Noble REMC
A Touchstone Energy® Cooperative

CHARGE AHEAD
Every Mile Matters

Frequently Asked Questions: Electric Vehicles

How far can I drive on a full charge?
Every manufacturer has different battery capacities. Electric vehicle (EV) ranges start around 110 miles and top out just over 500 miles.

What does it cost to charge my electric vehicle?
At home:

- For the middle-of-the-road EV (88-kWh battery), $8-12 at Noble REMC's current rates.

Away from home:

- Charging away from home is generally more expensive, but necessary on long trips. Technology is changing daily, allowing faster charge times. Even with slightly higher fees at public charging stations, it can still be substantially cheaper than gasoline.

How do I compare miles per gallon (mpg) in my current vehicle to an electric vehicle's charge?

- Electric vehicles are rated at kilowatt-hours (kWh) per 100 miles. If your current vehicle gets 20 mpg, with gasoline costs at $4 per gallon, it will cost you **$20** to drive 100 miles.
- If you purchase an EV that is rated at 34 kWh per 100 miles, with Noble REMC's cost per kWh at $0.095, it will cost you **$3.23** to drive 100 miles.
    - The potential impact to your electric bill, using the all-wheel drive Ford Mustang Mach-E (3.07 miles per kWh) driving 200 miles per week with Noble REMC's current rates, equals $6.50 each week for **a total of $26** on your monthly bill. (This is an estimate, as driving habits will affect the actual number.)

How does cold weather or hauling affect my battery?
As it is with a gasoline vehicle, cold weather, hard driving and hauling a load or trailer will affect an EV's battery usage. The current rule of thumb for extreme cold weather is about 30% degradation on your battery. Meaning, if your battery is rated to give you 300 miles on a full charge, you should plan for 210 miles when it is extremely cold.

How do I charge at home?

- Most manufacturers include a Level 1 charger with the vehicle purchase, which are 120 volts (the slowest option).
- If you purchase a Level 2 charger, most vehicles can be charged within 10 hours from 0-100%.
    - With a simple adaptor, Level 2 chargers can be plugged into a basic dryer/welder receptacle, or they can be hard-wired into your breaker panel. Noble REMC will check your transformer and electrical service sizing to ensure you are able to install a Level 2 charger in your home. You may need to hire an electrician to ensure you have room in your breaker panel.
- Either the vehicle or the charger (or both) will be considered "smart." With simple programming, you can plug your vehicle in anytime, and it will charge the battery for you while you sleep.

How do I find charging stations, especially if I want to take a road trip?
There are several nationwide charging networks available, as well as those provided by vehicle manufacturers, all of which have an app you can download on your phone to help you find charging stations and plan your route to your destination.

The public charging network is growing daily. Currently, the stations are primarily located in largely populated, retail areas. As the demand continues to grow, they are being installed in different types of locations.

For example, Noble REMC installed a ChargePoint charger at Country Heritage Winery, which is located off of S.R. 3 in LaOtto and can accommodate two vehicles.

What is the dependability and maintenance of an electric vehicle?

- According to a survey by Consumer Reports, the maintenance cost of an EV is half the cost of a traditional gasoline-powered vehicle.
- With fewer moving parts than a gasoline-powered vehicle, electric vehicles have a smaller chance for malfunctions or breakdowns.
- Currently, every EV sold in the U.S. is federally regulated to be covered by at least an 8-year/100,000-mile warranty for its battery.
- You should be able to take your EV to the dealership you purchased it from for any maintenance issues you may have. Most, if not all, manufacturers are utilizing an over-the-air diagnostic program to keep your vehicle operating as it should.