



Electric Police Cars = Smart Investments

Electric police vehicles have clearly demonstrated lower operating costs, superior handling, quick acceleration and less vehicle downtime for police departments across the country.

While most police department experiences have been with Teslas so far, the Ford Pro all-electric police pilot vehicle based on the 2021 Mustang Mach-E SUV became the first all-electric vehicle to pass the rigorous Michigan State Police 2022 model year evaluation. Additional EV models are being introduced by most automakers.

KEY DRIVERS

COST SAVINGS There are significant cost savings in switching from traditional internal combustion engine (ICE) police vehicles to electric vehicles (EVs). EVs have a lower total cost of ownership by providing significant savings in vehicle maintenance and fueling.

EVs do not require oil changes, exhaust or transmission repairs, plus regenerative braking reduces the wear on the conventional brakes while recharging the battery.

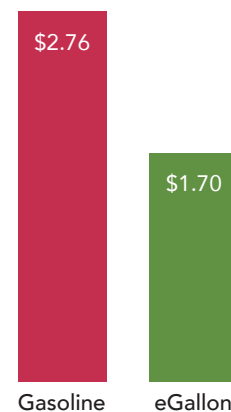
EVs significant fuel cost savings are due to being three times more efficient plus the cost of electricity is about 60% lower than gasoline.

PERFORMANCE & SAFETY EVs offer superior handling, quick acceleration, silence, less downtime, cleaner air and, for some, a 5-Star safety rating. Superior handling derives from the low center of gravity in the undercarriage which reduces rollover potential. The direct torque provides smooth, quick acceleration. With significantly fewer parts, EVs need fewer trips to the mechanic which results in less vehicle downtime. The police department in Fremont, CA reported "...an average of 27 fewer days of downtime per year..."

HEALTH & ENVIRONMENTAL IMPACT EVs provide a healthier and more comfortable environment inside and outside the vehicle with no engine noise or exhaust. The reduced noise while idling makes communications easier and no operational carbon emissions for officers and others to breathe or contribute to a warming planet. Burning a gallon of gas releases roughly 19 pounds of CO₂, a major contributor to the dangerous warming of our planet, while Carbon Monoxide and other toxic exhaust gasses can be lethal.

Fuel Cost

(NH as of March, 2021)





SELECTED E POLICE CAR EXPERIENCES

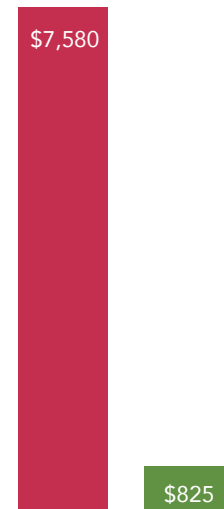
Bargersville, IN Police chief Todd Bertram was looking for cost savings to address hiring needs in 2018. Fuel and maintenance were significant line items that he thought an EV might reduce. The \$6000 savings in year one for a Tesla 3 vs the Dodge Charger quickly offsets the initial added cost of the Tesla and charging equipment. Chief Bertram figures the Tesla has a cost of ownership of \$0.37/ mile vs the \$0.65/ mile for the Dodges, excluding sale of used vehicles. The department is moving toward all EVs including the larger Tesla Y.

Westport, CT In December of 2019, the town of Westport Connecticut purchased a Tesla Model 3 to add to its police fleet. According to their Police Chief, the department's decision to add a Tesla to their fleet was motivated by environmental concerns, Tesla's superior performance and crash ratings, and the Model 3's collision avoidance technology. Although they spent almost \$11,000 more on a retrofitted EV—compared to what they would have spent on a retrofitted Ford Explorer—they are expected to save \$6,200 on fuel costs and \$11,000 on maintenance costs within the first three years. The department noted that the Tesla's 310 mile range was sufficient for two shifts per day, given that their officers drove an average of 50 to 80 miles per shift.

Windham County, VT When Windham County Sheriff Mark Anderson was ready to replace a vehicle in 2020 he was already interested in evaluating an EV. With the lead time for a typical replacement stretching into 2021 compared to the ease of getting a Tesla model 3 he was persuaded. It was ordered on 08/04/2020 and received on 10/14/2020. The vehicle was upfitted by a firm in Hudson, NH and a Level 2 (240 volt) charger was installed by a local electrician. The sheriff reports that, "we were measuring 2-4 cents per mile traveled for fuel cost compared to 26-28 cents for an ICE vehicle with similar duties, at \$2.41 a gallon."



Gas and Maintenance (Bargersville, IN)



CONCLUSION / ACTIONS

As taxpayers, we're excited by the significant cost savings of electric police cars in our communities. As citizens and parents, we are relieved by the reductions of the greenhouse gasses (GHGs) that threaten the world future generations will inherit.

ABOUT The Monadnock Sustainability Hub strengthens the sustainability and resilience of our region by working collaboratively to reduce greenhouse gas emissions and reach 100% clean energy. This includes programs and projects in energy efficiency, electric transportation, renewable energy and more.

For sources, links and details on charging, outfitting and more refer to *MSH's Report Making the Case for EV Police Cars*. <https://monadnocksustainabilityhub.org/ev-police-cars/>
Contact us at www.Monadnocksustainabilityhub.org