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MDOT
Michigan Department of Transportation

Electreon's wireless charging performance results

September 2024

Data from the nation's first public wireless charging road in Detroit, MI

The nation's first public wireless charging road

One technology, two in-road wireless charging solutions

- **Dynamic** electric road ¼ mile along 14th St. between Dalzelle St. & Marentette St., charges EVs as they drive
- **Static** charging when parked, on two static parking spaces near Michigan Central station

Map of charging locations, Detroit, MI

Modular infrastructure charges any vehicle type

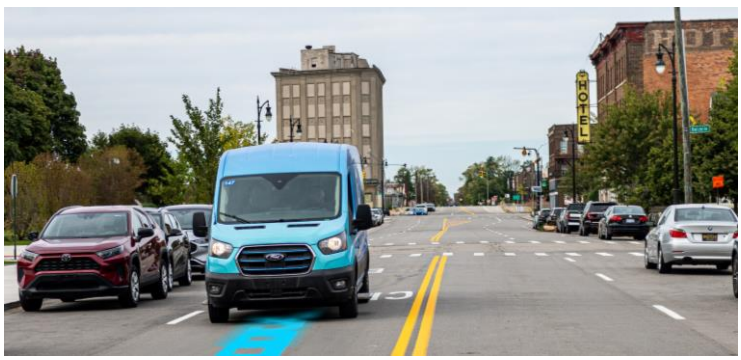
UPS world-leading delivery company will utilize this technology to power its delivery vehicles, with others in the pipeline

5-Year MOU with Michigan State

To lead Michigan and the U.S. in large-scale deployment of electrified roadways

Ford e-transit van shuttle "Ellie"
"I'm Ellie the EV, the road charges me while I drive"

Static charging



Dynamic charging

The pictures include illustrations of the in-road coils and wireless charging

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September key metrics & findings

0 min
Plug charged

19%
of total operational time includes charging

101.5 kWh
Total wireless energy charged

202 mi
Total distance driven

38.1 hrs
Operation time

0 min
System downtime

7.43 hrs
Wireless charging

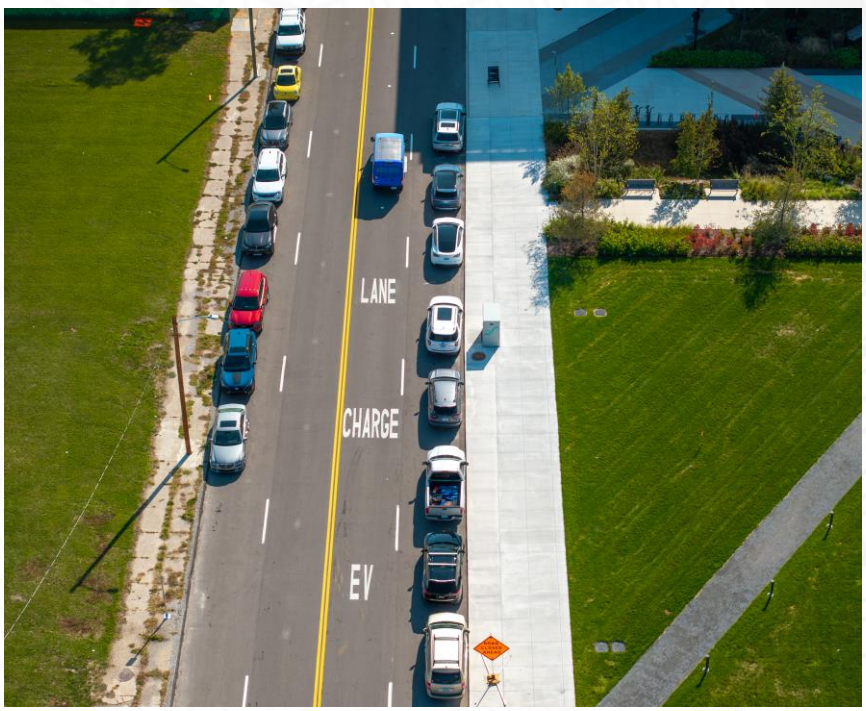
11 days
Operation

Activities

- System refinement and adjustments
- Driver training
- 4 demonstration events

Weather

- 1 rainy day (0.06 in)
- Temperatures ranged from 67°F to 88°F



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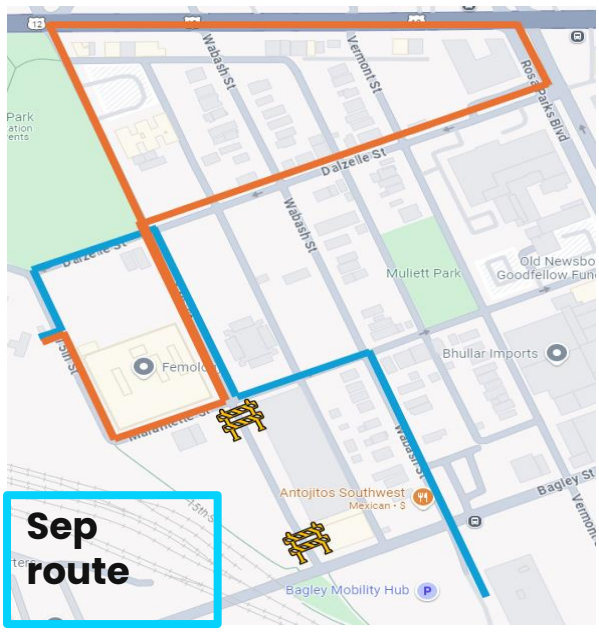
September highlights

Shuttle testing background

- Shuttle testing started on August 1st
- All dates in the data below are by calendar weeks (January 1st = wk 0, December 31st = wk 52).

Route adjustments

- Modified in August, previously ran from Michigan Central to Ford Factory
- From September, route runs from: Bagley garage->Michigan Central -> Ford Factory -> Bagley garage; still detoured due to construction closing on 14th St.



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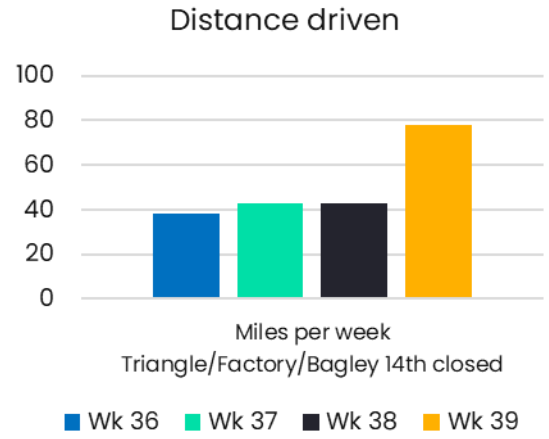
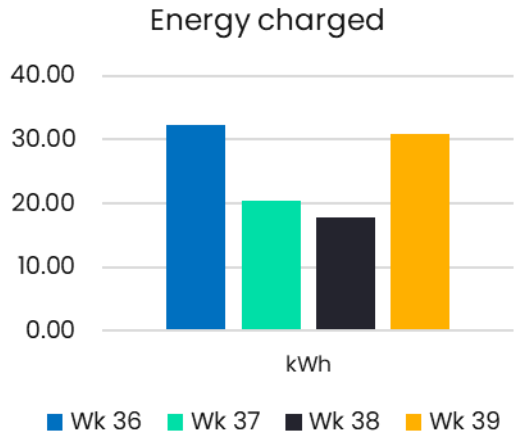
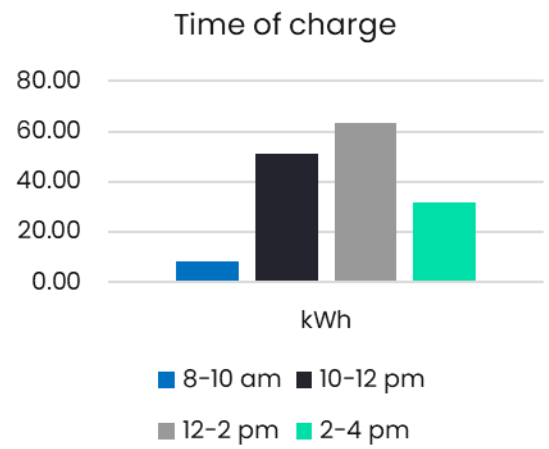
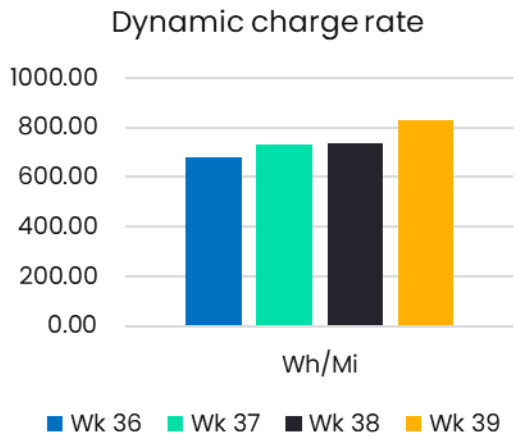
September highlights









Weekly energy insights

- Increased energy on calendar week 36 was due to demonstrations which spent more time charging on the static charger.
- Calendar weeks 37 & 38 had 2 testing days instead of 3 planned days due to summer events & system optimization
- Calendar week 39 included 4 testing days to accommodate a system demonstration

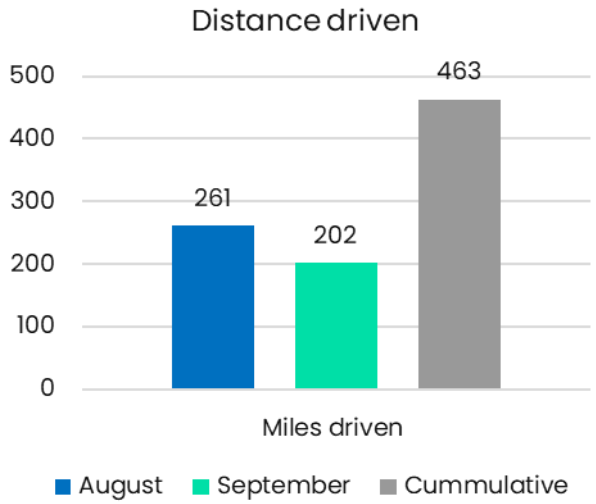
Time of charge

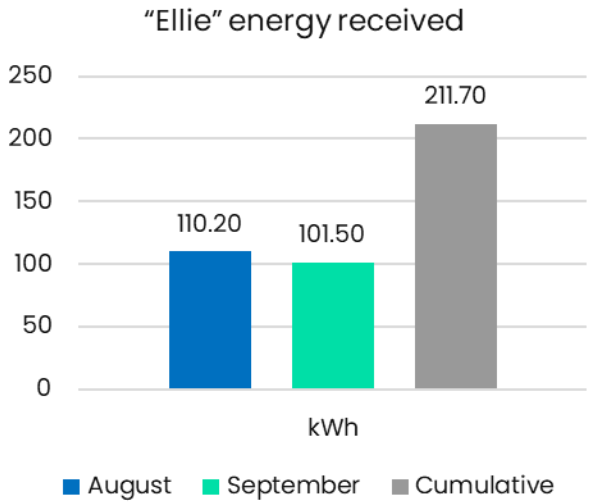
- Shuttle operated outside DTE's peak hours of 3-7 pm to avoid peak electricity rates
- The daytime shuttle schedule aligns with peak solar energy production (greener energy powering the shuttle).

Dynamic charge rate

- Charge rate increased due to driver training & system improvements

August & September cumulative testing results



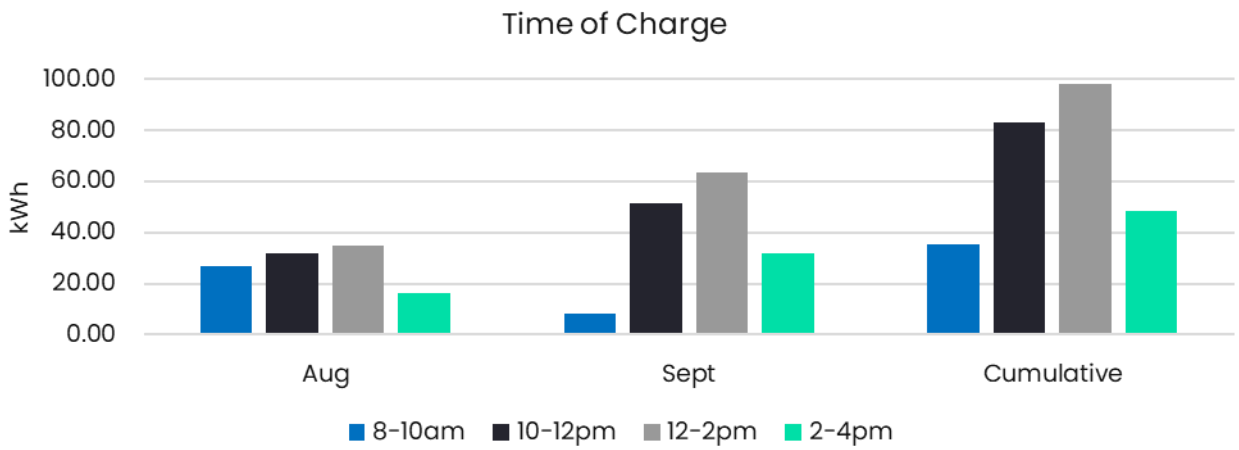


Miles Driven

- 261 miles driven in August
- 202 miles driven in September
- Reduction is due to summer events (blocked roads) and system demos allowing for less driving time

Operation Hours

- 45.7 hrs in August
- 38.1 hrs in September



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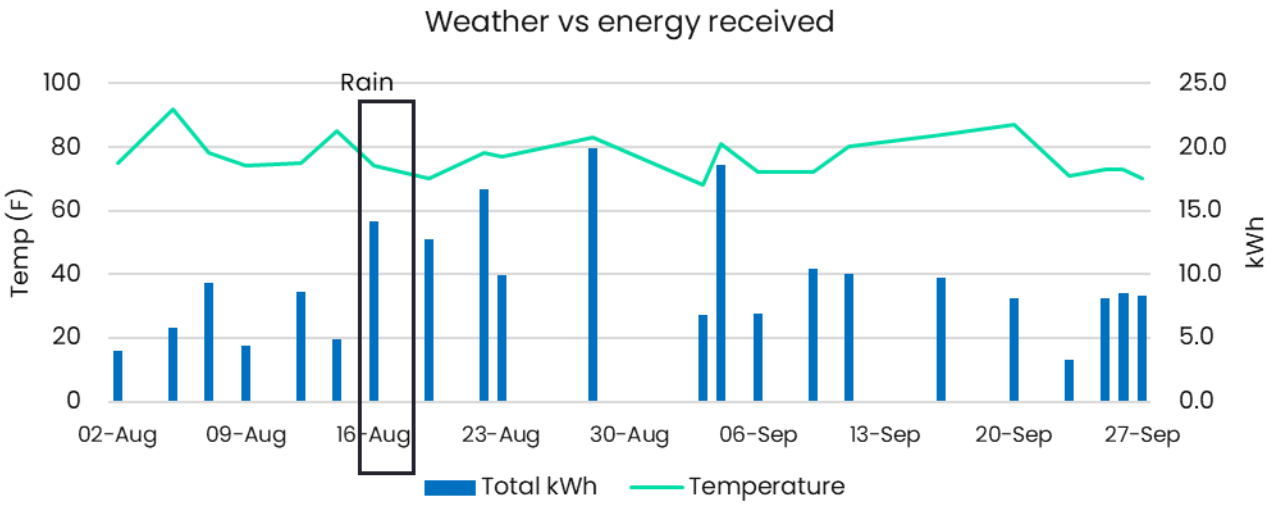
Negligible weather impact on charging



Notes:

- Weather remained consistent and mild through August and September, showing negligible impact on charging performance
- The rainy day had no measurable effect on charging
- Monitoring will continue as more diverse weather patterns and data are collected

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Thank you.