2015

Green Fleet Annual Report

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Background

Local Law #9 of 2015, establishing a Sustainable Green Fleet Policy was adopted by the Ulster County Legislature in August of 2015 and approved by the County Executive in September of 2015. While vital to the operation and function of County Government, the Green Fleet Law recognizes the environmental and economic impact of fleet operations and details ways in which to reduce these costs and impacts. The law sets forward requirements to inventory the fleet, monitor the fuel use, optimize the vehicle use of existing vehicles, and requires the purchase of new green fleet vehicles to meet a green fleet goal.

The monitoring and implementation of the Green Fleet Law is a collaborative effort between various Executive Departments, including the Department of the Environment, the Department of Public Works (Fleet Manager), as well as UCAT, UC Purchasing Department and others.

Reporting Requirements

The Green Fleet Law requires that a report is prepared each year on or before March 1st and filed with the County Executive and the Ulster County Legislative Standing Committee assigned with the Department of the Environment and any other Committee as determined by the Clerk of the Legislature.

The report shall include but not be limited to:
- Documentation of fuel use and emission associated with the fleet;
- Information addressing the intent and purpose of the law (Section 1), the fleet inventory (Section 3), and the Green Fleet Policy implementation strategies (Section 5);
- Assessment of goals as outlined in policy and whether they have been attained; and
- Recommendations regarding actions to be taken in order to meet the goals as well as recommendations as to specific changes or modifications to the policy.

Key Fleet Statistics

Number of Vehicles

The County operates approximately 424 vehicles (not including certain types of heavy equipment in DPW) in 26 different departments/divisions.

Retired/Auctioned Vehicles

In 2015 the following older, high mileage vehicles were surplused.

2016 Auction Vehicles- Surplused in 2015				
Vehicle Year	**Make**	**Model**	**UCV#**	**mileage**
1999	Jeep	Cherokee	83	149,000
2001	Ford	Taurus	84	102,570
1997	Lincoln	Town Car	242	156,481
2008	Ford	Crown Victoria	278	150,078
1998	Cadillac	Deville	286	118,372
1995	Dodge	B1500	1	66,795
1999	Chevy	Lumina	60	96,935
2004	Chevy	Impala	108	133,441
2001	Ford	Taurus	120	97,073
2003	Chevy	Impala	107	115,041
2002	Chevy	Impala	136	110,340
2002	Chevy	Impala	137	110,571
2000	Dodge	2500	155	124,938
2008	Chevy	Impala	258	88,009
2002	Dodge	Dakota	315	121,372
1999	BMW	740i	316	112,546
2010	Ford	Crown Victoria	327	139,437
1997	Lexus	ES300	488	183,195
2008	Dodge	Durango	1010	97,093
2008	Ford	E450 bus	Bus43	255,100
2009	Ford	E450 bus	Bus51	262,452

New Vehicles

The UC DPW Fleet Manager continues to work with departments to review the intended use and need for each vehicle request. The most efficient vehicle practicable is procured. The following new vehicles were purchased in 2015.
- UCAT received four new buses in 2015, 1-26' Paratransit low floor bus, and 3 - 30' low floor medium duty buses.
- Four 2016 Ford Fusion Energi - plug-in hybrids were ordered in 2015. (Vehicles were received early 2016.)
- 2016 Ford Transit with Para Transit package, 2016 Ford F-150, 2016 Ford F-250, 2 2016 Ford Transit Connects, and 2 Chevy Impalas.

2015 Fuel Use and Emissions

Fuel is used and dispensed under the following systems:
- A credit card procurement system (WexOnline) that allows vehicle drivers to fuel up at any service station (almost all unleaded vehicles and a few smaller diesel trucks use this system);

- Diesel tanks maintained by DPW at the Quarry and Substations as well as a fuel truck terminal pickup for diesel highway equipment; and
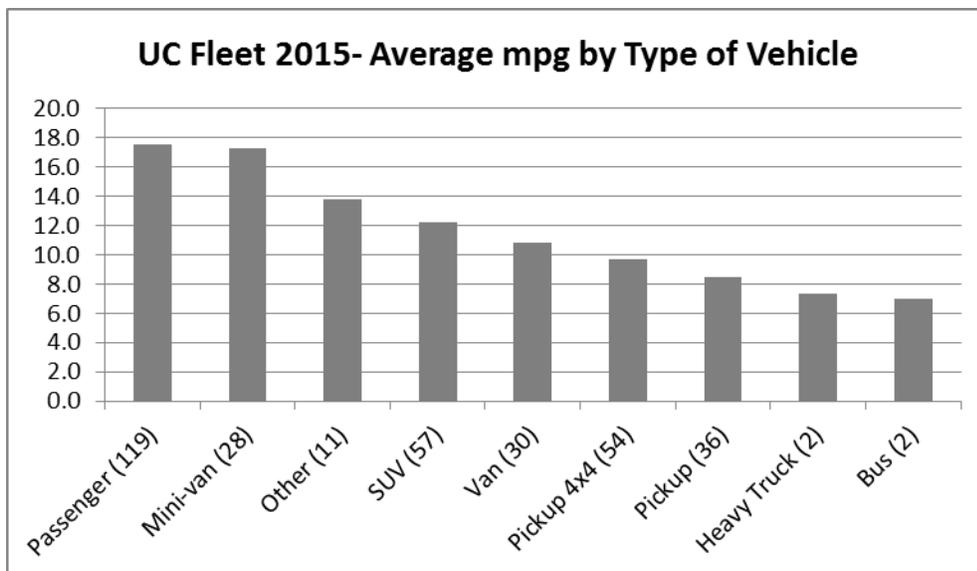- Diesel tanks and unleaded tanks at UCAT for use and operation of the UCAT bus fleet.

Approximately half of all the fuel used is monitored by reviewing the WexOnline system transactions (which allow each fuel fill-up to be linked to a specific driver and specific vehicle). In addition, fuel use records for the refilling of the diesel tanks maintained by DPW (which allow for tracking total volume of fuel dispensed and are linked to user cards but are not tracked to a specific vehicle) and records from UCAT (which are linked to vehicles and drivers) were also reviewed. To compile this report 15,915 individual fueling records from the WexOnline system were reviewed, 410 fueling records for DPW Highway Division diesel tanks and terminal pickups were reviewed as well as records from UCAT.
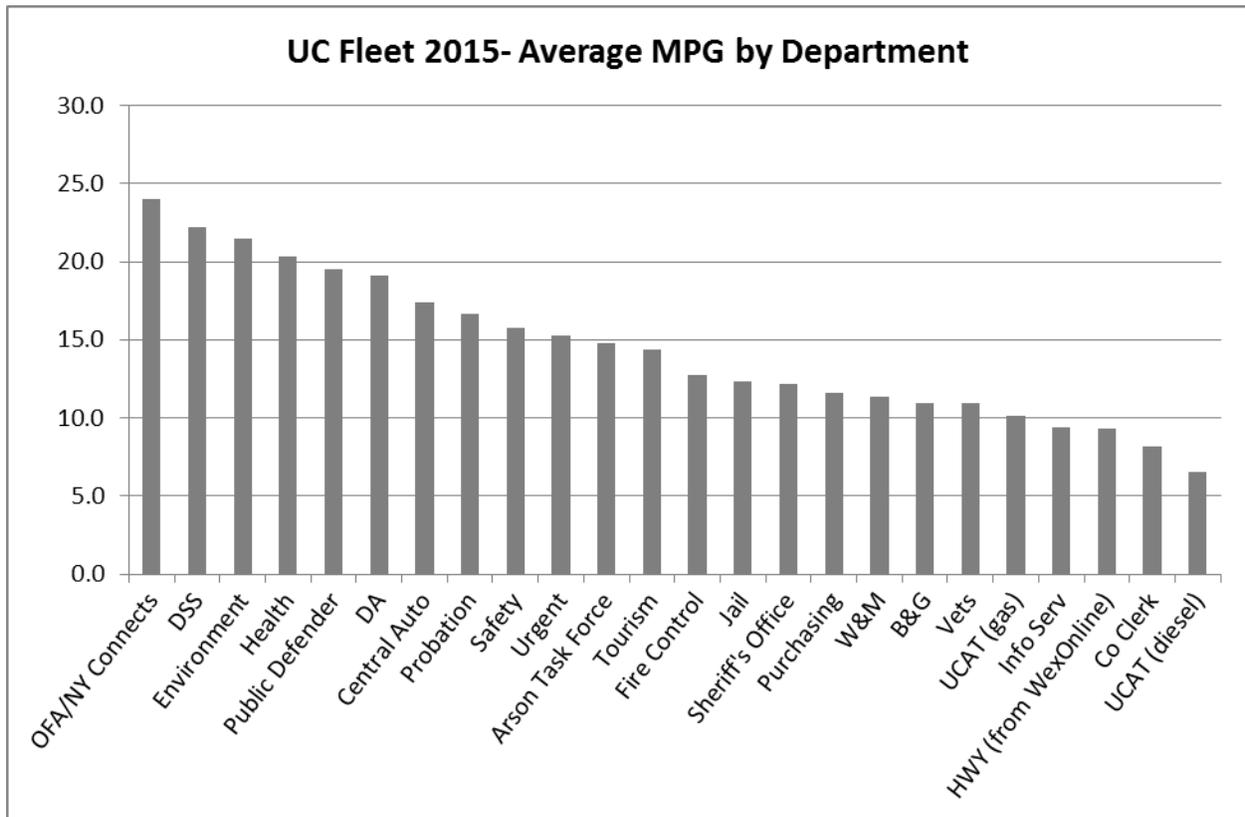
Fleet emissions were then calculated based on the total volume of unleaded fuel consumed, total volume of petro-diesel fuel consumed, and the total volume of bio-diesel consumed.

The summary of total gallons consumed, miles driven, fuel cost and emissions is included as Table 1 in the Appendix.

Miles per Gallon (mpg) Analysis

For all fleet vehicles that have individual fueling records (those tracked in the WexOnline system) an mpg analysis was performed. This analysis does not include DPW Highway Division Heavy Vehicles or UCAT buses.

UC Fleet 2015- Average MPG by Department

Chart showing average MPG by department, sorted from highest to lowest:

Department	Approx. MPG
OFA/NY Connects	24.0
DSS	22.2
Environment	21.5
Health	20.3
Public Defender	19.5
DA	19.1
Central Auto	17.4
Probation	16.6
Safety	15.7
Urgent	15.3
Arson Task Force	14.8
Tourism	14.4
Fire Control	12.7
Jail	12.3
Sheriff's Office	12.1
Purchasing	11.6
W&M	11.3
B&G	10.9
Vets	10.9
UCAT (gas)	10.1
Info Serv	9.4
HWY (from WexOnline)	9.3
Co Clerk	8.1
UCAT (diesel)	6.5

Green Fleet Goals and Implementation

During 2015, electric vehicle charging stations were installed at 9 County buildings. (County Office Building, County Courthouse, Department of Public Works, Probation, SUNY Kingston Center, Ulster Avenue Office Complex, Golden Hill, Law Enforcement Center, and Trudy Resnick Farber in Ellenville). This installation supports the deployment of plug-in hybrid and electric vehicles in the County's fleet as well as promotes EVs community wide which is a stated intent of the Green Fleet Policy. In progressing this goal it should be noted that:

- Public charging stations at County buildings were used 328 times from July through December 2015. It is estimated that 878 kg of greenhouse gases emissions were avoided due to that usage;

- 97% of the County workforce has access to a charging station at or near their workplace which should promote more employees to choose a green vehicle for their commute; and

- Ulster County's Green Fleet and electric vehicle charging station initiatives were featured in a regional Climate Smart Communities conference as well as a NYS

DEC statewide webinar on Green Fleet initiatives to educate other communities on green fleet and sustainable vehicle efforts.

In 2015, the County started the process of procuring four plug-in hybrid electric sedans for use in the fleet (vehicles were delivered early 2016).

In addition, during 2015 the County switched to a biodiesel blend (B5) at UCAT. Biodiesel is derived from plant and animal sources versus petro-diesel which is refined from crude petroleum. Biodiesel is generally considered a greener, more sustainable alternative to petro-diesel since it is not fossil fuel based and the regeneration of the plant and animal stock fixes (absorbs) the CO_2 emissions associated with the burning of the biodiesel product. The use of biodiesel reduced greenhouse gas emissions (CO2E) by over 50,600 kg in 2015.

The Green Fleet Policy requires that by 2020 5% of the fleet be green vehicles. The County currently owns and operates six hybrid buses. In addition, in 2015 the County started the process of procuring four plug-in hybrid sedans. This brings our inventory of green vehicles to 10 (as of the sedan delivery in early 2016). It should be noted that this tally of green vehicles does not currently include clean diesel trucks at DPW, clean diesel buses in the UCAT fleet, or the other vehicles in the UCAT fleet that operate on biodiesel. We estimate that we will need to have at least 21 green vehicles in our fleet by 2020 to meet the green vehicle goal and we are well on track.

Recommendations

Continue to specify green vehicles for new fleet purchases; continue to right size new vehicle purchases.

APPENDIX

TABLE 1- Number of vehicles, distance driven, fuel used and GHG emissions reported by department

Department	Number of Vehicles	Distance Driven (miles)	Fuel (gallons)	Cost ($)	Emissions in kg CO_2e
Office for the Aging/NY Connects	4	13,154	548	$ 1,378	4,869
Dept Social Services	33	429,166	19,344	$ 48,715	172,165
Central Auto	15	74,680	4,304	$ 10,839	38308
Environment	1	2,460	115	$ 288	1,019
Health Dept	14	129,377	6,367	$ 16,034	56,666
Public Defender	1	2,450	126	$ 317	1,119
District Attorney	8	51,177	2,682	$ 6,753	23,866
Probation	18	94,002	5,649	$ 14,225	50,272
Safety	3	23,854	1,515	$ 3,816	13,486
Urgent	12	92,759	6,063	$ 15,269	53,962
Arson Task Force	3	15,738	1,064	$ 2,680	9,471
Tourism	1	1,569	109	$ 275	973
Fire Control	2	10,240	801	$ 2,018	7,133
Jail	18	168,018	13,590	$ 34,223	120,947
Sheriff's Office	62	906,459	74,388	$ 187,330	662,050
Purchasing	1	7,231	624	$ 1,571	5,552
Weights & Measures	2	13,968	1,231	$ 3,099	10,952
DPW- B&G Division	32	134,157	12,256	$ 30,865	109,079
DPW -Hwy (from WexOnline)	68	681,762	73,518	$ 185,141	654,313
DPW- Hwy (diesel tank deliveries and pickup)	75		150,170	$ 284,868	1,534,739
Veterns Services	6	59,619	5,451	$ 13,727	48,512
Info Serv	8	9,841	1,051	$ 2,647	9,355
Co Clerk	2	4,681	570	$ 1,437	5,077
UCAT (diesel)	29	893,237	136,793	$ 278,634	1,366,015
UCAT (gasoline)	6	130,843	12,940	$ 23,292	116,600
TOTAL	**424**	**3,950,442**	**531,269**	**$ 1,169,441**	**5,076,501**