Tier 4 Interim
30	Railcar Switcher	Shuttle Wagon	NVX8040	2015	Tier 4 Final
31	Railcar Switcher	Shuttle Wagon	SWX605C	2007	HUSS/ADPF
32	Wheel Loader	Volvo	L70 H	2016	Tier 4 Final
33	Wheel Loader	Volvo	L180 H	2016	Tier 4 Final
34	Wheel Loader	Volvo	L180 H	2015	Tier 4 Final
35	Wheel Loader	Volvo	L70 H	2015	Tier 4 Final
36	Excavator	Volvo	EC 300	2015	Tier 4 Final
37	Reach Stacker	Taylor	TS9972	2015	Tier 4 Interim
38	Reach Stacker	Taylor	TS9972	2015	Tier 4 Interim
39	Rail Switcher	Shuttle Wagon	NVX6030	2015	Tier 4 Interim
40	Switcher	Rail King	SS4600	2000	HUSS/ADPF
41	Wheel Loader	Volvo	L180 H	2016	Tier 4 Final
42	Forklift	Hyster	H80FT	2007	Huss/ADPF
43	Wheel Loader	Volvo	L 150	2012	Tier 4 Interim
44	Hydraulic Excavator	Caterpillar	320E	2013	Tier 4 Interim
45	Top Pick	Taylor	XRS-9972	2016	Tier 4 Final
46	Top Pick	Kalmar	DCF410CSG	2006	Cleaire Phoenix
47	Wheel Loader	Caterpillar	903C	2015	Tier 4 Interim
48	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
49	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
50	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
51	Mech. Broom	Elgin	Elgin/Pelican	2006	Cleaire Phoenix
52	Front End Loader	Caterpillar	966G	2002	JM/CCRT
53	Front End Loader	Caterpillar	966H	2008	JM/CCRT
54	Skid Steer	Caterpillar	262D	2017	Tier 4 Final
55	Front End Loader	Caterpillar	966G	1999	DCL/DPF
56	Front End Loader	Caterpillar	966H	2010	DCL/DPF
57	Front End Loader	Caterpillar	966H	2010	DCL/DPF
58	Skid Steer	Caterpillar	262D	2017	Tier 4 Final
59	Excavator	Caterpillar	320EL	2013	Tier 4 Interim
60	Loader	Caterpillar	938M	2016	Tier 4 Final
61	Loader	Volvo	L150H	2016	Tier 4 Final

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
62	Material Handler	Fuchs	MHL370	2016	Tier 4 Final
63	Loader	Volvo	L120G	2014	Tier 4 Interim
64	Loader	Volvo	L120G	2012	Tier 4 Interim
65	Material Handler	Sennebogen	840M'E'	2013	Tier 4 Interim
66	Material Handler	Fuchs	MHL360	2015	Tier 4 Final
67	Loader	Volvo	L150G	2013	Tier 4 Interim
68	Loader	Volvo	L150H	2016	Tier 4 Final
69	Material Handler	Terrex	MHL370	2016	Tier 4 Final
70	Material Handler	Terrex	MHL370	2016	Tier 4 Final
71	Loader	Caterpillar	938K	2014	Tier 4 Interim
72	Loader	Komatsu	WA380-7	2012	Tier 4 Interim
73	Loader	Caterpillar	324e	2014	Tier 4 Interim
74	Loader	Komatsu	290C	2017	Tier 4 Final
75	Loader	Caterpillar	938K	2014	Tier 4 Interim
76	Excavator	Caterpillar	336EL	2013	Tier 4 Interim
77	Excavator	Caterpillar	336EL	2013	Tier 4 Interim
78	Loader	Caterpillar	980M	2017	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 78 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 Eight vehicles, Twenty Five of these vehicles used Classification Level IV Diesel Particulate Filters. Twenty Four vehicles are equipped with Tier IV Interim EPA Certified Engines. Twenty Nine vehicles are equipped with Certified Tier IV Final Engines. Certified Tier IV Final Engines are the most effective way to decrease pollutants as it uses PM reduction technology along with NOx reduction technology as well to 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 discussed above was 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 53 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) CITY GREEN ORGANICS
105-115 Thames Street
Brooklyn, NY 11237 | 10) IESI NY Corporation
110 50th Street
Brooklyn, NY 11232 |
| 2) American Recycling Mgmt.
172-33 Douglas Ave
Jamaica, NY 11433 | 11) IESI NY Corporation
577 Court Street
Brooklyn, NY 11231 |
| 3) Tully Environmental Inc.
127-20 34th Ave
Flushing, NY 11368 | 12) Action Environmental Systems, LLC
941 Stanley Ave
Brooklyn, NY 11208 |
| 4) Waste Management of NY LLC
221 Varick Ave
Brooklyn, NY 11237 | 13) Sims Municipal <i>Recycling</i> of NY Recycling
30-27 Green point Ave
Long Island City, NY 11101 |
| 5) Waste Management of NY LLC
98 Lincoln Ave
Bronx, NY 10474 | 14) Sims Municipal <i>Recycling</i> of NY Recycling
850 Edgewater Road
Bronx, NY 10474 |
| 6) Waste Management of NY LLC
38-22 Review Ave
Long Island City, NY 11101 | 15) Sims Municipal <i>Recycling</i> of NY Recycling
472 2 nd Ave
Brooklyn, NY 11232 |
| 7) Waste Management of NY LLC
475 Scott Ave
Brooklyn, NY 11222 | 16) Pratt Industries (<i>Paper Recycling</i>)
4435 Victory Blvd.
Staten Island, NY 10314 |
| 8) Regal Recycling
172-02 Douglas Ave
Jamaica, NY 11433 | 17) Flag Container Services (<i>Construction and Demolition</i>)
11 Ferry Street
Staten Island NY 10302 |
| 9) Allied Waste Systems
600 West Service Road
Staten Island, NY 10314 | 18) Action Environmental (<i>Construction and Demolition</i>)
920 East 132 nd Street
Bronx NY 10454 |

7. *What waivers were issued for ULSD (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 of Local Law no.74 of 2013 states, *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 which comply with current EPA standard.



Local Law 41 Annual Report Fiscal Year 2017

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 2017, 100% of the required vehicles are in compliance 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 235 diesel sightseeing buses.

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

Sight Seeing Bus Company	Number Licensed by DCA	Number with BART	Type of Technology
Gray Line New York Tours Inc.	87	87	There are 87 Classification Level IV Johnson Matthey CRT's.
CitySights New York LLC	11	11	There are 11 Classification Level IV Diesel Particulate Filter (DPF's). Continuous Regenerating Traps (CRT's).
Go New York Tours Inc.	17	15	Five CDTI Active Electrical Regeneration units, Ten CDTI Passive units and Two are certified 2014 model year engines (OEM Installed Technology).
Skyline Tours, LLC	5	0	All five are certified 2012, 2013 model year engines (OEM Installed Technology).
Experience the Ride	4	0	All four are certified as 2008 model year engines. (OEM Installed Technology).
Taxi Tours D.B.A. Big Bus New York	62	27	There are Twenty Seven Classification Level IV (DPF)'s. There are Thirty Buses equipped with <u>**2010 or newer certified model year engines</u> . (OEM Installed Technology). ***Three buses were not retrofitted.

Sight Seeing Bus Company	Number Licensed by DCA	Number with BART	Type of Technology
RDSL Urban NY / Open Tours NY	38	4	Four are 2015 "Glider Vehicles" retrofitted with Donaldson LNF DPF's. Thirty Four buses are equipped with **2010 or newer Certified Model Year Engines. (OEM Installed Technology).
Skyliner Travel & Tour Bus Corp.	10	0	Seven 2007 or newer Certified Model Year Engines. (OEM's) (Three are Gasoline Vehicles).
Madame Morbid LLC. (Trolley Tours)	1	NA	This bus is exempt, this bus is equipped with Gasoline Engine.

* 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-retrofitted 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).

***Three buses were not retrofitted; these buses are not in service anymore.

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) or equipped with 2007 or newer model year engine.

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 87 such buses out of the 231 that are certified to the applicable 2007 USEPA standard. The 144 equipped with BART and 4 buses are exempt because these buses are equipped with gasoline engines.

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
Gray Line New York Tours Inc.	43 2 nd Avenue, Brooklyn, NY 11215	1430 Broadway, New York, NY 10018
CitySights New York LLC	33 2 nd Avenue, Brooklyn, NY 11215	1430 Broadway, New York, NY 10018

Sight Seeing Bus Co.	Permanent Address	Mailing Address
Skyline LLC.	723 7 th Ave, NY (5 th Floor) New York, NY 10019	Same
Experience The Ride NY LLC	545 8 th Avenue, New York, NY 10018	Same
Big Bus New York / Skyline LLC / Taxi Tours Inc.	723 7 th Avenue (5 th Floor) New York, NY 10019	Same
RDSL Urban NY, LLC/ DBA Open Tour NY	785 8 th Avenue, NY 10036	Same
Skyliner Travel & Tour Bus Corp.	19-41 42 nd Street Astoria, NY 11105	Same
Madame Morbid LLC (Trolley Tours)	200 N. 11 th Street. #3N Brooklyn, NY 11211	Same

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



Local Law 42 Annual Report Fiscal Year 2017

§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 NYCDOE’s contracted GE diesel fueled fleet, 96.6% are using emission control devices with 91.8% using the best available devices.

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 2,266, Type C and D, general education school buses used to fulfill the requirements.

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

All 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))*

867 buses used this technology. Please see Table 1 for further breakdown.

Year	Retrofitted with DPF Count
1999	14*
2000	59*
2001	55
2002	26
2003	123
2004	117
2005	198
2006	275
Total	867

*These buses are used as spare vehicles

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))*

50 buses used other authorized technology. 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))*

1,213 buses are equipped with the applicable 2007 EPA standard engines.

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 32 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))*

The Mayor's Office has entered into a five year agreement with the DOE.

Table 1 - DPF

Technology	Manufacturer	Engine-Type	ULSD	Meets 2007 EPA Standard	No. of Buses with controls
Diesel Particulate Filter (DPF)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	1,213	1,213
Diesel Particulate Filter (DPF)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes		867
Diesel Oxidation Catalyst (DOC) with Closed Crankcase Ventilation System (CCVS)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes		50
DOC Only	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes		2
CCVS Only	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freightliner/Ford	Yes		57
None	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freightliner/Ford	Yes		77
Retrofit in Process	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freightliner/Ford	Yes		12*
Not Required to Retrofit	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freightliner/Ford	Yes		124**
Total GE Diesel Fueled Bus Fleet	See Above	Cummins/Navistar/Caterpillar/Freightliner/Ford	Yes	1,213	2,266

*Not included in total as not in use

**Not included in total as those buses are part of 5 year waiver from the Mayor's Office



Local Law 43 /2010 as Amended by Local Law 119 /2016

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 passage of 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 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 laboratory is screening the level of % Bio-Diesel in heating oil collected from the buildings storage oil tanks, major oil companies' terminals, and oil trucks delivering oil to residential and commercial buildings. If a sample result found to be below the regulated % bio-diesel blend levels in heating oil, then a summons returnable to the Office of Administrative Trials and Hearings (OATH), may be issued by the Bureau of Environmental Compliance's (BEC) enforcement group.

Data Discussion:

July 2016 to June 2017 BEC’s Air Enforcement Inspectors have collected 488 oil samples. The samples were obtained from the following locations: The Bronx 132 samples, Brooklyn 29 samples, Queens 134 samples, Manhattan 173 samples, Staten Island 3 samples. In addition, 10 samples were collected from delivery trucks, and 7 samples were collected from terminals. DEP was allocated with five additional inspectors to take samples, although not hired until after this fiscal year ended. These inspectors have subsequently been trained and their training and expertise will be reflected in the report for the next fiscal year.

DEP attempted to take samples from 758 locations. When there is an access problem, DEP leaves notice that the responsible party is required to contact DEP for a follow up inspection as mandated by law. Out of the 488 samples analyzed, 26 samples were below the air code limit (Refer to Table 1) for the requirement percentage of bio-diesel that has to be blended in heating oil. Corrective measures will be taken by BEC’s Enforcement unit to insure all 26 buildings comply with Subdivision (h) of section 24-168.1 of the Administrative Code of the City of New York. No violations were issued, as the percentage of biodiesel was very low. The accuracy of the test method has some variability and with a 2% standard, it is difficult to argue that the blend is off as opposed to being within the range of variability of the instrumentation.

Table 1

Oil Sample Number	% Biodiesel	Comment
(Taken from Chain Of Custody)	Results	Location
102-1591-2	0.9	221 Linden Blvd Queens No name of supplier provided/date delivered
303-1580-2	1.4	41-00 43rd Ave Queens
603-1657-2	0.5	102-10 66th Rd Queens (Supplier: Midnight Heating)
611-1657-2	1.6	110-34 73rd Rd Queens (Supplier unknown)
612-1657-2	1.4	110-31 73rd Rd Queens (Supplier unknown)
778-1657-2	1.6	86-35 Queens Blvd Queens (water in the sample, Supplier Castle)
783-1657-2	0.4	51-60 Van Kleeck St Queens (Supplier Morningside)
792-1657-2	1.6	80-08 135th Street Queens (Supplier unknown)
810-1657-2	1	73-37 Austin St Queens (Supplier Unknown. Oil 5yrs old)
819-1657-2	1.1	88-25 153rd St Queens (Supplier unknown)
820-1657-2	1.1	90-04 161St Street Queens (Supplier Brite Fuel)
849-1657-2	1.3	213-05 75Th Ave Queens (Supplier unknown)
867-1657-2	1.2	72-81 113th St Queens (Supplier unknown)
894-1657-2	0.9	120-10/12 85th Ave Queens (Supplier unknown)
910-1657-2	0.8	175-20 Wexford Terrace Queens (Supplier Hess > 6m)
924-1657-2	1.5	61-20 Grand Central Parkway Queens (Supplier unknown Last delivery was 5 years ago since conversion)
950-1657-2	1.6	67-30 Clyde St Queens (Unknown different suppliers)
954-1657-2	1.6	83-37 St James Ave Queens (Supplier unknown)
991-1657-2	0.5	73-20 Austin Street Queens (Supplier unknown)

Oil Sample Number (Taken from Chain Of Custody)	% Biodiesel Results	Comment Location
T503-1442-2	0.5	United Metro Terminal Brooklyn (more like auto diesel--color yellow)
833-1657-2	0.9	8701 Shore Rd Brooklyn (Supplier unknown)
81-1687-2	0.4	500 Kingsland Ave Bronx
82-1687-2	1.4	60 Hudson Street Manhattan United Metro Energy Corp May/2015
523-1553-2	1.2	200 East 71st Street Manhattan (Supplier: Hess Corp.)
711-1657-2	0.6	325 Riverside Drive Manhattan (Supplier unknown, no oil delivery for 4 years)
886-1657-2	1.4	400 E. 71st Street Manhattan (Supplier Hess, 3yrs old)

2 samples	Brooklyn
1 sample	Bronx
4 samples	Manhattan
19 samples	Queens