NYC Environmental Protection

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Honorable Michael R. Bloomberg
Mayor
The City of New York
City Hall
New York, NY 10007

Re: Local Law Air Reports for FY 2011

Dear Mayor Bloomberg:

Pursuant to the New York City Administrative Code, I am pleased to submit to you the Local Law Air Reports of Fiscal Year 2011 as required by Local Law 77 of 2003 and Local Laws 38, 39, 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.

Very truly yours,

Carter H. Strickland, Jr.

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c: Hon. Christine Quinn, Speaker, New York City Council
Hon. John C. Liu, Comptroller
Adrian Benepe, Commissioner, DPR
David J. Burney, Commissioner, DDC
Salvatore J. Cassano, Commissioner, FDNY
John J. Doherty, Commissioner, DSNY
Edna Wells Handy, Commissioner, DCAS
Raymond W. Kelly, Commissioner, NYPD
Janette Sadik-Khan, Commissioner, DOT
Dennis M. Walcott, Chancellor, Department of Education

Environmental
Protection

LOCAL LAW AIR REPORTS

FISCAL YEAR 2011

NYC Environmental Protection

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Local Law 38 Annual Report

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 20% reduction in fuel consumption by 2015 and thereafter as compared to baseline fuel efficiency data from 2004. 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 thereafter.

As of Fiscal Year 2011, the City met the mandated 15% increase in fuel economy for light duty vehicles. However, while gasoline use [by light and medium duty vehicles] has decreased, diesel use [by light and medium duty vehicles] has increased. The City exceeded the legislative goal that 95% of purchases be of the lowest polluting vehicles in their class, by purchasing 98.4% 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?*

Agency	Light Duty	Medium Duty	Total
Dept. of Health & Mental Hygiene (DOHMH)	2	0	2
Dept. of Environmental Protection (DEP)	14	6	20
Dept. of Transportation (DOT)	32	26	58
Dept. of Citywide Administrative Services (DCAS)	93	4	97
Dept. of Sanitation (DSNY)	48	26	74
Dept. of Parks & Recreation (DPR)	34	1	35
Police Dept. (NYPD)	406	1	407
Fire Dept. (NYFD)	15	0	15
Dept. of Correction (DOC)	14	0	14
Total	**658**	**64**	**722***

*This total was the baseline for Fiscal Year 2011 used to determine if the City achieved its goal of purchasing 95% of new vehicles that have the highest fuel efficiency ratings in their class.

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) 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	Total SULEV	Total ULEV	Total LEV	Vehicle Total
40	517	7	57	101	0	722

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.

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

3. *How many Alternative Fuel Buses were purchased?*

   There were no buses purchased last year that had to comply with LL38.

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
521*	0	Medium Size Sedan
18	0	Large Sedan
10	4	Regular Size Van
4	0	Mini Vans
53	7	Mid size Sports Utility
3	0	Large size Sports Utility
8	0	Mid size Light Duty Pick-ups
32	0	Medium Duty Vans
14	0	Medium Duty Pick-ups
18	0	Light Duty Pick-ups
Total: 681	**Total: 11**	
Total: 98.4%		

   * The 50 Volts are being counted in the lowest polluting category as 20 were purchased by NYPD as emergency vehicles and the remaining 30 are allowed under the 5% waiver as per LL 38.
   * *The total does not take into account the 30 T3 Transporters as they are all-electric, three-wheel, upright vehicles that carry one person and reach speeds of up to 25 miles per hour and are used in such places as Yankee Stadium and Central Park.

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

   The average fuel economy is 36.7 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 2011, DEP issued the following waivers:

   A waiver from DCAS came in for 50 Chevy Volts. The waiver was approved because the Volts are expected to primarily run on battery and not on fuel, thereby reducing emissions.

7. *What is the percentage increase in fuel economy? Target of 5% to 20%.*

The increase in average fuel economy was 15%, which meets the required reduction by Fiscal Year 2011. The baseline 2005 average fuel economy was 31.1 miles per gallon; the 2011 average fuel economy was 36.7 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 across the entire city fleet (light and medium duty vehicles).

2005 Gallons of Diesel	2011 Gallons of Diesel
337,554	494,521

2005 Gallons of Gasoline	2011 Gallons of Gasoline
2,828,217	2,695,495

Note: More agencies are using gas cards that directly measure the consumption of gasoline/diesel, where as other agencies such as DSNY have their own filling stations. The quantity of gasoline/diesel used at the agency filling stations measures what is purchased and may over-estimate the actual quantity of gasoline/diesel fuel consumed by the fleet. Gas card data is a better representation of the actual fuel consumed and as a result the amount of gasoline and diesel fuel consumed appears to be higher than in 2005. In addition, as hybrid vehicles are purchased, less gasoline is consumed.

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?*

CO_2 Calculations for LL38 Fiscal 2011		
Year	**2005**	**2011**
Gasoline Consumed (gal)	2,828,217	2,695,495
CO_2 emissions (lbs)	54,867,410	52,292,603
Diesel Consumed (gal)	337,554	494,521
CO_2 emissions (lbs)	7,493,699	10,978,366.2
Total CO_2 Emissions (lbs)	62,361,109	63,270,969.2
Reduction (lbs)	*NA*	(9,098,60.2)
Reduction (%)	*NA*	(14.6)%

Note: As fuel consumption increased, so too did the emission of CO_2.

Emissions Ratings on City Requirements Contracts for FY 11

Vehicle Type	ZEV	AT PZEV	PZEV	LEV II SULEV	LEV II ULEV	LEV II LEV
Light Duty Vehicles						
Medium Sedan						
Nissan Altima, Hybrid		123				
Ford Fusion, Hybrid		208				
Toyota Camry, Hybrid		7				
Chevrolet Volt					50	
Toyota Prius, Hybrid		133				
Large Sedan						
Ford Taurus				18		
Minivans						
Dodge Caravan					4	
Regular Size Van						
Ford E-150				4		
Ford Transit Connect Ev	10					
Mid-Size Sports Utility Vehicles						
Ford Escape Hybrid		53				
Toyota Highlander				7		
Large Sport Utility Vehicles						
Ford Expedition					3	
Mid-Size Light Duty Pickups						
Ford Ranger					8	
Subtotal	**10**	**524**	**0**	**11**	**62**	**0**
Medium Duty Vehicles						
Medium Duty Vans						
Ford E-250				1		
Ford E-350				31		
Medium Duty Pickups						
Ford F-250 8500 Gvw				14		98
Light Duty Pickups						
Chevy Silverado, Hybrid					18	
Subtotal	**0**	**0**	**0**	**46**	**18**	**98**
Total	**10**	**524**	**0**	**57**	**80**	**98**

Emission Ratings
(as defined by the California Air Resources Board)
http://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.

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.

PZEV: Partial Zero Emission Vehicle
PZEVs meet SULEV tailpipe emission standards, have zero evaporative emissions and a 15 year/150,000 mile warranty. No evaporative emissions means that they have fewer emissions while being driven than a typical gasoline car has while just sitting.

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.

Citywide Light Duty Vehicle Purchases FY '11 Calculation Of Average City Mileage As Required For LL38 Reporting				
Type Vehicle	Number Procured In FY '11	Fuel Type	EPA MPG City	Weighted Factor (Number Procured * EPA MPG City)
Chevrolet Volt (1.4l)	50	Electric/Gas	93	4650
Dodge Caravan (3.3l)	4	Gas/E85	17	68
Ford E150 (4.6l)	4	Gas/Ethanol	13	52
Ford Escape Hybrid (2.5l)	53	Electric/Gas	30	1590
Ford Expedition (5.4l)	3	Gas	13	39
Ford Fusion Hybrid (2.5l)	208	Electric/Gas	41	8528
Ford Ranger (4.0l)	8	Gas	14	112
Ford Taurus (3.5l)	18	Gas	18	324
Ford Transit Connect Ev	10	Electric	106	1060*
Nissan Altima Hybrid (2.5l)	123	Gas	33	4059
Toyota Camry Hybrid (2.4l)	7	Electric/Gas	31	217
Toyota Highlander Hybrid (3.5l)	7	Electric/Gas	28	196
Toyota Prius Hybrid (1.8l)	133	Electric/Gas	51	6783
Grand Totals	**628**			**23028**
Average City Mileage For Light Duty Vehicles Purchased In FY '11				**36.7**

*This is the EPA MPG for Nissan Leaf. There is no current EPA rating for the Ford Transit Connect.

Please note the T3 Transporter is not included as they are all-electric, three-wheel, upright vehicles that carry one person and reach speeds of up to 25 miles per hour and are used in such places as Yankee Stadium and Central Park.

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Local Law 39 Annual Report

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.

As of Fiscal Year 2011, 77% of the required vehicles used an emission reduction device, which did not meet the required mandate of 90% by Fiscal Year 2011. Also, all diesel vehicles are powered by ULSD (since the passage of LL39, the EPA has required ULSD to be sold nationwide).

The answers below describe the status of the City's implementation of the law and respond to the specific questions posed in the legislation.[2]

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))*

Agency	Vehicles Owned as of June 30, 2011
DEP	473
DSNY	3,624
DPR	464
DOT	948
DCAS	62
Total	**5,571**

2. *What is the number of such diesel fuel-powered motor vehicles that were powered by ULSD? (Ad. Code 24-163.4(g)(1)(ii))*

Agency	ULSD Vehicles as of June 30, 2011
DEP	473
DSNY	3,624
DPR	464
DOT	948
DCAS	62
Total	**5,571**

[2]Section 24-163.4 (g)(1) of the Administrative Code sets forth seven questions to which the Annual Report is required to provide an answer.

3. *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))*

Agency	Vehicles Owned as of 06-30-2011	Vehicles Retrofitted with BART	Vehicles Retrofitted with Other Technology	2007 or Newer Vehicles	Number of Vehicles to be retrofitted	% Complete
DEP	473	25	121	64	263	44%*
DSNY	3,624	629	114	2,334	547	85%
DPR	464	0	195	237	32	93%
DOT	948	85	182	260	421	56%**
DCAS	62	26	0	32	4	94%
Total	**5,571**	**765**	**612**	**2,927**	**1,267**	**77%**

*DEP's diesel fleet consists of many different vehicle types, each requiring a different design solution to achieve the mandated reductions in emissions while complying with the safety requirement of properly enclosing the exhaust system and diesel particulate filter with a guard. The DEP fleet is scheduled to be fully compliant in FY 2012.

** The Clean Cat DOC used by the DOT is not a verified technology, and were therefore considered as vehicles that had yet to be retrofitted.

4. *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))*

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 Packer	Donaldson	Diesel Oxidation Catalyst (DOC)
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
DOT Dump Truck Crew Cab	NELSON	DOC
DEP MACK CV713	Clearie	DPF
DEP Freightliner FL 70	HUG	DPF
DEP CAT L9500	Engine Control Systems	DPF

Note: For a complete list of diesel equipment, engine details, and agency-wide breakdown, please contact DEP.

5. *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))*

   As the chart for question three shows, there were 2,927 vehicles from 2007 or newer certified to these requirements.

6. *Were any findings made or waivers issued pursuant to §24-163.4(g)(1)(vii)?*[3]

   One conditional waiver was issued to DEP to install diesel oxidation catalysts on 40 Freightline Series 985 trucks with the understanding that DEP will evaluate installing a filter-cleaning regeneration panel so more DPFs can be installed.

[3]These 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 ULSDF would be available.

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Local Law 40 Annual Report

Local Law 40 (LL40) requires all contractors managing the City's solid waste disposal program or recycling program for the Department on 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 2011, all contractor vehicles were in compliance with this legislation or had received an appropriate waiver.

Below are answers to the questions posed in the legislation describing the City's status in achieving these milestones.[4] The data for these questions was provided from the Department of Sanitation.

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 53 vehicles used for these contracts and all of them are off road vehicles.

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

   All 53 vehicles used for these contracts were powered by ULSD.

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))*

Type of Vehicle	Model	Engine Year	Technology
Loader	CAT 966	1998	ESW/Thermacat ADPF
Loader	CAT 950	1994	ESW/Thermacat ADPF
Front Loader	WA-500	1998	DCL MINE-X Sootfilter
Front Loader	WA-500	1997	DCL MINE-X Sootfilter
Excavator	PC 200	1998	DCL MINE-X Sootfilter
Excavator	PC 300	1998	DCL MINE-X Sootfilter
Waste Handler	WA-470	2010	DCL MINE-X Sootfilter
Waste Handler	CAT-966H	2008	DCL MINE-X Sootfilter
Wheel Loader	L180F	2008	HUSS/ADPF
Wheel Loader	L180F	2008	HUSS/ADPF
Railcar Switcher	SS4600	2000	HUSS/ADPF
Container Handler	TEC 950L	1993	HUSS/ADPF

[4]Section 24-163.5 (j)(1) of the Administrative Code sets forth eight questions to which the Annual Report is required to provide an answer.

Type of Vehicle	Model	Engine Year	Technology
Railcar Switcher	SWX 465	2002	HUSS/ADPF
Forklift	H80FT	2007	HUSS/ADPF
Excavator	EC290	2009	HUSS/ADPF
Wheel Loader	L70F	2009	HUSS/ADPF
Wheel Loader	L220	2007	HUSS/ADPF
Compactor	BC772RB	2007	HUSS/ADPF
Excavator	EC330	2007	HUSS/ADPF
Wheel Loader	L180E	2004	HUSS/ADPF
Excavator	325MH	2005	HUSS/ADPF
Wheel Loader	L70E	2005	HUSS/ADPF
Compactor	826H	2007	HUSS/ADPF
Wheel Loader	980H	2007	HUSS/ADPF
Wheel Loader	980H	2007	HUSS/ADPF
Wheel Loader	L70E	2008	HUSS/ADPF
Railcar Switcher	SWX5252BE	2003	HUSS/ADPF
Railcar Switcher	SWX605C	2007	HUSS/ADPF
Wheel Loader	L180F	2008	HUSS/ADPF
Wheel Loader	L180F	2002	HUSS/ADPF
Forklift	H80FT	2007	HUSS/ADPF
Loader	CAT 966D	1987	DCL/DOC
Loader	CAT 966E	1990	DCL/DOC
Material Handler	MHL 350D	2007	HUSS/ADPF
Loader	L120F	2008	HUSS/ADPF
Front Loader	CAT 962G	1999	DCL Mine-X Sootfilter
Front Loader	CAT 966H	2010	JM CRT
Front Loader	CAT 966H	2010	JM CRT
Skid Loader	Bobcat 863	2002	Waiver app. pending
Skid Loader	Bobcat S250	2010	Waiver app. pending
Front Loader	CAT 966G	2005	JM CRT
Front Loader	CAT 966G	2008	JM CRT
Skid Loader	Bobcat	2000	Waiver app. pending
Skid Loader	Bobcat	2010	Waiver app. pending
Top Pick	DCF410CSG	2006	Cleaire Phoenix
Top Pick	DCF410CSG	2006	Cleaire Phoenix
Yard Jocky	Ottawa 4X2	2007	Cleaire Phoenix
Yard Jocky	Ottawa 4X2	2007	Cleaire Phoenix
Yard Jocky	Ottawa 4X2	2007	Cleaire Phoenix
Broom	Elgin SE	2003	Cleaire Phoenix
Skid Loader	Bobcat S220	2006	Waiver app. pending
Rack Truck	GMC / C4500	2005	HUG

Note: The above chart shows that 46 of these vehicles used Classification Level IV Diesel Particulate Filters. Of the seven remaining vehicles, two used a Diesel Oxidation Catalyst because of the age of the equipment while five received a waiver because the size of the equipment does not allow for any BAT. These classification levels are a hierarchical structure for reducing particulate matter. Classification Level IV is the most effective way to decrease pollutants as it uses a diesel particulate filter as compared to Level II which uses a diesel oxidation catalyst.

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 29 vehicles certified to comply with section 86.007-11 of Title 40 of the CFR.

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

   The locations were as follows:

   1) Brooklyn Transfer Inc. / Action / Waste Export Brooklyn
      105-115 Thames Street, Brooklyn, NY
   2) American Recycling Mgmt. / DSNY Transfer Station
      172-33 Douglas Ave, Queens, NY
   3) Tully Environmental Inc. / Export of MSW from Queens
      127-20 34th Ave, Queens, NY
   4) Waste Management of NY LLC / Varick 1
      221 Varick Ave, Brooklyn, NY
   5) Waste Management of NY LLC / Harlem River Yard,
      98 Lincoln Ave, Bronx, NY
   6) Waste Management of NY LLC / Review Ave
      38-50 Review Ave, Queens, NY
   7) Waste Management of NY LLC / BQE
      475 Scott Ave, Brooklyn, NY
   8) Regal Recycling / Regal Recycling
      172-02 Douglas Ave, Queens, NY
   9) Sims Municipal Recycling of NY
      850 Edgewater Road, Bronx, NY
   10) Sims Municipal Recycling of NY
      30-27 Greenpoint Ave, Long Island City, NY
   11) IESI NY Corporation / DSNY Transfer Station
      110 50th Street, Brooklyn, NY

12) IESI NY Corporation / DSNY Transfer Station
577 Court Street, Brooklyn, NY
13) Republic Services / Staten Island Transfer Station
600 West Service Road, Staten Island, NY

7. *What waivers were issued for ULSDF? [5](Ad. Code 24-163.5(j)(1)(vii))*

No waivers were issued.

8. *What waivers were issued for the use of other authorized technology in lieu of the best available technology?[6] (Ad. Code 24-163.5(j)(1)(viii))*

No waivers were issued, but several were pending.

[5] These waivers would have been granted for off road vehicles that did not need to be equipped with an emissions reducing device because they already had a 2007 or later engine that EPA has certified as reducing particulate matter according to the standard in this law.
[6] These waivers would be granted by DEP if a City agency documents that best available technology is unavailable for purchase.

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Local Law 41 Annual Report

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.

As of Fiscal Year 2011, 100% of the required vehicles use best available retrofit technology. 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 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))*

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
Community Bus Lines Inc.	8	8	Eight are model engine year 2008 that meet applicable United States Environmental Protection Agency (EPA) standards for particulate matter as set forth in section 86.007-11 of title 40 of the Code of Federal Regulations.*
CitySights	66	66	All Classification Level IV Diesel Particulate Filter (DPF) Continuous Regenerating Traps (CRTs) except for six which are retrofitted with DOCs because the engines are pre-1990 and cannot accept DPFs.
Experience the Ride	3	3	Two are certified as 2008 model year engines & one is certified with a 2009 model year engine.
Gray Line New York Tours Inc ("Coach USA")	72	72	Six diesel oxidation catalysts (DOCs); 60 Classification Level IV Johnson Matthey CRTs & 6 are certified with 2010 model year engine.
MCIZ	9	9	Three are certified with 2008 model year, four are certified with 2009 model year, and two are Classification Level IV DPFs with CRTs.
Olympia Trails Bus	1	1	Certified with 2008 model year engine.

Sight Seeing Bus Company	Number Licensed by DCA	Number with BART	Type of Technology
Skyliner Travel and Tour Bus Corp	17	17	Five are certified with 2008 model year engines, 10 are certified 2009 model year engines and two are certified with 2010 model year engines.
Taxi Tours Inc	3	3	All are retrofitted with DOCs on pre-1991engines.
Suburban Trails	7	7	All are certified with 2009 model year engines.
Around NY Tours Inc.	1	1	This is a gas vehicle exempt from LL41 requirements.
Golden Touch	3	3	Certified as 2009 model year engines.
Safe Coach Bus Inc.	1	1	Certified as 2008 model year engine.
NY City Airport Express Bus	1	1	Waiver requested and granted as it is a 1964 bus with a 1982 engine.
Travel Plan USA Inc./See USA Tours	4	4	One is certified as 2008 model engine year, two are certified as 2009 model engine years and one is certified as 2010 model engine year.
TOTAL	**196**	**196**	

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

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) or Level I (DOC) BART with one gasoline vehicle.

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 57 such buses out of the 195 that meet BART, one bus utilizes gas and is exempt from Local Law 41 requirements. **Olympia Trails** has one model year 2008 engine; **Suburban** has seven model year 2009 engines; **Skyliner** has five model year 2008 engines, 10 model year 2009 engines, and two model year 2010 engines; **Community Bus** has eight model year 2008 engines; **MCIZ** has three model year 2008 engines and four model year 2009 engines; **Experience** has three model year 2008 engines; **See USA Tours** has one model year 2008 engine, two are 2009 model engines and one is 2010 model year engine; **Safecoach** has one 2008 model year engine; **Grayline** has six model year 2010 engines and **Golden Touch** has three model year 2009 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
Community Bus Lines Inc.	160 S. Rte. 17 North Paramus, NJ 07652	49 West 45th Street, 5th Floor New York, NY 10036
Experience the Ride	311 W 43rd Street New York, NY 10036	Same
MCIZ Corp	15 Second Avenue, Brooklyn, NY 11215	Same
Olympia Trails Bus Company Inc.	349 First Street, Elizabeth, NJ 07206	Same
Skyliner Travel and Tour Bus Corp.	19-41 42nd Street, Astoria, NY 11105	Same
Taxi Tours Inc.	52-15 11th Street, Long Island City, New York, NY 11101	333 5th Avenue NY 10016
Golden Touch Transportation of NY, Inc.	45-02 Ditmars Boulevard Astoria, NY 11105	Same
Around NY Tours	565 Prospect Place, Apt 2G Brooklyn, NY 11238	Same
Safe Coach Bus, Inc.	1040 Rockaway Avenue Brooklyn, NY 11236	Same
NYC Airport Express Bus/Big Apple Fire Engine Tours	928 Flushing Avenue Brooklyn, NY 11206	19 Leary Lane Nesconset, NY 11767
Travel Plan USA Inc./See USA Tours	153-04 Rockaway Boulevard Jamaica, NY 11434	Same
CitySights	15 Second Avenue, Brooklyn, NY 11215	Same
Suburban Trails Inc.	750 Somerset Street New Brunswick, NJ 08901	Same

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

All were certified to 2007 and later model engines, which are exempt from BART pursuant to 40 C.F.R. § 86.007-11 except for one 1964 bus using a 1982 engine.

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

One waiver was granted for a 1964 bus using a 1982 engine. Due to the age of the bus and engine, such technology is unavailable.

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Local Law 42 Annual Report

Local Law 42 (LL42) required that by September 1, 2006, certain general education diesel fuel-powered school buses be powered by a specific diesel fuel, ultra low sulfur diesel fuel (ULSD). In addition, LL 42 required that by September 1, 2007, all of these school buses use best available retrofit technology (BART) to reduce emissions.

As of Fiscal Year 2011, the Department of Education was using ULSD for their fleet of school buses with vehicles manufactured after 2001. DOE is also going beyond the scope of the requirements of the legislation to reduce the emission of pollutants from Type C and D general education school buses by retrofitting special education buses with BART. Of DOE's total fleet, 96% are using emission control devices with 43% using the best available devices.

Below are answers to the questions posed in the legislation describing the City's status in achieving these milestones.[1] Table 1 summarizes the answers to questions one through five.

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 was a fleet of 2,188, 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 2,188 buses were 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))*

   188 buses used this technology. Please see Table 1 for the breakdown.

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))*

   774 buses used other authorized technology. Please see Table 1 for the breakdown.

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[1]Section 24-163.7 (j)(1) of the Administrative Code sets forth seven questions to which the Annual Report is required to provide an answer.

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))*

   752 buses were equipped with the applicable 2007 EPA standard engines.

6. *Where were the locations of the school districts where such buses were powered by ULSDF, 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 in the city used these buses.

7. *Were any waivers granted pursuant to 24-163.7(h) of this law?*[2]

   A waiver was granted to DOE on September 14, 2007, after they provided documentation that diesel particulate filters (DPFs), which constitute the best available technology, would have caused serious operational issues. On May 24th, 2010, that waiver was extended to March 15, 2011. DOE is currently in the process of obtaining DPFs.

Table 1

Technology	Manufacturer	Engine-Type	ULSD	Meets 2007 EPA Standard	No. of Buses
Diesel Particulate Filter (DPF)	IC, Bluebird, Thomas & Freightliner	Unavailable	Yes	752	940
Diesel Oxidation Catalyst with Crankcase Filtration System	IC, Bluebird, GMC, Thomas, Ford & Freightliner	Unavailable	Yes	Unknown	774
Diesel Oxidation Catalyst Only (DOC)	IC, Bluebird, GMC, Thomas, Ford, Chevy & Freightliner	Unavailable	Yes	Unknown	306
Total General Education Bus Fleet				**752**	**2,188**

[1]Section 24-163.7(h) authorizes DEP to grant such a request when best available technology is unavailable.

[2]Section 24-163.7(h) authorizes DEP to grant such a request when best available technology is unavailable.

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Local Law 77 Annual Report

Local Law 77 (LL77) requires that any diesel powered off road vehicle used by the City use ultra low sulfur diesel (ULSD) fuel. It also requires these vehicles be retrofitted with an emissions controlled device to reduce the release of harmful pollutants into the environment.

The milestones in the legislation are as follows:

- June 2004: Diesel powered off road vehicles used by the City in Lower Manhattan must meet LL77's requirements.

- December 2005: Any diesel-powered off road vehicle, 50 horsepower and greater, that the City used must meet the requirements.

Federal regulations required ULSD in on road diesel vehicles by July 1, 2006, and will require ULSD in off road diesel vehicles by 2010. To meet these nationwide requirements, DEP and other City agencies have worked to improve air quality by going beyond the emission requirements in LL77. The Department of Sanitation has been using ULSD, alone and in combination with biodiesel blends and emissions controlling devices well in advance of the effective dates of LL77, and DEP, as a voluntary measure, has been using this fuel and these devices at the Croton Water Filtration Plant construction site.

As of Fiscal Year 2011, all City vehicles are using ULSD and the City continues to install best retrofit technology in its vehicles. Unlike for on road vehicles, it took time for industry to standardize best available emission control equipment for off road vehicles and the processes necessary to comply with this Local Law. This industry delay, in turn, caused delays in implementation of the law's measures. As technology improves and the universe of devices increases, there have been less operational issues with implementing this law and more agencies are coming into compliance.

Below are answers to the questions in the legislation describing the City's status in achieving these milestones.[7] Table 1, after question three, summarizes the data for the first three questions.

1. *What is the total number of diesel-powered off road vehicles owned by, operated by or on behalf of, or leased by each city agency or used to fulfill the requirements of a public works contract for each city agency? (Ad. Code 24-163.3(g)(1)(i))*

   Please see Table 1 for information.

2. *What is the number of such off road vehicles that were powered by ULSDF? (Ad. Code 24-163.3(g)(1)(ii))*

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[7]Section 24-163.3 (g)(1) of the Administration Code sets forth seven questions to which the Annual Report is required to provide an answer.

Please see Table 1 for information.

3. *What is the number of such off road vehicles that used BAT for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.3(g)(1)(iii))*

Please see Tables 1 and 2 for information.

Table 1

Note: This table reflects retrofits to date, but for the leased vehicles it is for Fiscal Year 2011 only.

Agency	Vehicles Owned as of 6.30.11	Vehicles Leased as of 6.30.11	Vehicles Owned Using ULSD	Vehicles Leased Using ULSD	Vehicles Owned Retrofitted with BAT	Vehicles Leased Retrofitted with BAT	Vehicles Owned Retrofitted with Other Technology	Leased Vehicles Retrofitted with other Technology
DEP	158	93	158	93	107	93	0	0
DDC	0	266	0	266	0	47	0	0
DCAS	6	0	6	0	0	0	0	0
DSNY	287	14	287	14	286	14	98	0
DPR	122	0	122	0	119	0	0	0
DOT	231	0	231	0	116	0	0	0
Total	**804**	**373**	**804**	**373**	**628**	**154**	**0**	**0**

Table 2

Manufacturer	Technology	Agency
NETT	Selective Catalytic Reduction (SCR) Flow Through Filter (FTF)	DSNY
DONALDSON	DOC; DPF	DSNY; DOT; PARKS
HUSS	Active Diesel Particulate Filter (ADPF)	DSNY DEP Contractor at Croton, Bronx
JM	DPF/FTF DPF	DSNY DOT
DCL	DPF/FTF; DPF	DSNY; DDC; DEP Contractors
AIR FLOW CATALYST SYSTEM	DOC	DSNY
CLEARIE	ADPF/DPF	DOT
LUBRIZOL	DPF	DCAS
CAT	DPF	DEP Contractor at Valhalla
ECS	DPF/DOC	DEP Contractor at Wards Island, Manhattan; Croton, Bronx; and Avenue V , Brooklyn

Note: This chart represents a sampling of best available technology. The complete list can be obtained by contacting DEP.

4. *What is the number of such off road 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 24-163.3(g)(1)(iv))*

98 DSNY off road vehicles which are listed in the table below.

Unit	EQ Type	Mfg	Model	MY	# Units	BAT Mfg	BAT Type
21CB	Front End Loader	Doosan	DL200	2009	25	NETT	FTF
21CB	Front End Loader	Doosan	DL200	2009	71	ESW	FTF
21CC	Skid Steer	Deutz	5640E	2009	2	DCL International	DOC

5. *`What were the locations in Lower Manhattan where such off road vehicles that were powered by ULSDF and/or used BAT for reducing the emission of pollutants or other authorized technology were used? (Ad. Code 24-163.3(g)(1)(v))*

   All City off road vehicles were used citywide. DEP contractors used off road vehicles at Gilboa Dam, Croton, Valhalla and DSNY used off road vehicles at Fresh Kills Landfill.

6. *Were any findings issued that there was an insufficient amount of ULSDF pursuant to § 24-163.3(k)(1)?If so, please describe those findings.*[8] *(Ad. Code 24-163.3(g)(l)(vi))*

   No findings were made.

7. *Were any findings issued that the best available technology for reducing the emission of pollutants was unavailable for a particular vehicle pursuant to §24-163.3 (k)(1)?*

   No waivers were issued as there were no technical reasons for such waivers to be granted.

8. *Were any findings issued that the use best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction?*

   No findings were made.

[8] **If ULSD that contains no more than 15 parts per million was unavailable, DEP would grant a waiver to an agency allowing them to use diesel fuel that has a sulfur content of more than 30 parts per million.**