Headline: Charging EVs in cold weather  
 requires serious preparation

Questions abound regarding the purchasing of an electric vehicle. One of the more common is how does colder temperatures affect charging and mileage range.

The driving capacities of all vehicles – no matter the source of power – suffer during the seasons when our weather patterns reach their coldest conditions. The U.S. Department of Energy found that fuel economy suffers by 15-24% in gas-powered vehicles and the ranges of EVs drop by roughly 39%.

Driving and charging an EV in colder weather has its nuances, according to the University of Michigan. Temperatures below 40 degrees can reduce charging power, but with preparation and planning, an EV will meet your needs year-round.

Here are tips to keep an EV running smoothly during the winter:

***Charging may take longer –*** The vehicle controls the charging rate, not the charger. Lower temperatures result in an EV’s software reducing its charging power to avoid stressing the battery. The Idaho National Laboratory found that at 32 degrees, an EV battery absorbed 36% less energy that when the battery was charged the same amount of time at 77 degrees. It’s important to plan for longer charge times when temperatures drop.

***Pay attention to overnight changes in your EV’s range –*** Be aware of overnight low temperatures. Cold temperatures overnight can lower an EV’s driving range by an average of 20%, according to the Norwegian Automobile Federation. Pay attention to the vehicle’s console display. Some EVs can predict these range reductions during extreme temperatures.

***Plan your charges –*** Expect to stop at public-charging stations to avoid finding yourself with a limited range. The Electrify America mobile app assists drivers to easily navigate to nearby ultrafast charging stations and see which chargers are available.

***Park indoors when you can –*** Parking an EV in a garage with higher indoor temperatures can help the battery charge more quickly and hold that charge longer.

***Understand your EV’s cold-weather features –***Some EVs have preconditioned features that allow drivers to program or manually warm the battery to more optimal temperatures. This process uses battery power to provide a warming effect, but it can make the battery more efficient while maximizing driving range.

By understanding your EV and its charging needs, particularly during colder weather, you’ll be better prepared to rely on your EV, no matter when and where you are driving.