



William L. Caynor Sr.,
CEO & President

ELECTRIC VEHICLE, THE ARGUMENT

Today, you can hardly turn on the television or read a periodical without being inundated with information related to electric vehicles (EV) and plug-in hybrids (PHEV).

Although, and ironically, an electric vehicle is not a new concept; in fact, the first electric car dates back

to the early nineteenth century. The question is why the interest now? Why not within the last 200 years? That's easy: technology and cost tend to drive interest. The other major factor is emissions. The transportation industry is the largest global greenhouse gas emitter. So, who are the purchasers of electric vehicles? The three classifications are: Environmentally Conscious, Technology and Car Driven, and Frugal Travelers. I could easily consider myself all the above.

Within the EV car market, Tesla models dominate the sales market and accounted for two-thirds of EV sales in June, but they will be opposed by other manufacturers as several new models enter the market over the next few years. If it's speed you're attracted to, the fastest car in the world is an Automobili Pininfarina Battista, and it's an EV. Imagine going 186 mph in less than 12 seconds. That sounds like jet propulsion. Not to be outdone, Tesla has the Roadster which can reach 100 mph in 4.2 seconds and has a 620-mile range. These cars are works of art and are as sleek and beautiful as a Ferrari or Lamborghini.

You have probably seen a few EVs when you traveled to a larger city, but why haven't we seen many in the Northwoods? Part of this is the vehicles' range and the lack of infrastructure to recharge in our area. Chargers are abundant, and there's more of an opportunity to use electric motored cars in the low-speed, stop-and-go traffic of the city. Currently, there are only eight EV models that eclipse a 200-mile range, which means a charger is required before 200 miles or you'll have to turn around halfway to make it back to recharge. It must be noted that recharging is not for the impatient as it is not comparative to fueling up your vehicle in a few minutes at the gas station. Most charge at home overnight, especially the PHEV owners.

There are three levels of charging that operate at three different voltages. Voltage is the pressure to push the current through for quicker charge time. As battery technology improves the energy density, these charge times will decrease, and performance will increase, and eventually the

cost will come down. Tesla promotes their DC Fast Charge, which can give a 50–170-mile charge in 30 minutes as opposed to a 240-volt Level 2, which you will see outside of all the electric cooperatives in the state, to include Price Electric. A Level 2 will give a charge of 12–25 miles in an hour, and lastly is a 120-volt Level 1, which is 4–5 miles per hour. A Level 1 is used mainly for the PHEVs and has a three-prong plug that simply connects to your standard wall outlet, whereas the other Levels will take some money and a little more work to install.

Another deterrent and reason you don't see EVs in the Northwoods are the long winters, road conditions, and salt on the roads. Doesn't it seem as if you have to replace your calipers every time you replace your brake pads because of the road salt? Well, what do you think would happen to the regenerative braking, or electric motors used for all-wheel drive EVs and PHEVs? It sounds expensive to repair or

replace.

We at your electric cooperative support your future automotive purchasing decisions and certainly endorse any EV charging unit you ever wish to install...

I'm personally a believer in hybrids in the Northwoods, as I have owned a Prius (PHEV) for six years. I don't have to worry about a charging location as I can run on electric or gas. I minimize my carbon footprint while getting 50 mpg in

the city. I had a gentleman relay a Prius testimony just the other day, which I would like to share. His brother actually got 1,000 mpg in Seattle with a Prius. Is it possible? I think it is in this case. Living in the city, he drove to and from work on electric every day and rented a space in a parking garage for \$400 year, while receiving a \$350 credit for owning a PHEV, along with a prime parking space and free daily charging. After seven months of not using any gas his mechanic recommended that he drive with the combustion engine long enough to burn out the old gas. Sounds weird, to drive every day and you have seven-month-old gas in the tank. Sounds like he made a smart decision, with very little snow, and no salt to worry about.

We at your electric cooperative support your future automotive purchasing decisions and certainly endorse any EV charging unit you ever wish to install to minimize your carbon footprint, and reduce your fuel cost, while increasing energy consumption for the benefit of your cooperative.

