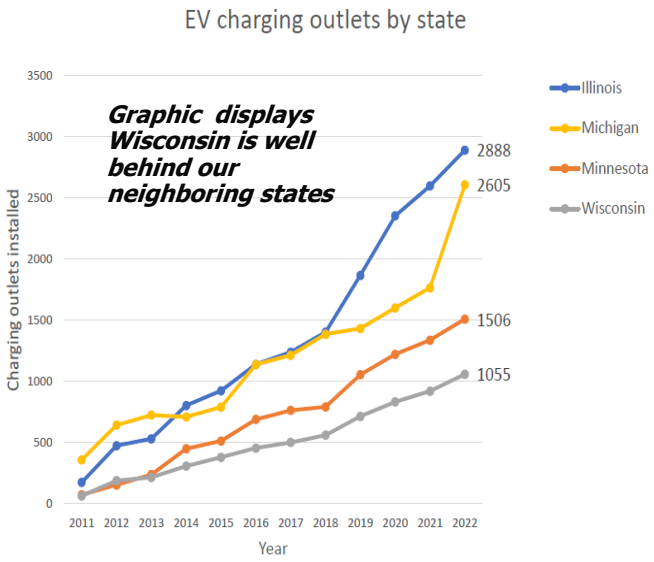
Projected EV Charger Need for Green County

The Wisconsin Clean Energy Plan predicts a substantial shortage of EV chargers by 2030.

In 2030, it is predicted Wisconsin will need 4,855 Level 2 Charging Outlets, and 310 Public Level 3 Direct Current Fast Charging Outlets to keep up with the demand of Electric Vehicles.

In 2021, there were 41,329 vehicles registered in Green County. By 2027, it is estimated 4% (1,653) of vehicles in Green County will be EVs, and by 2030, 6% (2,480 EVs).

In Green County, ~80% of EV owners charge their vehicles at home. However, 25% of households in Green County (3,800+), rent their home and cannot control whether they charge at home increasing the need for additional chargers.



BENEFITS OF ELECTRIC VEHICLES:

- Electricity is cheaper, and more sustainable, than gasoline or diesel
- Reduced greenhouse gas emissions
- No tailpipe emissions which prevent smog and therefore helps people with lung diseases like asthma
- Lower maintenance costs including no oil changes
- No gasoline fumes or possible fuel spills including underground leaks which can contaminate our environment and water supply

GREEN COUNTY LEADERS

to serve, to grow, to achieve ... putting the pieces together

To learn more, please visit:

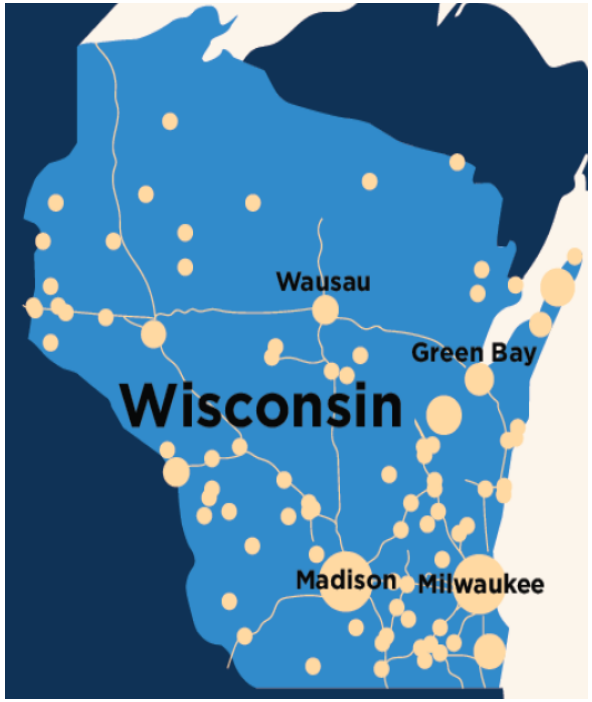
https://greencountydevelopment.com/live-work/

Or scan:

Electric Vehicle (EV) Charging Stations

Green County Leaders Project

"Bringing tourism, and sustainability, to Green County"



Above Figure shows the Electric Vehicle Infrastructure with Level 3 Direct Current Fast Charging & Level 2 Chargers

Why EV Chargers?

- In 2021, Ford, GM, and Stellantis, AKA the "Detroit Big Three," announced a joint goal for electric vehicles to achieve 40% - 50% of theirs sales by 2030.
- Saving money with fuel & maintenance. The price of gasoline and electricity fluctuate, but as of the end of 2022, the price of an "electric eGallon" was $1.77/gallon versus $3.75/gallon for gasoline.
- Electric vehicle emissions are ~72% less than gasoline or diesel emissions.
- The number of electric vehicles and EV charging stations are increasing rapidly, and we want Green County to benefit from catering to the EV market by attracting EV owners to Green County.

TOURISM:

Tourism is a big business with annual spending in Green County of:

- $72 million in total business sales, and

- $41 million in direct visitor spending

Long-distance EV drivers want:

- Level 3 Direct Current fast charging outlets near their routes, OR

- Level 2 chargers near their overnight accommodations.

EV charging stations would be added to the Green County Development Corporation website, Convention and Visitors Bureau (CVB), and PlugShare app webpage so EV visitors are aware and can plan their trip through Green County.

WHERE TO LOCATE EV CHARGING STATIONS?

The goal is to strategically place these chargers throughout Green County to attract EV owners to multiple towns and villages in Green County.

Level 3 chargers are for long-distance travelers and typically located next to businesses, restaurants, retail locations, parks, and big box stores.

Level 2 chargers are typically used for commuters or multi-hour stays located near parks, hotels, medical campuses, educational institutions, and museums.

CHARGERS:

Level 1 Chargers generally provide 2-5 miles per hour and require a standard 120 Volts of electricity. These are typically not feasible as it would take ~100 hours (~4 days) for a 350 mile charge.

Level 2 Chargers generally give 10-30* miles per hour and require 240 Volts of electricity.

Level 3 Direct Current Fast Chargers generally give 150—1,200* miles per hour and require 480 Volts of electricity.

COSTS:

Funding may be available with grants.

Level 2 Single Port Charger: $900—$2400

Level 2 Dual Port Charger: $4,000—$11,000

Level 3 Direct Current Fast Charger: ~$50,000—$70,000

Additionally, there is a fee of about $240/year per charging port.

*Charging times vary based on the vehicle's electric architecture as well as the charger itself. Current EV's have a maximum power acceptance rate in kilowatts (kW). Chargers also vary between maximum charging rates of 50kW to 350+ kW. The higher the maximum power acceptance rate, and the higher the charging rate, gives the quickest charge.

EV

Year	Projected WI EV Registrations	Percent of Total Vehicle Fleet being EV
2022	9,039	0.1%
2027	217,048	4.1%
2030	334,097	6.1%
2035	553,686	9.9%
2040	843,623	14.7%
2050	1,863,585	31.0%