Since 1940 WISCONSIN ENERGGY COOPERATION May 2023 NEWS



Your Touchstone Energy Partner 🔨 🔀

MAY IS NATIONAL BIKE MONTH

HARNESSING HYDRO

SPRING IS A TIME FOR ADVOCACY

BEEF RECIPES



EV EDUCATION ON THE ROAD



Kenneth Ceaglske, President/CEO

his month I will update you on a trip that I took in March where my transportation was an electric vehicle (EV). I rented a Mustang Mach-e from Medford Motors and drove to Nashville for a meeting and some personal travel, totaling about 3,200 miles. I had considered this in the past, but didn't follow through due to questions of time, range, charging station availability, and cost to charge the main questions that everyone seems to have regarding EVs. In essence, can they make long road trips? With a little research, I developed a plan that looked reasonable.

All in all the trip was fairly uneventful. I did learn a lot about EV travel in the 10 days that I had the car.

Travel time. First lesson: It is difficult to be the driver. navigator, and social media communications person and still try to set a solid pace. With that said, I needed to adjust the time comparison to account for the differences. Based on the mapping programs for both systems, it was going to take about 12 hours, including charges, to get to Paducah, my first stop. Adjusting for time spent not focused on the drive (Facebook posts, logging data, hotel reroute, etc.), it took me about 12.5 hours. The drive-only time would have been just over 10 hours, plus any stops. Estimating for three gas stops and two food stops at 15 minutes each (restroom breaks when stopped), the drive would have been about 11.25 hours for a similar gas vehicle. So, the EV added about an hour, give or take. With the EV, there is no adder for the food or restroom stops, as you can plug the car in and walk away. I made five stops to recharge on the route, for as little as 15 minutes or as long as 40 minutes. I coordinated the longer stops with meals.

Vehicle range. The gauge on the EV's dash is a little optimistic. The distance to empty had a cushion of 90 miles when I left home, but when I got to Madison for the first charge, that cushion was 30 and about 14% battery, or over 1/8th of a "tank." This can lead to range anxiety. This leg of the journey was the longest between chargers and it was the only time that I felt a little uncomfortable about the trip while following the guidance of the mapping program in the car. At one point I made a decision to not listen to the advice and charge when I could, but that anxiety was self-inflicted. It was also the first time I had ever driven that vehicle, so it's possible I was driving it differently from the history the vehicle was basing the mileage on. When I got to Madison, I stopped for about 15 minutes to get enough charge to make it to Rockford, my lunch stop. The car notified me that it was charged enough to get going before I had made it back.

Charging station availability. I never had a situation where I was not able to access a charger due to other cars or malfunctions. I ran into one station at a new car dealership that had non EVs parked in front of two of the four chargers. Given that the charger was only three or four days old, I'm sure some people were just not used to how the chargers are used, and the area was not signed very well. Some of the smaller charging stations had two plugs, but most had four, and some were large enough for eight chargers at a single location. I did have one charger that did not want to connect to the vehicle; in that case I used one of the other chargers at the station.

Over the course of the trip, I found a few chargers that had been installed during the previous week, including one in



Stevens Point that was not available on my trip down, but came in very handy on the way home. Looking ahead, the National Electric Vehicle Initiative (NEVI) plans to install high-speed chargers along major routes every 50 miles. These stations will each have a minimum of six chargers. There are definitely more EV fast chargers along the interstates and major four-lane roads. In time I can see more areas gaining fast chargers as well.

Cost to charge while on the road. Total cost of energy on the trip was about \$290. The overall per-mile cost for all of my energy was about \$.09/ mile. Based on a comparison with a similar vehicle (Subaru Outback, AWD, five passenger, very similar size, 26 MPG), it would have cost about \$.13/ mile or about \$420. The most expensive charging station I found on the trip charged about \$0.50 per kwh. The lowest-cost charging stations were at the hotels that I stayed at, where charging was free. I ran the trip without using one of the subscription services for energy. In the end, most of my charging was done at one "brand" of charger that offers a program for which I could have paid \$4 for a plus membership for the month and saved about \$45-another lesson learned for next time.





Lessons Learned

Brakes. The EV has regenerative braking, meaning it uses the motor as a generator rather than using the regular brakes. This extends the battery by charging just a bit every time you slow down—very effective.

Charging. Limit charging above 80% at fast chargers—they slow down above 80%. Better to make more frequent, smaller charges. Also, I don't get as stiff from riding in the car if I get out every couple hours anyway.

Max out the charges at hotels if possible. These chargers are lower cost and capable of reaching 100% due to the slower charge rate. Hotel chargers range from 6-10 kw, so it took 8-12 hours to take the Mach-e from 15% to 100%.

Where to make dinner plans? Stop at the restaurant with the fast charger nearby, but do check the menu before you go. One charger I saw was out front of a fairly pricey restaurant.

What to do while charging? With the freedom to plug in and walk away, meals and restrooms are top on the list, but I saw people reading, napping, and visiting with passengers or other drivers. One gentleman was enjoying his music in the car as he waited. Most of my charging stops did not have much down time. I could see packing a cribbage board.

Cost-effective methods. Home and overnight charging are the most costeffective and time-saving features of EVs. For the extra few hours I spent on this trip, if I had the EV for daily use, the time would be more than made up during the rest of the year when I wouldn't need to make the trips to the gas station while going back and forth to work. With the time-of-day pricing that we have on EV charging, any charging from 9:00 at night to 1:00 the next afternoon is done at \$.06/kWh, or just over \$.02/mile.

Are EVs the greatest thing since sliced bread? Are they going to replace all vehicles? I'm not sure of that. There are still uses at my house for which an EV will not replace my pickup. Towing the boat or camper for longer distances is still beyond the limits of the EVs on the market today. In fairness, my pickup is too big for most parking spots, clumsy for taking shopping, and realistically too costly from a fuel economy standpoint for commuting. Every vehicle on the market was designed to fulfill a type of use. For commuting or even some longer-range, passengers-only type of travel, EVs are very capable. As range and charging infrastructure improve, they will be even more viable. If you have further questions about EVs and how the trip went, feel free to contact me.



TAYLOR ELECTRIC COOPERATIVE 2023 PROPOSED BYLAW AMENDMENTS

New language is shown by underlining – "<u>add these words</u>." Language to be deleted is shown by strike through – "delete these words." And longer passages with no changes are indicated by "…"

1. Amend the second sentence of Article IV ("Directors"), Section 2.a of the Bylaws as follows:

Section 2. Tenure and Qualifications.

a. Tenure. At each annual meeting, directors shall be elected by and from the members and shall serve for three year terms or until their successors shall have been elected and qualified. No director who has completed service for <u>sixfive</u> successive full terms shall be eligible for re-election until the third annual meeting from the expiration of the director's last term. ...

EXPLANATION: This amendment extends the term limit for directors from 5 to 6 terms, to allow the Co-op to better utilize the experience and training the Co-op invests in for its directors. It will also increase the opportunity for the Taylor Electric directors who represent the Co-op on the boards of our affiliated organizations to serve in positions of leadership in those organizations.

2. Amend the third sentence of Article IV ("Directors"), Section 2.a of the Bylaws as follows:

Section 2. Tenure and Qualifications.

a. Tenure. At each annual meeting, directors shall be elected ... These limitations shall apply to the appointment by the board to fill a vacancy <u>for an</u> <u>unexpired portion of a term until the next annual</u> <u>meeting</u> as well as to elections by the members. EXPLANATION: This amendment updates Section 2.a so that it is consistent with Section 4 ("Vacancies") as amended at a prior annual meeting.

3. Amend Article IV ("Directors"), Section 5 of the Bylaws as follows:

Section 5. Compensation. Directors, as such, shall not receive any salary for their services, but may be allowed a meeting per diem and expenses of attending committee meetings and meetings of the board of directors. ... The board of directors shall from time to time establish the rate of the meeting per diem-and the compensation per diem, but such action of the board of directors shall be reported to and subject to review at the following annual meeting. The change shall only take effect as of the date of that annual meeting .- and if the members in attendance at anthe annual meeting shall establish a changed or different per diem for attending meetings and for compensation, such action of the members shall govern such the per diem and compensation for the ensuing year unless and until the board or members shall take other action under this section at any future annual meeting. No close relative ...

EXPLANATION: This amendment clarifies the description of the process for member review of (and opportunity to modify) any changes in the director per diem.



NEW VOTING METHOD AVAILABLE THIS YEAR!

Absentee Ballot by Request

Call or stop by the office, verify your account information, pick up your ballot, and submit completed ballot back to the office!

Absentee Ballots will be available after May 8, 2023.

In-person voting will still be available at the annual meeting on June 27 as in the past.

Energy Efficiency Tip of the Month

The location of your thermostat can impact your HVAC system's ability to maintain an ideal indoor temperature. For maximum accuracy, thermostats should be placed in the center of the home, away from air vents, plumbing pipes and exterior doors. Avoid placing items like lamps and televisions near your thermostat, which can cause the HVAC to run longer than necessary. Avoid installing thermostats in rooms that tend to feel warmer or colder than the rest of the home. Do not place furniture in front of the thermostat, which can block air flow and result in inaccurate readings.



Taylor Electric Cooperative's office will be closed Monday, May 29.

You're invited to participate in the Wisconsin Electric Cooperative Association's

ELECTRICAL SAFETY POSTER CONTEST

Submit an original poster supporting electrical safety to your local electric cooperative by **May 31, 2023**, for a chance to win a **\$25 gift card**! The top three posters will be entered into the statewide poster contest for a chance to win one of three great prizes:



1st place – Chromebook 2nd place – \$100 Gift Card 3rd place – \$75 Gift Card Posters should be at least 8.5x11 inches, but no larger than 11x14 inches.

Entries must include completed entry form and student's name on the back of the poster.

Contact your local electric cooperative or go to www.weca.coop for registration forms.

Kenneth Ceaglske, President/CEO

N1831 State Highway 13, Medford, WI 54451 715-678-2411 • 800-862-2407 email: taylrec@taylorelectric.org website: www.taylorelectric.org

Lainie Kellnhofer, Editor



Your Touchstone Energy® Partner 🏾 🍆

