

Tech for Sustainability in Police

For the Town of Lexington and Lexington Police Department

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About Me

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The Problem

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Climate Change & Emissions

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24% increase

Total Auto Emissions Increase in Metro Boston Since 1990

Annual Mileage	Fleet Size	Dodge MPG
20,000	25	18

	2021 Dodge Charger Pursuit	2020 Tesla Model 3 (upstream)	Delta
Miles Driven	20,000	20,000	0
Gallons of Gasoline	1,111	0	-1,111
CO ₂ Emissions (grams)	9,874,444	1,400,000	-8,474,444
CO ₂ Emissions (tons)	10.9	1.5	-9.3
Entire Fleet	272.1	38.6	-233.5

Emissions

Dodge Charger Pursuit ^{4 5}

Tesla Model 3 ⁶

These numbers are estimates based on public data. They should not be considered for exact expectations.

It Could Even beZero

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Solving for the Problem

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Using Current Technology

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A Proposed Solution

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+ additional benefits

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Utilizing Electric Vehicles

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**“Police cars can spend lots of time idling...
In any fully electric car, the tailpipe
emissions... will be eliminated.”**

Chief Foti Koskinas of the Westport, CT Police Department ⁷

Using a Tesla Model 3

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Benefits Are Not Just in Reducing Emissions 2

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“[H]e, ‘believes in being green’ but was primarily impressed by the superior performance, 5 star crash ratings, and industry-leading collision avoidance technology available”

Chief Foti Koskinas of the Westport, CT Police Department ⁷

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Near \$0

Oil, Gas, and Maintenance Cost

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Safety Ratings 3

Increased Performance & Functionality

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“an extra trunk in the front of the vehicle... will be able to store emergency equipment that’s important to be kept separate from cargo in the rear trunk”

Chief Foti Koskinas of the Westport, CT Police Department ⁷

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Public Appeal

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A Net Lower Cost

Less than 2 years to break-even

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Maintained Value

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An Additional

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Combining Types

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Implementation

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Departments with a Tesla

Not an full list

- Bargersville Police Department (Indiana) (Model 3)
- Westport Police Department (Connecticut) (Model 3)
- Los Angles Police Department (California) (Model S)
- Fremont Police Department (California) (Model S and Y)
- Hastings-on-Hudson Police Department (New York) (Model Y)

Westport & Bargersville PD

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At Year
3

	Ford Westport⁷	Tesla Westport⁷	Dodge Bargersville⁸	Tesla Bargersville⁸ ₉	Dodge Lexington Actual #'s can be added	Tesla Lexington (Estimate)
Purchase	\$37,000	\$52,290	\$25,000	\$39,500		\$37,990
Equipment	Unknown	Unknown	\$11,000	\$11,000		\$10,000
Annual Cost / Maintenance	\$11,000	\$1,000	\$8,537	\$2,499		\$2,000
Total	\$70,000	\$55,290	\$61,611	\$57,997	\$0	\$53,990

Numbers for Cost

Dodge Charger Pursuit vs.

Tesla Model 3 in Westport,

Bargersville, and Lexington

These numbers are estimates based on public data. They should not be considered for exact expectations of what the cost for Lexington would be.

Lexington Could be a First

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My Ask

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**To be involved and part of the
process**

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**Be able to write on the product
and it's results**

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Be credited for what I do

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**+ I would appreciate anything
more**

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Involved + Report + Credited + Anything More

Data Sources

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¹ Popovich, Nadja, and Denise Lu. "The Most Detailed Map of Auto Emissions in America." *The New York Times*, The New York Times, 10 Oct. 2019, www.nytimes.com/interactive/2019/10/10/climate/driving-emissions-map.html.

² *Tesla Police Car Ride Along! | In Depth*, Now You Know, 4 Sept. 2020, youtu.be/Rmlnv3riJSY.

³ "2020 TESLA MODEL 3 4 DR RWD." NHTSA, www.nhtsa.gov/vehicle/2020/TESLA/MODEL%25203/4%2520DR/RWD.

⁴ "2021 Dodge Charger Pursuit." *2021 Dodge Charger Pursuit - FCA Fleet*, www.fcausfleet.com/dodge/charger-pursuit.html.

⁵ "Greenhouse Gas Emissions from a Typical Passenger Vehicle." EPA, Environmental Protection Agency, 10 May 2018, www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle.

⁶ "Greenhouse Gas Emissions from Electric and Plug-In Hybrid Vehicles – Results." *fuelconomy.gov - the Official Government Source for Fuel Economy Information*, www.fueleconomy.gov/feg/Find.do?year=2021&vehicleId=43401&zipCode=02420&action=bt3.

⁷ *Westport Police Department Buys First Tesla Model 3 Squad Car in Connecticut*, Town of Westport, CT, 10 Dec. 2019, www.westportct.gov/home/showdocument?id=21919.

⁸ Todd Bertram, Chief of Westport, CT Police

⁹ Fred Lambert. "Tesla Model 3 Crushes Dodge Charger in 1-Year Review of Cost of Operation as Police Car." *Electrek*, 5 Oct. 2020, electrek.co/2020/10/05/tesla-model-3-crushes-dodge-charger-cost-of-operation-police-car/amp/.