More Mainers Than Ever Driving Electric Cars

Survey Shows EVs Are Affordable, Reliable, and Better for Maine's Environment

More than 6,800 Mainers own or lease electric cars – five times more than were on the road in 2018. With electric car and truck sales booming, manufacturers bringing more diverse models to market, and the need to transition away from expensive and polluting fossil fuels, electric vehicles (EVs) are a hot topic of conversation. More Mainers than ever are driving EVs right here in our state, so we decided to go right to the source to learn from Maine EV drivers about their experiences.

In April 2022, the Natural Resources Council of Maine (NRCM) conducted an opinion survey of every EV owner in Maine, building on previous surveys in 2014 and 2018. We received 1,230 responses, or about 18% of the total owner population in the state, and results came in from every one of Maine's 16 counties. The results provide valuable insight into why Maine residents are buying or leasing EVs today.

The survey shows that Mainers love their EVs and would personally recommend EVs to their neighbors. Here's what Maine EV owners said about their experience:

Affordable and Easy to Maintain

- 97% of survey respondents said their EV is easy and affordable to maintain.
- 56% of survey respondents said they save $50 or more per month on gasoline costs, and an additional 23% said they save over $25.

Reliable, Quiet, and Fun to Drive

- 99% of survey respondents said their EV is reliable.
- Drivers would overwhelmingly recommend their EV to friends and family (97%) and would recommend EVs in general at an even higher rate (98%).

Most Charge at Home, and Use of Public Charging is Increasing

- 90% of EV owners primarily charge their EV at home.
- 73% of drivers are more likely to choose to go to a destination if charging is available there.
- Two-thirds of drivers use public charging stations in Maine, an increase from the 2014 survey (1/3), and the 2018 survey (1/2).

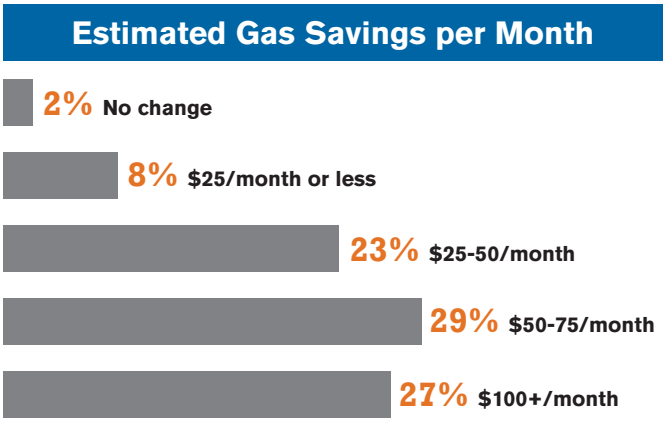
Positive Overall Experience

- More than a quarter of respondents (27%) said that there is absolutely nothing they dislike about their EV.
- The top five things drivers like about their EV are the quiet ride, benefits to the climate, overall performance, reliability, and saving gas money.
- All of the initial concerns listed about buying an EV before owning one dropped significantly after the purchase, though concerns about battery range and the availability of public charging stations remain important.
- The top two reasons Mainers chose to buy or lease an EV were to reduce air pollution/climate change (79%) and to save money on gasoline (44%).

EVs Save Money and Reduce Pollution

Maine EV owners made clear that driving an EV substantially reduces fuel costs. Only 2% of respondents indicated that their monthly gasoline costs did not change after purchasing an EV, while 56% of respondents reported saving $50 or more on gasoline every month. 27% of respondents are saving $100 or more on gasoline each month, or more than $1,200 per year.[4]

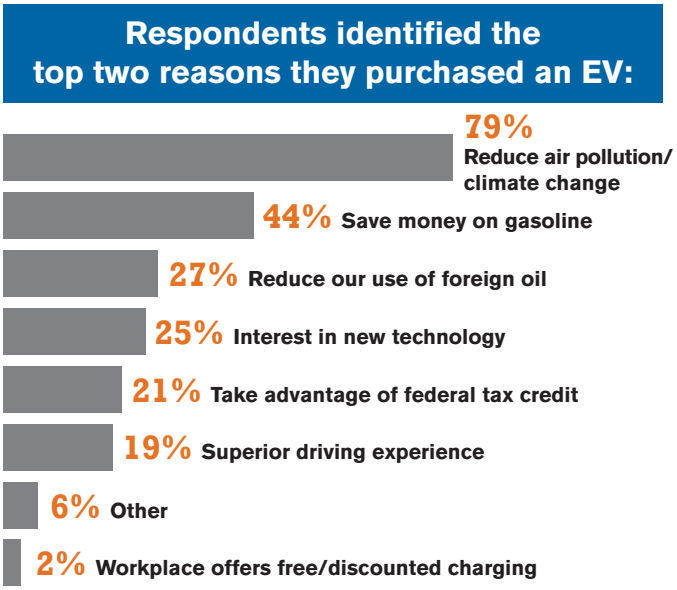
On the flip side, most drivers did not report significant increases in their electrical bill due to home charging. Fifty-three percent of respondents saw an increase in their monthly electric bill of $20 or less, with 23% reporting no increase whatsoever.



EV Drivers Love Their Cars

Respondents were enthusiastic about a lot of elements of EV ownership, but overwhelmingly noted that **a quiet ride** (33%), **benefits to the climate** (30%), **overall vehicle performance** (22%), **vehicle reliability** (18%), and **saving money on gas** (16%) were the top things they liked about their EV.

There were some concerns, too, notably **anxiety about battery range** (33%), but the second most reported concern by drivers was **"nothing"** (28%).



EVs are Better for Maine's Environment

- EVs, combined with investments in active transportation and public transit along with smarter land use planning, are an essential part of transitioning away from fossil fuels and toward a clean energy economy. More than half of Maine's carbon emissions come from our transportation system, and because Maine does not produce fossil fuels, all of the money spent on gas leaves our state.[1]
- The average new EV today has a lower monthly cost than the average new gas-powered vehicle, and EVs have a much lower lifetime carbon footprint than a gas-powered vehicle.[2,3] As our electric grid continues to get cleaner with clean renewable energy replacing fossil fuels, the environmental advantages of EVs will continue to grow.

1 https://climatecouncil.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf
2 https://www.ucsusa.org/resources/driving-cleaner
3 https://www.fastcompany.com/90717196/these-evs-are-cheaper-to-own-than-their-gas-powered-counterparts
4 Note that these surveys were completed between April 15th and May 15th, 2022, when gas prices in Maine were between $4.55 per gallon and $4.63 per gallon. Average Maine gas prices peaked on June 20th, 2022, at $5.59 per gallon. https://www.globalpetrolprices.com/USA/Maine/gasoline_prices/

What Maine EV Drivers are Saying:

99% say their EV is **RELIABLE**

98% would **RECOMMEND** EVs to others

97% say their EV is **AFFORDABLE** and easy to maintain

79% **SAVE $25** or more per month on gasoline

56% **SAVE $50** or more per month on gasoline

Once Mainers Start Driving EVs, Their Previous Concerns Drop

A vehicle is a big purchase for Maine families. One of our goals was to better understand common concerns prospective EV buyers had and to compare how they felt after purchasing their EV.

The survey of Maine EV drivers found that overwhelmingly, concerns prior to purchase greatly dissipated after owners were able to get behind the wheel.

- Concern about home charging dropped by 86% (441 to 74 respondents) from before to after purchase
- Concern about cost of insurance dropped 80% (267 to 54 respondents)
- Concern about upfront cost dropped by 79% (406 to 86 respondents)
- Concern about charging cost dropped by 73% (364 to 98 respondents)
- Concern about affordable maintenance dropped 58% (334 to 141 respondents), and
- Concern about All Wheel Drive availability dropped by 54% (235 to 108 respondents)

Though all initial concerns dropped after the purchase was made, three concerns persisted as being significant. Forty-four percent of EV owners remain concerned about the lack of available public charging stations; 32% continue to have anxiety about battery range; and 30% still have concerns about the performance of their EV in the cold. These concerns speak to the need for expanded EV charging buildout throughout the state and continued improvement of battery range in new EV models.

Vehicle Charging Becoming More Convenient

Ninety percent of respondents reported that their home was their primary charging location, with “Other Public Level 2 Chargers” and “DC Fast Charger en Route to Destination” as the most popular secondary and occasional charging locations. Seventy-one percent of respondents charge their vehicle overnight while at home, while another 16% charge during the day or overnight while at home. Fifty-four percent of drivers have a Level 2 charging station at home.

While most drivers reported primarily charging at home, 67% of respondents have used public charging stations in Maine over the last year. This is up from 50% in 2018, which shows that public charging is becoming a more popular option for EV owners. Efficiency Maine and the Maine Department of Transportation are currently in the process of expanding Maine’s public EV charging network to provide more access to Maine EV drivers.[5]

5 https://www.efficiencymaine.com/ev/

Wider Selection of EVs Now Available

There is now a wide selection of electric vehicles on the road in Maine, with more coming on the market each model year. Of all EV owners in the state, 44% own a battery electric vehicle (BEV) that does not use any gasoline (up from 30% in 2018), while 56% own a plug-in hybrid vehicle (PHEV) that relies on electric and gas power. Both BEVs and PHEVs are plugged in to charge their batteries. Below are the most popular types of BEV and PHEV vehicles currently on the road in Maine.

BEV **44%** of registered EVs in Maine	**Nissan Leaf** 8% of Maine EVs **RANGE:** 226 battery miles	**Tesla Model Y** 4% of Maine EVs **RANGE:** 303 battery miles	**Tesla Model 3** 4% of Maine EVs **RANGE:** 358 battery miles	**Chevrolet Bolt** 3% of Maine EVs **RANGE:** 259 battery miles
PHEV **56%** of registered EVs in Maine	**Toyota Prius Prime** 14% of Maine EVs **RANGE:** 25 electric miles +615 gas miles	**Toyota RAV4 Prime** 6% of Maine EVs **RANGE:** 42 electric miles +558 gas miles	**Ford Fusion** 6% of Maine EVs **RANGE:** 26 electric miles +584 gas miles	**Chevrolet Volt** 5% of Maine EVs **RANGE:** 53 electric miles +367 gas miles

The top 5 manufacturers of EVs registered in Maine are Toyota (23%), Tesla (17%), Chevrolet (11%), Ford (11%), and Nissan (9%).

EV sales are surging in Maine despite current supply chain disruptions. Maine's Clean Transportation Roadmap shows that 1,355 EVs were sold in just the first two quarters of 2021, more than were sold in the entire year of 2020 (983). In 2019, 1.4% of new vehicles sold in Maine were EVs. That number jumped to 1.6% in 2020 and then again to 3.7% in 2021. These are positive trends, but Maine still lags behind the national average in EV sales per capita.[6]

Of all EV owners in Maine, one-third (32%) do not own another vehicle. Of the two-thirds of respondents that do own another vehicle, 48% own another car while 52% own a truck, van, or SUV. Ten percent of other vehicles are EVs, and 90% are gas-powered. Ten percent more people are relying solely on an EV than in 2018.

More than 80% of respondents own an EV made in model year 2017 or later, and 49% own an EV made in model year 2020 or later.

6 https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/Maine%20Clean%20Transportation%20Roadmap.pdf

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Natural Resources Council of Maine
Protecting the Nature of Maine