Fuel Savings Methodology

Updated April 2024

How to Use This Document

This methodology document shows you how we calculate average savings for Massachusetts and Rhode Island electric vehicle drivers. We update this document quarterly and separate out our calculations by the three major electric utilities in our two states: National Grid and Eversource in Massachusetts and Rhode Island Energy in Rhode Island. We use average numbers in our calculations but feel free to replace the numbers in red with your personal numbers to get a more specific answer for your fuel savings.

Utilities

There are two main utilities in Massachusetts that provide electricity: National Grid and Eversource. In Rhode Island, the main utility is Rhode Island Energy. Alternatively, you may get your electricity from a municipally owned utility. Here is a list of MA municipally owned utilities and a list of RI utilities.

Most likely, you are a customer on the "Basic Service" rate with your electric utility. However, if you individually signed up with a competitive electricity supplier, you may be paying a different rate, and if you are a resident in one of a growing number of aggregation communities, you may be paying your community's negotiated rate. (More on that below)

Driving on Electricity

So, how much does it cost to drive a mile on electricity in each of these three main utility districts? The average new all-electric car available through the Drive Green program requires about 0.30 kilowatt-hours (kWh) per mile driven. When you multiply that by the cost of electricity (including supply, transmission, and distribution!), **you can calculate the fuel costs per mile of driving.**

Utility	$/kWh	Price Through	Math	$/mile
MA: National Grid (supply + delivery)	$0.34	Nov 2023 – Jul 2024	$\frac{0.30kWh}{mile} \times \frac{0.34}{kWh} \approx 0.10$	$0.10
MA: Eversource (supply + delivery)	$0.29	Jan 2024 – Jul 2024	$\frac{0.30kWh}{mile} \times \frac{0.29}{kWh} \approx 0.086$	$0.086

RI: Rhode Island Energy ([supply](#) + [delivery](#))	$0.23	Apr 2024 – Sept 2024	$\frac{0.30 kWh}{mile} \times \frac{0.23}{kWh} \approx 0.07$	$0.07

Driving on Gasoline

How much does it cost to drive a mile on gasoline?

The average fuel efficiency of the vehicle fleet in the United States is [25.4 miles per gallon](#). The six-month average retail gasoline price for all fuel grades in New England in 2024 as of 04/01/2024 was [$3.18 per gallon.](#) Below is an example of the equation:

$$\frac{1\ gallon}{25.4\ miles} \times \frac{3.18}{gallon} = \frac{0.125}{mile} \approx 0.125\ to\ drive\ a\ mile\ on\ gas$$

Savings

Utility	$/mile	Math	Savings/mile
MA: National Grid	$0.10	$0.125 - $0.10 = $0.025	$0.025
MA: Eversource	$0.086	$0.125 - $0.086 = $0.04	$0.04
RI: Rhode Island Energy	$0.07	$0.125 - $0.07 = $0.055	$0.055

Tip: Check out apps like Plugshare to find any free charging stations near you! Your costs might actually be lower! If you live in an aggregation program or under a municipal utility, you likely have lower electricity rates! This means you can save more if you drive electric. When using the equations above to calculate your electric savings, fill in the numbers in red with your electricity rate.