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## **Reducing Maintenance Costs With Electric Vehicles**

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When we discuss benefits of electric plug-in vehicles, we generally focus on stopping the use of fossil fuels and the air quality and greenhouse benefits this brings. Electric vehicles also offer the promise of substantial reductions in maintenance and repair costs and service disruptions.

For all-electric vehicles (BEVs), the oil change, spark plug, and air filter replacement are things of the past. You won't need to get your transmission serviced or worry about your muffler or catalytic converter needing repairs or being stolen, an issue our fleet is dealing with now on gas and hybrid cars. (More on that in a future newsletter.)

While tire and wiper issues remain the same as with gas cars, electric vehicles offer a surprising improvement to brake operations. Regenerative braking reduces wear on brakes and can vastly extend servicing intervals for items such as brake pads.

For truck operations, there is reduced belt reliance and the removal of vacuum lines. Most importantly for maintenance costs would be the elimination of costly and difficult-to-maintain diesel particulate emissions reduction systems, called DPFs. In fact, vehicle emissions tests themselves become unnecessary with electric vehicles.

NYC Fleet has more experience with electric vehicles than most, so we took a look at last year's maintenance costs with the DCAS client fleet to see if these service benefits are materializing. Right now, servicing costs with our all-electric vehicle models is dramatically less than with gas, hybrid, or hybrid plug-in models. In general, our hybrid models also achieve benefits from gas models, though the most dramatic results in this report are with the all electrics.

NYC Fleet  
Saving Maintenance Costs with Electric Vehicles

Vehicle Model	System	Number	2018 Maintenance Cost
Bolt	All electric BEV	93	\$204.86
Focus	Gas	11	\$1,805.24
Focus Electric	All electric BEV	7	\$386.31
Fusion	Gas	62	\$1,621.34
Fusion Energi	Hybrid Gas/Electric Plug in	154	\$496.73
Fusion hybrid	Hybrid Gas/Electric	205	\$1,310.89
Leaf	All electric BEV	149	\$344.14
Prius	Hybrid Gas/Electric	1,131	\$893.31
Taurus	Gas	38	\$922.67
Volt	Hybrid Gas/Electric Plug in	43	\$1,210.40

Data from DCAS Client Program, CY2018

Our electric vehicles have not yet completed a full life cycle of ten or so years, so we will keep monitoring and reporting on maintenance performance. All early indicators are that we are achieving the fuel, emissions, and maintenance benefits of this exciting transition away from the internal combustion engine.

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