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To: Carmine Rivetti, Government Relations

From: Keith T. Kerman, Deputy Commissioner 

Date: January 29, 2019

RE: Local Law 75: Report on Use Based Fuel Economy for City Fleet

Please find attached a report on the use-based fuel economy for non-emergency light and medium duty fleet units as required by Local Law 75 of 2013. This is the fourth report that DCAS has submitted in compliance with this law and covers FY17 and FY18 fleet usage.

Thank you.

Cc: Suzanne Lynn, DCAS Counsel
Eric Richardson, Deputy Chief Fleet Officer
Sherry Lee, Chief of Staff, Fleet

DCAS: REPORT ON THE USE BASED FUEL ECONOMY OF LIGHT AND MEDIUM NON-EMERGENCY VEHICLES IN THE CITY FLEET (FY17 and FY18)

1) Summary

In 2013, the City Council passed Local Law 75 regarding the use-based fuel economy of the City's non-emergency light and medium duty vehicles. DCAS already reports on the manufacturer's listed miles per gallon (MPG) as part of Local Law 38 of 2005 which governs the purchase of new light and medium duty vehicles. Local Law 75 of 2013 requires the reporting of the actual "use based" fuel economy of City vehicles, as impacted by weather, traffic, use of AC and heaters, idling, and other road and operational conditions.

In 2013, DCAS did not have the reporting capacity to provide use-based fuel economy in the manner required by the law. Since 2013, DCAS has implemented a new fleet management system, NYC Fleet Focus; a new gas card contract for private retail fueling; and a new citywide fuel management system for in-house fueling. In 2014, DCAS also implemented an initial location tracking program for many fleet units.

In early FY19 DCAS began the rollout of real-time telematics on all fleet vehicles except NYPD. This system will be more comprehensive than previous vehicle tracking and will greatly enhance our capacity to report on use-based fuel economy. The new system will report actual fuel economy directly from each vehicle's computer. Currently, we have been required to integrate the fleet and fuel tracking systems to produce this report, which complicates the reports and results in various data quality issues. In FY19, we expect to prepare this report in whole or most part using the new telematics systems and not the current approach. We also expect to be able to report accurately on additional fleet units for this report.

The report provided below excludes a small number of vehicles reporting under 5 mpg or over 60 mpg. These data points are outliers which represent some limitations in the reporting system involving older model units and other technical issues. This report provides FY17 data for comparison purposes.

This report includes hybrid plug in EV vehicles like the GM Volt (PHEVs) but excludes dedicated EV vehicles, like the GM Bolt (BEVs), which use no liquid fuels. The City has been working to expand the number of electric vehicles, both PHEV and BEV, and now operates over 1,700 EV units. This represents an increase of over 600 since last year's report which accounts for some reduction in vehicles reporting.

The report also excludes compressed natural gas sedans, mostly at Parks which also do not use liquid fuel.

Some of the results are as follows:

- **Light duty vehicles such as sedans are far more fuel efficient (over 100%) than medium duty such as pickups and vans.** DCAS works with agencies to down-size and right-size fleet units wherever possible. Hybrid as well as plug in units achieve over 50% better fuel economy in general than their gas only versions.
- **Overall fuel efficiency increased between FY17 and FY18 among liquid fueled light and medium duty vehicles from 18.5 MPG to 20.3 MPG.** This was an improvement of just under 10% for liquid fueled vehicles covered under this local law. This was a result of a further transition from gasoline only vehicles to hybrids and electric (PHEV) vehicles. The FY17 report covered 5,140 vehicles. The FY18 report covers 4,814 vehicles. Gas vehicles that have been transitioned to electric vehicles are no longer tracked in this report.
- **Plug in electric vehicles and hybrid electric vehicles achieve far greater use-based fuel economy than gasoline vehicles. A plug-in hybrid light duty vehicle such as the Chevy Volt is achieving more than double the fuel economy of a regular gas light duty unit.** There was also an increase in MPG among electric/gas plug in vehicles from 30.27 in FY17 to 34.91 in FY18 due to an increased focus on using electricity instead of liquid fuels to power these vehicles. The expansion of the city's internal charging network including solar car ports will allow for a further improvement for FY19 and beyond.

2) Use based fuel economy report for FY17 and FY18

Local Law Report

2017

Agency	Count of Units
DCAS	2,386
DEP	917
DHMH	272
DOCN	9
DOTR	1,190
DPAR	358
DSNY	8
Total	5,140

2018

Agency	Count of Units
DCAS	2,219
DEP	881
DHMH	270
DOCN	2
DOTR	1,105
DPAR	329
DSNY	8
Total	4,814

Subgroup	Count of Units	Total Miles	Total Gallons	MPG
Light	3,844	28,897,583	1,203,799	24.01
Medium	1,296	8,026,726	791,337	10.14
Total	5,140	36,924,309	1,995,137	18.51

Subgroup	Count of Units	Total Miles	Total Gallons	MPG
Light	3,649	24,998,550	958,117	26.09
Medium	1,165	6,320,166	583,502	10.83
Total	4,814	31,318,716	1,541,619	20.32

	Count of Units	Total Miles	Total Gallons	MPG
Light	3,844	28,897,583	1,203,799	24.01
Plug-in	160	832,396	27,497	30.27
Hybrid	2,731	19,833,592	629,336	31.52
Gas	953	8,231,057	546,966	15.05
Medium	1,296	8,026,726	791,337	10.14
Hybrid	0	0	0	0
Diesel/Bio	130	745,178	59,398	12.55
Gas	1,166	7,281,548	731,940	9.95
Grand Total	5,140	36,924,309	1,995,137	18.51

	Count of Units	Total Miles	Total Gallons	MPG
Light	3,649	24,998,550	958,117	26.09
Plug-in	330	1,896,270	54,320	34.91
Hybrid	2,405	15,470,015	452,960	34.15
Gas	914	7,632,167	450,823	16.93
Medium	1,165	6,320,166	583,502	10.83
Hybrid	4	9,571	763	12.54
Diesel/Bio	167	842,519	57,262	14.71
Gas	994	5,468,076	525,476	10.41
Grand Total	4814	31318716	1541619	20.32

- In FY17 pure EV miles exceeded 800,000 miles for the first time. In FY18 pure EV miles increased by 80% crossing 1.4 million miles. The miles traveled by the pure electric fleet are not accounted for in the tables below.
- Diesel pickups and vans are significantly more fuel efficient than gasoline pickups and vans. In FY18 diesel pickups had a 41% improvement in MPG over gasoline equivalent pickups. Diesel vans in FY18 saw a 43% improvement in MPG over gasoline equivalent vans. Through an initiative supported by OMB the city is transitioning towards an increased number of diesel pickups and vans. In addition to improve fuel economy, this transition also allows the city a further reduction in green house gas emissions since these vehicles are fueling either with biodiesel or renewable diesel at in house fueling sites.

DCAS will use these results to further inform our sustainability efforts as part of the NYC Clean Fleet initiative.

Category	FY17	FY18
Gasoline	1,200,000	1,400,000
Diesel	800,000	1,000,000
EV	800,000	1,400,000
Total	2,800,000	3,800,000

Vehicle Type	FY17	FY18
Pickups	1,200,000	1,400,000
Vans	800,000	1,000,000
Other	800,000	1,400,000
Total	2,800,000	3,800,000

Vehicle Type	FY17	FY18
Gasoline Pickups	1,200,000	1,400,000
Diesel Pickups	800,000	1,000,000
Gasoline Vans	800,000	1,400,000
Diesel Vans	800,000	1,000,000
Other	800,000	1,400,000
Total	2,800,000	3,800,000