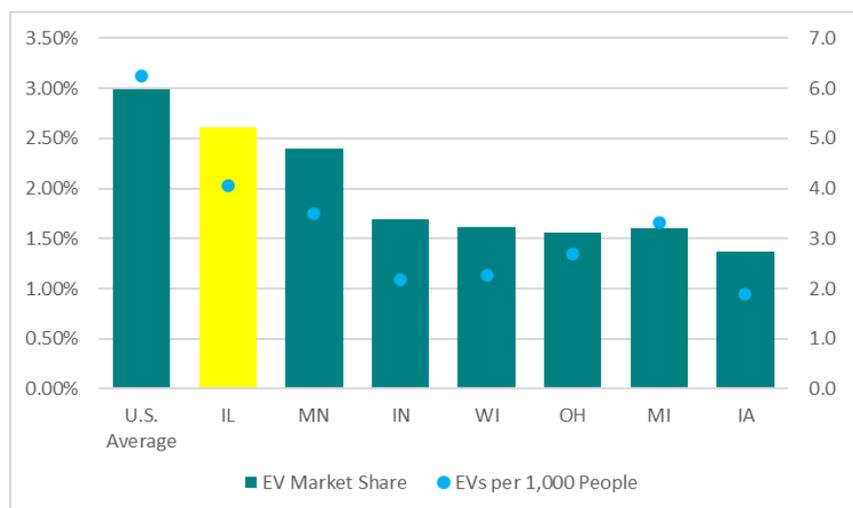


The Electrification Coalition is building upon its work in the Midwest, providing policy and implementation support at the state level to accelerate the electrification of the transportation sector. These efforts will reduce the national and economic security issues wrought by our nation’s dependence on oil, a resource controlled by a cartel that does not share our interests or values. The most recent price shock due to Russia’s invasion of Ukraine shows that we cannot insulate American consumers from this market volatility. Our only option is to eliminate our use of oil to power our transportation systems by transitioning to electric vehicles (EVs).

Generally, states in the Midwest lag behind the national average for EV sales as a portion of light-duty vehicle sales. Figure 1 shows that since 2019 in Midwest states (Illinois, Indiana, Michigan, Ohio, and Wisconsin), EV adoption rates lag behind the national average by between 0.4% and 1.63%. Illinois leads this cohort, with 2.61 percent EV sales over the past three years. Indiana’s rate is almost a full percent below Illinois’s, at 1.69 percent. Wisconsin, Ohio, and Michigan are close behind Indiana, with a rate between 1.55 and 1.61 percent.

Figure 1 also shows the EVs per 1,000 people in each state, which sits between 2 and 4 EVs per 1,000 people in the Midwest. Compare this to the national average of 6.25. Adoption in Illinois, the leading Midwestern state, is closest to the national average, with 4.06 EVs per 1,000 people.

Figure 1. Cumulative EV Penetration Rates and EVs per 1,000 People, Midwest: Q1 2019–Q3 2022



Source: Electrification Coalition (Data provided by Atlas Public Policy)



Governor Tony Evers looking at Madison, WI's first electric firetruck in April 2021

Robust state policy is critical to overcoming the early-stage market challenges of transportation electrification in the Midwest. This includes opportunities to activate the executive and legislative branches and regulatory agencies, as well as to drive action with local governments. While the political landscape within the Midwest varies from state to state and across election cycles, governors have generally emerged as key leaders in the region. State legislatures are often tepid in their support of transportation

electrification. This may reflect the urban/rural divide, with support for transportation electrification waning farther away from urban centers.

Many of the largest cities in the Midwest have taken action to advance the uptake of EVs, but it has been difficult to adopt similar programs in less populated areas, driving this divide even further. Until recently, the Midwest has placed less concern on automobile emissions than other regions such as the West Coast and the Northeast. Many states in the Midwest have not yet undertaken efforts to address air quality or climate change, and those that have, like Illinois, have historically focused on clean energy over clean transportation. Building support for EVs in the region will require policies and programs that bridge the urban/rural divide and accelerate adoption outside major city centers.

Overview

As Wisconsin continues to drive toward an electrified transportation future, which policies, strategies, and partners can help it succeed? This brief outlines how the state can move forward to achieve a more robust EV future.

The Electrification Coalition (EC) developed this document to guide the work of the EC State EV Policy Accelerator over the next two years. It features our assessment of the policy opportunities, pathways, messaging, and key players that will be most effective in achieving progress in the near term. It reflects input from a wide range of on-the-ground stakeholders and builds upon the insights of previous roadmaps and guidance documents, including those developed by the EC. It accounts for the Wisconsin transportation sector's current impacts on public health, safety, and the economy. From the collection of policy opportunities we examine here, the EC has identified a set of high-impact areas of engagement where we will dedicate our resources in partnership with other players. Our goal: Electrify the Badger State.

The importance of the transportation sector's transition from petroleum to electricity extends beyond emissions reductions. About 90% of transportation in the United States is currently powered by oil. This dependence has bound the United States' national, economic, and energy security to a highly volatile, cartel-influenced global oil market.¹ Every year, the **U.S. military spends roughly \$81 billion** to safeguard global oil supplies.² Eighty percent of conventional crude oil reserves are controlled by OPEC member states that do not share U.S. strategic values or interests.³ Some economists have estimated that the financial resources spent by the military equate to a U.S. taxpayer **subsidy of up to \$0.70 per gallon** of gasoline.⁴ The U.S. has gone to great lengths to secure oil supply and reduce volatility globally, but not all supply disruptions can be predicted or prevented. And because oil is a global commodity, no matter where the oil supply is disrupted, prices everywhere are affected. If the U.S. is to attain true energy security, we must accelerate the transition from petroleum-dependent transportation to electric vehicles.

The direct financial impact of transportation electrification can be significant. The transportation sector in Illinois consumed approximately 175 million barrels of petroleum in 2019, at an annual cost of roughly \$19.7 billion.⁵ For comparison, the gross state product of Illinois was \$938 billion in 2021.⁶



Chevrolet Equinox EV from General Motors

The Midwest is known for its rich automotive and manufacturing heritage. As both new and legacy auto manufacturers transition towards our electric future, the Midwest offers the industry access to world-class supply chains, industry expertise, and skilled labor. While there are no major auto manufacturers producing EVs yet in Wisconsin, the state currently hosts Harley Davidson and its recent electric motorcycle spin-off LiveWire and manufacturing and distribution centers for General Motors, as well as EV and automotive supply chain players including ABB, Bosch, Clarios, Continental, Cummins, Odyne Systems, and Polaris, meaning the state is ripe with opportunities to support existing companies or to start new ventures across the EV manufacturing and supply chain in Wisconsin.

A combination of federal, state, and local support is beginning to catalyze private investment in the buildout of EV charging infrastructure and across the EV supply chain. As of May 2022, Wisconsin has fully committed all \$50 million it was allocated from the Volkswagen

¹ U.S. Energy Information Agency. "Use of energy explained: Energy use for transportation." <https://bit.ly/3WzHq2k>

² SAFE. "The Military Cost of Defending the Global Oil Supply." 2018. <https://bit.ly/3XYwf3W>

³ OPEC. "Annual Statistical Bulletin." 2021. <https://bit.ly/400ZgOk>

⁴ Ibid 2.

⁵ U.S. Energy Information Administration. "State Energy Data System." 2019. <https://bit.ly/3XZ2SOT>

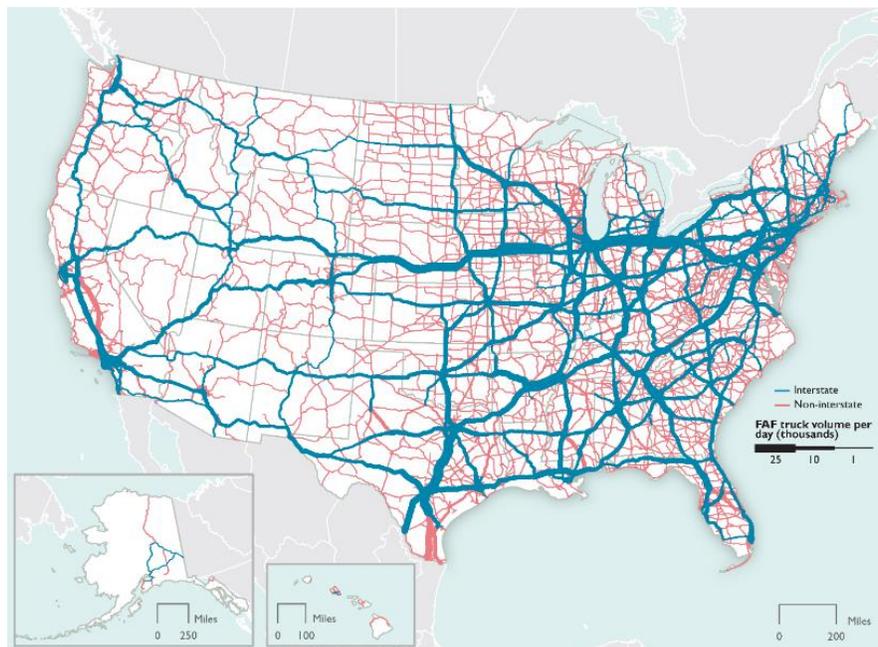
⁶ Bureau of Economic Analysis. "Economic Profile of Illinois." 2021. <https://bit.ly/3wtzjJL>

Settlement. The federal government has also allocated over \$79 million to Wisconsin as a part of the National Electric Vehicle Infrastructure Formula Program.⁷

Wisconsin has also committed to supporting transportation electrification via both public dollar investment and critical political support. This year, Wisconsin joined Michigan, Indiana, and Illinois in signing the Lake Michigan EV Circuit Tour MOU to create an EV charging corridor along the Lake Michigan coastline that is intended to make it possible to seamlessly drive an EV across the states that border Lake Michigan.⁸ Governor Evers has also included EV charging station funding in his two-year spending plans since 2020. In 2022, the City of Racine received a \$3.7 million federal grant to replace their diesel buses with electric buses.⁹

Electrification of the medium- and heavy-duty vehicle sectors in Wisconsin will be another critical component of reducing oil dependence, as well as addressing the associated public health and air quality issues, especially as the Midwest is a critical freight transportation hub for the region and the country. The image below from the Bureau of Transportation Statistics exemplifies the Midwest's role in freight transportation throughout the country. Preparing Wisconsin to support electric commercial vehicles traveling through and within the state/region will be essential to ensuring these vital supply chain routes will be safeguarded from energy price shocks stemming from volatile oil markets.

Figure 2. Projected Average Daily Long-Haul Truck Traffic on the National Highway System: 2045



Source: US Department of Transportation, Bureau of Transportation Statistics

⁷ Data from Atlas Public Policy's Automakers Dashboard.

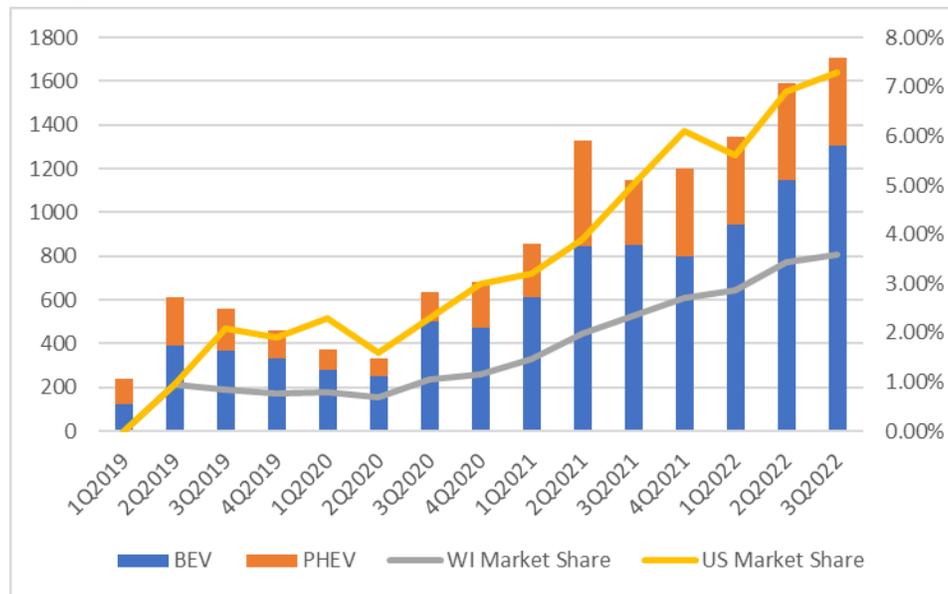
⁸ U.S. Department of Energy Alternative Fuels Data Center. "Lake Michigan Electric Vehicle (EV) Circuit." <https://bit.ly/3kDL4L0>

⁹ Federal Transit Administration. "FY22 FTA Bus and Low- and No-Emission Grant Awards." <https://bit.ly/3XCmyZk>

Wisconsin Market Development

Since 2019, the Badger State has had about 1.6 percent of vehicle sales being battery electric or plug-in hybrids, though the state still lags behind the national average by nearly three percent. Since 2019, Wisconsin lags behind Illinois, where the market share over the same time period is 2.61 percent, and Minnesota has also closed the gap and is vying for regional leadership in EV adoption with 2.40 percent. Figure 2 illustrates quarterly light-duty EV sales performance in Wisconsin since 2019. Battery electric vehicles (BEVs) make up most of these sales (versus plug-in hybrids—or PHEVs). While market growth in the U.S. has not grown as quickly, Wisconsin is still below the country as a whole.

Figure 2. EVs Sold in Wisconsin and Market Share: Q1 2019–Q3 2022

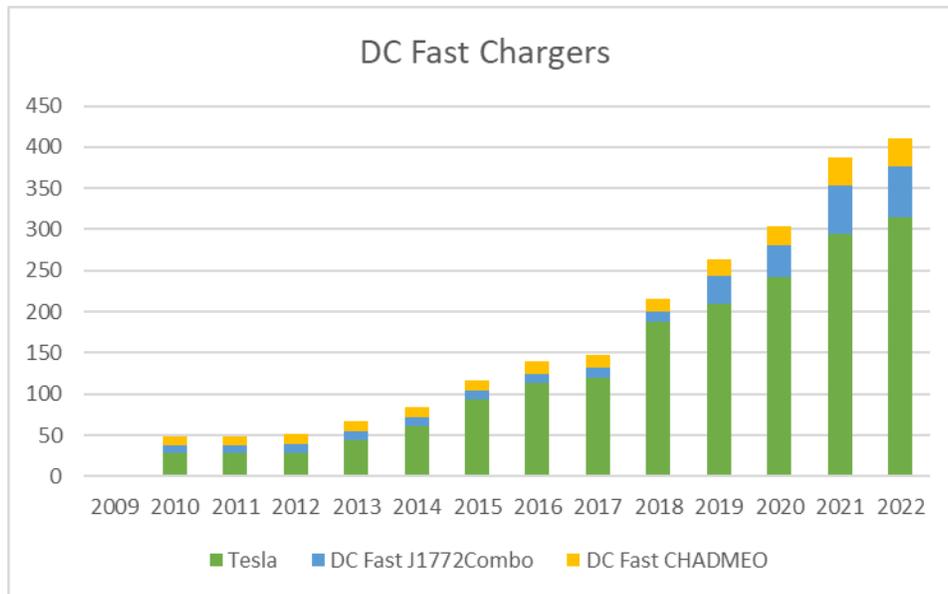
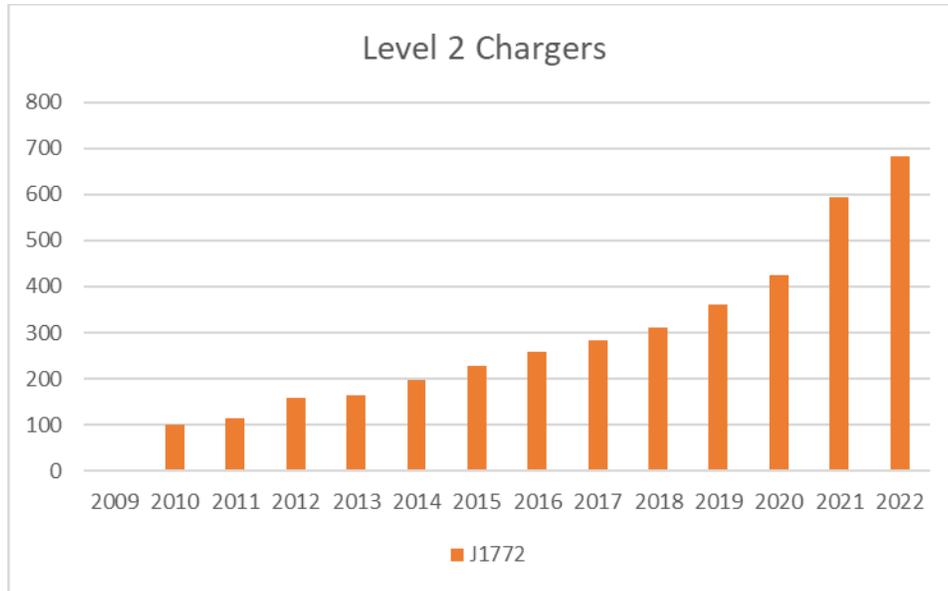


Source: Electrification Coalition (Data provided by Atlas Public Policy)

While approximately 80% of EV charging is done at home or at work, access to public EV charging infrastructure has shown to be an essential element of a thriving EV market.¹⁰ Without enough public charging ports and widely dispersed locations across each state, consumers may be reluctant to purchase EVs due to range anxiety. Through December 1, 2022, there have been nearly 700 Level 2 charging ports and 411 DC fast charging (DCFC) ports deployed in Wisconsin. It is important to note that over three-quarters of the DCFCs in the state are proprietary Tesla chargers and are not currently available for non-Tesla users.

¹⁰ U.S. Department of Energy: Office of Energy Efficiency & Renewable Energy. "Charging at Home." <https://bit.ly/3R8UpXy>

Figure 3. EVSE Installations in Wisconsin: 2009 – 12/01/2022. (Top graph: Level 2 charger ports; Bottom graph: DC fast charger ports)



Source: Electrification Coalition (Data provided by Atlas Public Policy)

Electrification of Medium- and Heavy-Duty Sectors

Deployment of electric medium- and heavy-duty vehicles (e-MHDVs) in both Wisconsin and nationally is in its early stages. Most deployments so far have been via small pilot projects. However, manufacturers are investing heavily to electrify more commercial market segments. It is yet to be seen how these vehicles will best be deployed and in what ways e-MHDV fleets will need to be supported by charging infrastructure. However, as mentioned above, it will be critical for Wisconsin to support the electrification of the MHD sector, as both Illinois and the region are vital junctures in the transportation of goods across the nation. More information on electrifying the MHD sector can be found in the Electrification Coalition's [Electrifying Freight](#) report.

Policy Environment

The Midwest is still in the early stages of implementing the necessary policy incentives to support a thriving EV market.

One of the key barriers to higher EV adoption rates is the higher upfront cost of most EVs, which is why several states across the US have provided financial incentives for purchasing EVs. Illinois provides a useful model for ways that Wisconsin can increase its EV market share rate through



ABB's Terra HP charge post

direct rebates to lower the initial cost of EVs. Through the passage of the IL Climate Equity and Jobs Act, residents can obtain a \$4,000 rebate for new and used EVs.

Additionally, every Midwestern state currently requires additional registration fees for EVs. According to recent research by [Consumer Reports](#), the fees in the region are generally close to equitable with what internal combustion vehicles pay in gas tax, except in Ohio, where the fee is punitive. In Wisconsin, EV owners pay \$100 annually. Another major policy issue involves market access. Only two states in the region currently allow all EV OEMs to sell their vehicles to customers directly. Anxiety surrounding charging infrastructure availability continues to be a barrier to consumer adoption, and visible and reliable charger deployment will be vital to overcoming this adoption barrier. According to data from Atlas Public Policy, Midwestern states generally lag behind the national average in EV-to-charger ratios.

Policy Landscape



Madison, WI

Wisconsin is in the middle of the pack regarding transportation electrification in the Midwest, where there is political momentum but little quantifiable action thus far. There have been directives from the governor's office, and much of the state fleet is electrifying now that total cost of ownership (TCO) calculators have shown that EVs are cheaper than ICEs in the long run.

Some significant policy challenges still remain in the state before it can be a completely EV-friendly environment. Under state law, only utilities can sell energy measured by kWh, meaning that any third-party charging stations need to sell energy by the minute. This results in obvious discrepancies as variable charging speeds based on individual chargers, vehicles, and even the EV's current state of charge will create a considerable variance in the cost of kWhs and cause confusion, uncertainty, and obscure potential fuel-cost savings for EV drivers.¹¹

The state faced a substantial setback in publicly available charging implementation in 2019 when the state supreme court ruled it unconstitutional for Governor Evers to use the veto pen to change language in the state budget proposal, allocating funding to EV public charging.¹² Because the Wisconsin State Legislature has a Republican majority and has not been friendly to EV legislature in the past, it is unlikely that legislation advancing EV adoption and deployment will happen in the next session without a considerable shift in the narrative around EVs and the future of automotive manufacturing.

Through Executive Order 52, the Governor's office created a task force on climate change, led by Lt. Governor Mandela Barnes, which addressed overarching climate goals through nine sectors and three policy pathways: executive action/agency direction, the state budget, and legislation. The report highlights the need for hybrid, PHEV, and BEV adoption and outlines options through all three legislative pathways. This report advocates for removing current punitive EV taxes while recognizing that as EVs take up a larger share of the market, more analysis will have to occur on how to make up the deficit created by drivers not paying

¹¹ "Electrification is coming: Wisconsin prepares to spend \$78.7 million on EV network." *La Crosse Tribune*. July 2022. <https://bit.ly/3HenjB0>

¹² "Wisconsin Supreme Court Takes Case Challenging Gov. Tony Evers' Veto Powers." *Wisconsin Public Radio*. October 2019. <https://bit.ly/3XADlVW>

gasoline taxes. They call on the state to create a comprehensive plan for EV highway charging corridors focusing on rural and low-income urban areas, which was created through the NEVI proposal process.¹³

The table below lists some of the main EV policies for accelerating EV adoption in a state on the light-duty and MHD side¹⁴:

Policy	Description	Pathway
LDV Tax Credit or Rebate	No: Wisconsin does not offer a tax credit or rebate incentive for the purchase or lease of electric LDV vehicles.	In Place
MHDV Tax Credit or Rebate	No: Wisconsin does not offer a tax credit or rebate incentive for the purchase or lease of electric MHD vehicles.	Legislative
EV LD Registration Fee (Annual)	Yes: Wisconsin has a \$100 EV fee, which is paid in addition to license and registration fees. The Governor's Task Force on Climate Change calls on the Department of Transportation to remove this fee and investigate more equitable alternatives to road funding.	In Place
EVSE Incentives (Public)	No: The State does not currently offer any incentives for public charging installation or maintenance.	In Place
State ZEV Plan / Targets / Procurement Requirements	No: The State does not currently have any procurement requirements. The State must put out a request for bids when they purchase new fleet vehicles, so if an EV manufacturer does not bid on the contract, they cannot purchase an EV.	Administrative

¹³ The State of Wisconsin. *Governor's Task Force on Climate Change Report*. 2020. <https://bit.ly/3JnaB5g>

¹⁴ Alternative Fuels Data Center. "Wisconsin Laws and Incentives." 2022. <https://bit.ly/3XJ93Hu>

Policy	Description	Pathway
Freedom to Buy EVs (Direct-to-Consumer Sales)	No: EV manufacturers without existing franchise agreements cannot sell and service vehicles to customers directly.	Legislative
Alternative Fuel Vehicle Acquisition Requirements	No: There are no current requirements to purchase alternative fuel vehicles. The Wisconsin Legislature sets goals for minimum annual renewable fuel sales volumes based on annual renewable fuel volumes required under the federal Renewable Fuel Standard.	Administrative/ Regulatory
EV Building Codes	No: Wisconsin does not have EV building code requirements at the state level.	Legislative/ Regulatory
Zero Emission Vehicle Standard	No: Wisconsin is not one of the 16 states that have adopted California's ZEV standard, which would require vehicle manufacturers to sell an increasing percentage of zero-emission light-duty vehicles in the state.	Administrative/ Legislative/ Regulatory
MHD ZEV MOU	No: Wisconsin is not one of the 18 states that have signed the Medium- and Heavy-Duty ZEV MOU, a non-binding commitment to accelerate the MHD sector, with a 30% sales target by 2030 and a 100% sales target by 2050.	Administrative
Advanced Clean Truck Rule	No: Wisconsin is not one of the six states that have adopted California's Advanced Clean Truck rule, which requires vehicle manufacturers to sell an increasing percentage of zero-emission MHDVs (Class 2b-8).	Administrative/ Legislative/ Regulatory

Policy	Description	Pathway
Vehicle-to-Grid Incentives	Yes: Wisconsin has not provided financial or technical support for advanced electricity projects, including EVs and devices that enable EVs to engage in smart grid functions.	Administrative/ Legislative/ Regulatory
Vehicle Research, Development, & Manufacturing Incentives	Yes: The Wisconsin State Energy Office offers a tax credit equal to 10% of the qualified research expenses the corporation incurs in Wisconsin. Qualified research includes, but is not limited to, automotive batteries for use in hybrid electric vehicles that improve the efficiency of electricity use, and research related to designing internal combustion engines for vehicles, including expenses related to designing vehicles that are powered by such engines and improving production processes for such engines and vehicles.	In Place
EVSE Incentives (Residential)	Yes: There are several EVSE incentives, which are detailed in the table below.	In Place
State Highway EVSE Authorization	No: Wisconsin Department of Transportation does not plan to install EVSE at interstate highway rest areas, even if allowed by federal regulations.	Administrative/ Regulatory
Electric School Bus Programs	No: Wisconsin does not yet offer incentives for electric school buses.	Administrative/ Legislative/ Regulatory
Electric Transit Bus Programs	Yes: The Wisconsin Department of Administration (DOA) offers grants to replace eligible public transit buses. Funding is available for the replacement and scrapping of model year 1992–2009 heavy-duty public transit buses with new replacement diesel or alternative fueled buses.	In Place

Policy	Description	Pathway
Electric MHDV Weight Exemptions	No: Wisconsin has a Natural Gas exemption but has not passed a weight exemption for electric MHDVs.	Legislative

Political Outlook

Governor Evers, who was reelected this fall, has advocated for EVs historically and will continue to do so throughout his next term. In one of his early acts in office, Evers joined the U.S. Climate Alliance, committing Wisconsin to the Paris climate agreement targets after former President Trump's decision to withdraw the U.S. from the agreement.¹⁵ Soon after, the governor **created** the Office of Sustainability and Clean Energy and asked it to develop a road map for the state to get to 100% carbon-free electricity consumption by 2050. He has been a strong supporter of city bus electrification in Milwaukee and has made several attempts to include EVSE appropriations in his budget recommendations. He has been largely unsuccessful in state-level electrification goals, largely due to the Republican-majority legislature in his first term and now second term. This fall, Republicans gained three seats in the state assembly, keeping their majority and narrowly missing a supermajority.

Key Constituents

Advocate allies: Wisconsin Clean Cities, 1000 Friends of Wisconsin, Wisconsin Initiative on Climate Change Impacts, Wisconsin Green Fire, Midwest Energy Research Consortium, Great Plains Institute, University of Wisconsin Sustainability, Midwest Renewable Energy Association

Equity: Renew Wisconsin, Clean Wisconsin, University of Wisconsin Population Health Institute

Rural groups: Midwest Tribal Energy Resources Association, Energy On Wisconsin

Manufacturers: Harley Davidson, ABB, Pierce Manufacturing

The EV industry in Wisconsin will be a powerful ally in advancing EV policies, as many constituents not aligned with EVs for environmental reasons would support them from an industry efficiency or financial lens.

¹⁵ Jack Kelly, The Cap Times. May 2022. "Tony Evers targets climate change despite lack of legislative support." <https://bit.ly/3XOTxcM>

Utility Snapshot

Utility incentives for EVs and EVSE vary greatly across the Midwest. The most common incentives currently offered in Wisconsin are EVSE rebates for residential single-home locations.

The table below assesses EV incentives from utilities operating in the region.¹⁶

	EV Purchase Rebate	EVSE Rebate (Residential Single Home)	EVSE Rebate (MUD)	EVSE Rebate (Commercial)	EVSE Rebate (Public)	EV Charging Rate (Residential)	EV Charging Rate (Commercial)
Madison Gas and Electric	No	<u>Yes</u>	No	No	No	<u>Yes</u>	No
Baron Electric Cooperative	No	No	No	No	No	<u>Yes</u>	No
Chippewa Valley Electric Cooperative	No	<u>Yes, Expired</u>	No	No	No	No	No
Alliant Energy	No	<u>Yes</u>	No	No	No	No	No
Clark Electric Cooperative	No	<u>Yes</u>	No	No	No	No	No
East Central Energy	No	<u>Yes</u>	No	No	No	<u>Yes</u>	No
Price Electric Cooperative	No	<u>Yes</u>	No	No	No	No	No
Riverland Energy Cooperative	No	<u>Yes</u>	No	No	No	No	No
Pierce Pepin Cooperative Services	No	<u>Yes</u>	No	No	No	No	No

¹⁶ Alternative Fuels Data Center. "Wisconsin Laws and Incentives." 2022. <https://bit.ly/403hM8Y>

Policy Opportunities

Wisconsin has a rich set of policy opportunities to pursue, with some groundwork already laid and a well-established demand for electrification. The existing foundation and momentum can accelerate Wisconsin's rise as a leader in transportation innovation and manufacturing and jumpstart the deployment of EVs and the charging network necessary to support them.

Key policy opportunities include:

- Targeting and advancing the electrification of the medium- and heavy-duty sectors
- Enabling greater adoption of EVs in the passenger vehicle market
- Promoting greater support for EVs at the utility level with supportive policies for rates, rate design and grid integration
- Establishing EV-ready building codes
- Providing monetary and non-monetary incentives to support electric vehicles and charging infrastructure

Based on our assessment to date, the top policy priorities for EC's work accelerating the electrification of transportation in Wisconsin in the near term are as follows:

1. Support cleaner freight and buses by signing onto the Multi-State Medium- and Heavy-Duty Zero Emission Vehicle MOU and support follow-up policies, and if possible, adoption of the Advanced Clean Trucks rule.
2. Support Wisconsin in adopting Advanced Clean Cars 1.0 and 2.0.
3. Electrify the state fleet either through policy targets and/or the use of TCO tools for future procurement.
4. Begin the process to establish a Clean Fuels Standard with specific carve out for transportation electrification programs and policies for low-income and disadvantaged programs.

5. Support the adoption of EV-ready building codes across the state.
6. Support greater transportation electrification planning efforts at the utility level.
7. Support implementation of NEVI funds to optimize the federal investment.
8. Support conversations to modify the EV fee in WI to other policy solutions, such as VMT.
9. Support the freedom for consumers to buy EVs in Wisconsin (direct sales).

The EC will seek opportunities to support education and outreach on the transition to electric vehicles and pursue additional policy strategies and venues as opportunities arise.

About the Electrification Coalition

The Electrification Coalition is a nonpartisan, nonprofit organization that advances policies and actions to facilitate widespread deployment and adoption of electric vehicles in order to reduce the economic, public health, and national security risks caused by America's dependence on oil. For more information, visit electrificationcoalition.org.