

EV Basics: Myths

In 2011, among the readily available Electric Vehicles (EVs) on the market were a super-expensive Tesla Roadster, a 73-mile range Nissan LEAF, and a Chevrolet Volt plug-in hybrid with a 35-mile electric range. Automotive newcomer Tesla was getting ready to launch its iconic Model S.

Fast forward 10 years and nearly every major car manufacturer has a vehicle electrification program. Affordable 200+ mile range cars are available today. Here in Michigan, General Motors has announced its aspirations to go all electric by 2035. They launched their Bolt EUV crossover along with a refreshed Bolt EV hatchback while featuring a hilarious set of Super Bowl ads teasing Norway's EV leadership. Ford's Mustang Mach-E is hitting the showroom floor and an electrified F-150 pickup isn't far behind.

Startups like Rivian and Lordstown Motors are also close to releases in the popular pickup truck segment. With any disruptive paradigm shift, there will be questions and myths. Let's dive in and talk about some of those topics.



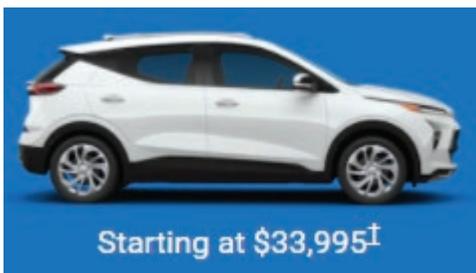
Average Michigan Commute: 12.9 Miles
Source: Michigan.Gov - MI Travel Counts Survey

1 | Not Enough Range

According to the **MI Travel Counts III survey** in 2015, Michigan car commuters drive an average of about 13 miles to work, about 1 mile longer than the national average. That means even the humble 73-mile range of a 2011 Nissan LEAF is enough for most round-trip commutes plus a few more errands. Most modern EVs now have ranges well above 200 miles with some, like the Tesla Model 3 sedan and Model Y crossover, now boasting over 300 miles of range.

2 | Too Expensive

With new luxury EVs being announced almost daily, there are also plenty of affordable choices. The 2022 Chevrolet Bolt EV starts at \$33,995. Our driver profile this month features Don Kalisz with his Tesla Model 3. He was surprised at the affordability of the Model 3 and Model Y with the Model 3 starting at \$36,990. First generation EVs are now a bargain on the used car market with many models now under \$10,000.



Where driving electric really shines is in the cost to operate. You can expect fueling an EV to cost about half that of a similar gas vehicle. With an average Michigan gas price of about \$2.40 per gallon, fueling an economical Chevy Cruze with 30 miles per gallon efficiency will cost about \$960 per year for 12,000 miles. A Chevy Bolt EV will use 3 kWh per mile and at \$0.10 per kWh cost less than half in fuel: \$400. That's a \$560 savings per year or \$2,800 over 5 years. Switching to a time-of-use electricity rate plan and charging at off-peak times can save customers even more.

3 | What About Maintenance?

Say goodbye to oil changes, tune-ups, belts, hoses, and drinking bad coffee while you wait. If you know how to change a wiper blade and know a good place to get your tires rotated, that's about the extent of your annual maintenance. Expensive battery changes every 3-4 years, you ask? Modern EVs use long life lithium-ion batteries that last hundreds of thousands of miles with most of their range intact.



Used EVs are an inexpensive way to get started with EVs.

4 | Home Charging Is Inconvenient and Expensive

Charging your car is just like charging your cell phone. Plug it in when you get home and forget about it. Wake up to a full “tank” of electrons every day. No need to fiddle with credit card or stand in the snow (or the heat) and pump gas. Visiting a convenience store will only be about drinks, snacks and bathroom breaks.



Typical Garage Charging Station
Source: Media Kit | Enel X

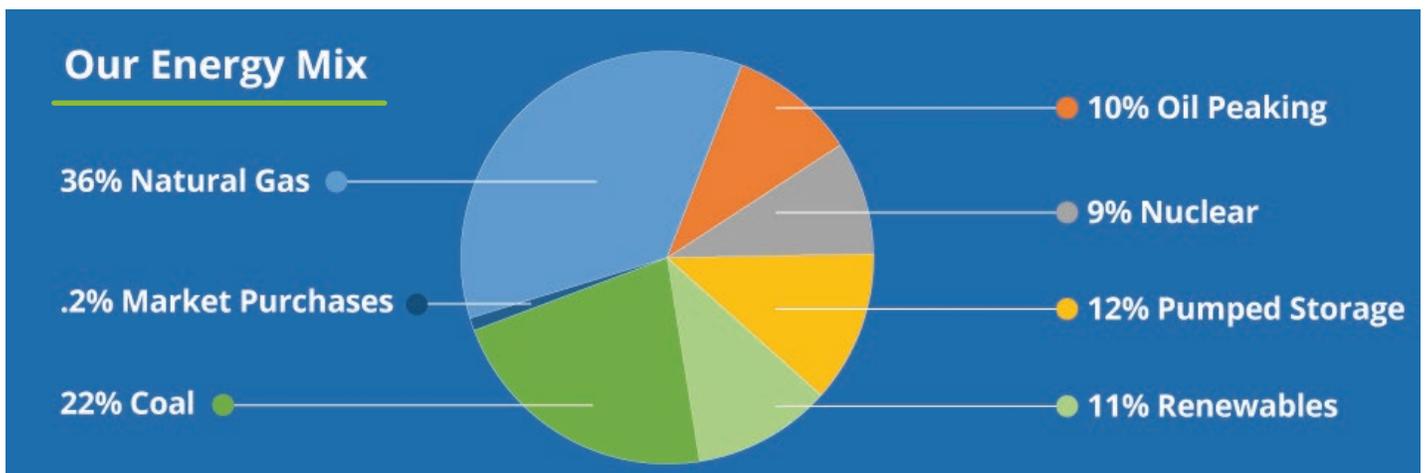
Adding home charging doesn't need to be complicated or expensive. The day you bring your new EV home, you can plug it into a standard outlet to get 3-4 miles of range per hour. If you need more range than that, we recommend adding a 240V circuit similar to an electric dryer circuit and a Level 2 charger. This combination will boost your ability to charge to 10-30 miles of range per hour. A licensed electrician can give you an estimate.

The Consumers Energy **PowerMIDrive program** offers a \$500 rebate on several popular Wi-Fi connected home chargers. A list of approved chargers can be found on the **PowerMIDrive Home Charger Rebates** web page. Coupled with a Consumers Energy Residential Time of Use Rate, a 60 kWh EV battery can be charged from 0-100% for about \$6 at off-peak times.

5 | Driving Electric Is Just A “Long Tailpipe”

EVs are agnostic where they get their energy. The batteries get charged whether the electricity is generated by coal, natural gas, wind turbines, or solar energy. According to the **Union of Concerned Scientists**, driving an electric vehicle today already results in less global warming emissions than the average gasoline-fueled vehicle. As the US electricity grid gets cleaner (by shifting away from coal and adding solar and wind power), the benefits of EVs compared with gasoline vehicles will continue to grow.

By 2040, Consumers Energy plans to achieve net zero carbon emissions and meet 90 percent of Michigan's energy needs with clean resources. Even today, only 22% of our energy mix comes from coal. With new renewable generation coming online, driving an EV will continue to produce less emissions over time. To learn more, check out our **Clean Energy Plan**.



6 | Did Someone Say Road Trips?

With available 200+ mile range, now we're talking road trips! The [MI Travel Counts III survey](#) found that 53% of long-distance trips are destined within the state of Michigan with an additional 16% being visits to neighboring Ohio, Indiana, and Illinois. While the charging infrastructure is still growing, EV roads trips are already possible today.

Consumers Energy has been partnering with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and site hosts to accelerate the construction of public chargers. You can find the public charging stations for your next road trip on the US Department of Energy [Alternative Fuels Data Center map](#) or apps like [PlugShare](#).

Station hosts like Meijer offer charging locations that feature convenient rest stops along your journey. In the time it takes to stop in for a coffee, snack or other shopping, your car can get a sufficient charge to get you back home or to your next destination.



Public EV Chargers at Meijer