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**Fremont Police Department Releases Results  
 from One of the Nation’s First Zero-Emission Tesla Patrol Vehicle Pilot Program**

**FREMONT, Calif.** - November 19, 2020 — Today, the Fremont Police Department (FPD) released the results of one of the nation’s first Electric Patrol Vehicle Pilot Program that tested a Tesla Model S 85 electric vehicle (EV) customized for patrol operations from March 2019 to March 2020. Results found that the pilot vehicle exceeded performance and operational objectives, withstood the rigors of police use requiring minimal maintenance, and is cost-effective when factoring in overall cost of vehicle with maintenance and fuel savings.

The chart below lists data derived from the pilot program and beyond as compared to calculated annual averages for a standard gas Ford police pursuit vehicle (PPV).

<b>Factors</b>	<b>2014 Tesla Model S 85</b>	<b>Gas Ford PPV</b>
Vehicle Cost	\$61,478.50	\$40,500
Standard Equipment Build Cost	\$35,000*	\$35,000
Modifications Above/Beyond Standard Equipment Build Cost	\$6,774.48*	\$0
OEM Range	265 miles (85kWh battery)	344 miles (18.6 tank cap)
Actual Annual Energy/Avg. Annual Fuel Cost	\$1,036 <i>Cost of energy consumed while charging</i>	\$5,133 <i>Calculated assuming \$3.00 per gallon</i>
Avg. Annual Repair/Maintenance Cost	\$4,865	\$2,915
<b>Actual Annual Costs of Energy/Avg. Fuel and Maintenance/Repair Costs</b>	<b>\$5,901</b>	<b>\$8,048</b>
Avg. Annual Maintenance Downtime	39.125 Days (10.72%)	66 days (17.98%)
Avg. Annual Operational CO2 Emissions	0 lbs.	42,198 lbs.

\*Some costs were donated as part of the Pilot Program.

Not only did the Tesla Model S 85 result in a lower total annual cost of energy/fuel, maintenance, and repair, it also demonstrated the effectiveness of electric vehicles in helping the City of Fremont meet its goals to reduce 2005 levels of greenhouse gas emissions by 55% by 2030 and achieve long-term carbon neutrality by 2045.

It is also expected that the Tesla's average annual maintenance and repair costs will decrease over time as more data is available and the sample period is extended, with a roughly 50% reduction (approximately \$2,910).

Additionally, initial statistics from the City of Fremont's Electric Patrol Vehicle Pilot Program have indicated that the reduced maintenance needs of electric vehicles will likely result in an expected lifespan of longer than five years (the expected lifespan for patrol vehicles), leading to additional cost savings for the Fremont Police Department.

In terms of performance, the Tesla Model S 85 met or exceeded expectations. The 265-mile range of the Tesla easily accommodated the 40-70 mile range that patrol vehicles drove on average per day.

"The final results from the one-year Electric Patrol Vehicle Pilot Program have been encouraging as the City of Fremont continues to look for cost-effective ways to help make Fremont more sustainable," said Fremont Police Captain Sean Washington. "With an average of 27 fewer days of downtime per year, a savings of \$2,147 in the total annual cost of energy/fuel, maintenance, and repair, and no operational carbon dioxide emissions, the pilot program results have prompted Fremont PD to move forward with plans to expand its fleet of electric patrol vehicle alternatives."

To date, the Fremont Police Department has acquired two out of the three additional electric/hybrid patrol vehicles it has budgeted for the last two fiscal years: the 2020 Tesla Model Y (purchased for \$57,126.83) and the 2021 Ford Hybrid Explorer (purchased for \$48,223). These vehicles were purchased to help mitigate the increased amount of time that FPD gas-powered vehicles were out of service, resulting in a consistent and severe shortage of usable patrol vehicles. The third vehicle has not been purchased yet, but the Department is committed to staying energy efficient and will be considering a variety of car manufacturers and vehicle options prior to moving forward with this investment.

The newly purchased Tesla Model Y has many advantages over the Tesla Model S 85, including a lower starting price, an increased range of over 300 miles, more rear cargo and storage space for police equipment, and higher ground clearance to allow the vehicle to traverse a wide variety of terrain.

The total cost of ownership (TCO) over a five-year period was calculated for the Tesla Model S 85 at \$132,758 and the Ford Utility Interceptor at \$115,740 factoring in upfront costs such as purchase price and modifications, miles driven, fuel/energy costs, and maintenance costs. Furthermore, FPD expects the lifespan of the Tesla Model S 85 to be longer than 5 years, further decreasing the TCO.

Comprehensive TCO calculations derived from the 388 City vehicles studied in the City of Fremont Municipal Fleet Electrification Study from May 2020 indicated EV replacement results in \$3,156,000 of savings to the City over the next 20 years, with \$2,457,000 of these savings directly related to Police vehicle replacement.

Additionally, the current City fleet's greenhouse gas emissions impact is approximately 2,000 metric tons of carbon dioxide annually, more than half of which comes from Police vehicles alone. If the City were to electrify according to the above parameters, it could reduce its greenhouse gas impact from fleet vehicles by 53% by 2030.

In order to improve efficiency and sustainability, the City first began experimenting with electric vehicles in 2009 with the purchase of two Ford Escape hybrid vehicles and five 2009 Toyota Prius vehicles.

The full-length report includes a pilot project timeline, maintenance and fuel economy outcomes and methodology, deployment benefits and challenges, recommendations, and future plans. To download the report and find additional information about the Tesla pilot project, visit

[www.fremontpolice.gov/ElectricVehicle](http://www.fremontpolice.gov/ElectricVehicle). Photos of the Tesla Model S are available upon request, as well as vintage photos of Fremont patrol cars dating back to 1958.

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