



Distribution of Electric Vehicle Charging Infrastructure in Minnesota

Final Report

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FINAL REPORT

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LIST OF ABBREVIATIONS

Acronym	Description
AFC	Alternative Fuel Corridor
AFDC	Alternative Fuels Data Center
ATP	Area Transportation Partnerships
DCFC	Direct Current Fast Charging
DOE	United States Department of Energy
USDOT	United States Department of Transportation
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
IIIA	Infrastructure Investment and Jobs Act
MPCA	Minnesota Pollution Control Agency
MnDOT	Minnesota Department of Transportation
MSA	Metropolitan Statistical Area
NEVI	National Electric Vehicle Infrastructure
VW	Volkswagen

CHAPTER 1: INTRODUCTION

Across the United States, electric vehicle (EV) infrastructure has expanded significantly over the past 15 years. The United States Department of Energy (DOE)'s Alternative Fuels Data Center (AFDC) has tracked EV infrastructure since the 1990s (Brown et al., 2020), documenting nationwide increases in charging stations and outlets since the early 2010s. Although charging infrastructure exists across the nation in rural communities, the majority of charging stations are located in urban and metropolitan areas (Bestvater & Shah, 2024). The AFDC does not track residential charging, resulting in having Level 1 charging outlets underrepresented in public datasets (Brown et al., 2020).

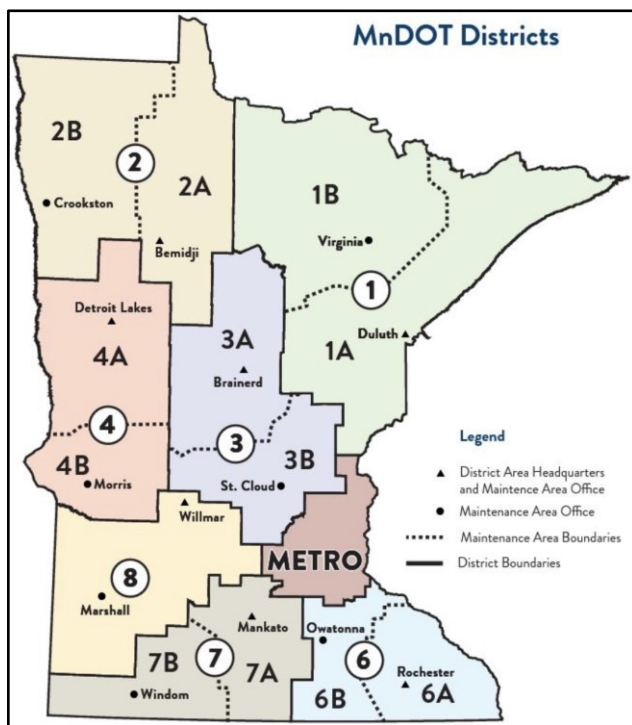
Nationally, Level 2 charging outlets have been the most common type of outlet opened over time. However, growth patterns have shifted over time. Between 2011 and 2019, the percentage of DC fast charger outlets experienced the most rapid growth in installations compared to other outlet types. This trend accelerated further in the 2020s. In January 2021, there were 78,112 available public Level 2 charging ports and 17,192 public DC fast charging ports (Joint Office of Energy and Transportation, 2026). By January 2026, there were 167,732 Level 2 ports and 67,696 DC fast charging ports, representing increases of 115% and 294%, respectively. The rapid expansion has been driven in part by federal laws and initiatives, such as the 2021 Infrastructure Investment and Jobs Act (IIJA), which has encouraged the adoption of charging infrastructure across the states (Bestvater & Shah, 2024; Christianson, 2023).

Similar to the rest of the country, Minnesota has experienced growth in EV infrastructure since 2011. This report aims to provide context on the funding programs that have supported the adoption of EV charging infrastructure in the state. In addition, this report offers a visual overview and descriptive analysis of the current distribution of EV charging stations by county and transportation district in the state, highlighting spatial trends and regional disparities.

CHAPTER 2: METHODOLOGY AND DATA

2.1 METHODS

This report presents a descriptive analysis of the distribution of EV charging stations in Minnesota from 2011 to 2025. The research team used ArcGIS Online to aggregate station and port counts at the state, district, and county levels. For the district-level analysis, researchers used Area Transportation Partnerships (ATPs) boundaries, which were established by the Minnesota Department of Transportation (MnDOT) to improve regional coordination with traditional and nontraditional transportation partners for the implementation of regional transportation priorities. Minnesota is divided into eight ATPs/MnDOT districts (MnDOT, 2026a).¹ Figure 2.1 provides a statewide overview of the ATP boundaries.



Source: (MnDOT, 2026a).

Figure 2.1 Area Transportation Partnerships/ MnDOT Districts

¹ See additional information for MnDOT Districts in <https://www.dot.state.mn.us/information/districts.html>

In addition to the state, district, and county-level analysis of aggregated counts of charging stations, the analysis also examines charging station density (measured as the number of stations per square mile). The area in square miles for a county comes from the US Census Bureau county data profiles.

2.2 DATA SOURCES

The Minnesota EV charging station and port data were obtained from the AFDC. The AFDC maintains a station locator database that provides information on alternative fuel stations across the United States and Canada. For the analysis in this report, the database was filtered by the state (Minnesota only), fuel type (electric only), and station details (available private and public access). All stations and ports were included regardless of charger type, connector type, power output, or network.

Each station record in the dataset contained information on address and coordinates, network, open date, connector type, facility, and access type. The port-level dataset had similar attributes, but some stations appear multiple times (multiple rows) because a single location could host multiple charging ports. The data were downloaded in January 2026 and limited to stations opened as of December 31, 2025.

CHAPTER 3: FUNDING AVAILABLE FOR INSTALLING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

In recent years, the state of Minnesota and the federal government have funded various initiatives to support the deployment of EV charging infrastructure. This section summarizes key federal, state, local, and Tribal funding initiatives that have contributed to the expansion of EV charging infrastructure in Minnesota.

3.1 THE NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) PROGRAM

The National Electric Vehicle Infrastructure (NEVI) Formula Program, administered by the US Department of Transportation (USDOT) through the IIJA, is one of the primary ways public-access charging stations have been financed. It provided up to 80% of the total project funding for public electric vehicle chargers. This funding is provided to the states and covers installation and connection, operations and maintenance, and long-term data-sharing (DOE, 2026b).

NEVI-funded chargers must meet several requirements: be *“non-proprietary, allow for open-access payment methods, be publicly available or available to authorized commercial motor vehicle operators from more than one company, and be located along designated Federal Highway Administration (FHWA) Alternative Fuel Corridors (AFCs)”* (DOE, 2026b). States are required to submit, annually and prior to the disbursement of funds, their plans to the FHWA and Joint Office of Energy and Transportation for review, and are required to describe how the state plans to use the funds. While states may contract with private entities to construct, install, and operate charging stations under the program, the state’s Department of Transportation is required to maintain compliance with the NEVI program requirements (FHWA, 2022). The first NEVI-funded stations opened in Ohio and New York in 2023 Biden-Harris (FHWA, 2023).

The program policies were brought under review in February 2025 by USDOT leadership appointed by the Trump Administration in January of 2025. After the funding freeze was overturned in a federal court, states were allowed to resubmit plans to obligate their remaining fiscal year 2022-2026 funding (Electrification Coalition, 2025). New interim final guidance was issued in August 2025. The final guidance gives states more flexibility in how and where they can deploy funds, including expanded site eligibility beyond designated AFCs, consolidated solicitations, and simplifying certification of corridor buildout (King, 2026; USDOT, 2025).² While there was a six-month freeze to the program, NEVI funds began to be administered again in August of 2025, with the new requirements described (Domonoske,

² In addition to removing the 50-mile requirement, other changes involve the removal of certain planning and siting requirements originally integrated into this program. These revisions include rescinded language regarding the deployment of stations in underserved areas, the use of the Justice40 guidance to site charging stations, labor/safety/training requirements, and safety planning (USDOT, 2025).

2025). States are additionally required to update their NEVI program plans in adherence with updates, and Minnesota’s updated plan was approved in September 2025 (MnDOT, 2026b).

In Minnesota, MnDOT administers the NEVI program funding to support the installation of charging stations statewide. Early program requirements mandated that the stations be located no more than 50 miles apart along the AFC; however, after 2025, the updated program guidance provides for states to justify that their AFC is fully built out and seek approval from the FWHA, in place of meeting the 50-mile placement requirement (Craddock, 2025). Other key requirements include the station being no less than one mile driving distance from the AFC exit, having a minimum of four 150 kW charging ports able to operate simultaneously, and open to the public 24 hours a day, seven days a week (MnDOT, 2026b).

As of 2026, MnDOT has administered two rounds of charging station funding under the NEVI program. The first round awarded \$7.4 millions of maximum grant reimbursements to 12 grant awardees in 2024, and the second round of funding awarded \$9.1 million to 12 grant awardees in 2025 (MnDOT, 2026b). In the first round, funding went towards stations in the cities of Albert Lea, Burnsville, Forest Lake, North Branch, Pine City, Moose Lake, Proctor, Moorhead, Alexandria, Sauk Centre, St. Michael, and Brooklyn Park. The second round of funding went to municipalities in Luverne, Worthington, Jackson, Blue Earth, Albert Lea, Austin, Stewartville, St. Charles, Barnesville, Fergus Falls, Rockville, and Lake Elmo. Examples of entities that received funding in the two funding rounds include Kwik Trip, Circle K, Love’s, and Francis Energy Charging.

MnDOT requires that the team installing the project include an *“experienced charging network provider and an entity with ownership or lease of the property through the five-year operations and maintenance period”* (MnDOT, 2026b). The grantees must operate the station for five years following construction completion (MnDOT, 2025).

AFCs were initially established under the Fixing America’s Surface Transportation (FAST) Act in 2015, as a directive of the FHWA (FHWA, 2016). In 2016, the FHWA released AFC plans that included 55 routes, spanning 35 states and 85,000 miles. Minnesota has three AFCs within the state: I-35, I-94, and I-90 (MnDOT, 2026b).

3.2 OTHER FEDERAL FUNDING SOURCES

In addition to direct funding programs, federal tax incentives support the deployment of EV charging infrastructure. The Alternative Fuel Vehicle Refueling Property Credit is available for electric vehicle charging stations and other types of alternative fuels, specifically in low-income or non-urban census tracts (IRS, 2026). This credit is available to businesses and individuals who install qualifying electric vehicle charging equipment in an eligible location. Eligible tax-exempt and government entities can also claim this credit through elective pay. The credit was available starting on January 1, 2023, and is available through December 31, 2032. The credit covers 6% of the depreciable costs, up to \$100,000 per item or 30% of the depreciable costs, up to \$100,000 per item, if the installation meets US Department of Labor prevailing wage and apprenticeship requirements” (DOE, 2025).

3.3 VOLKSWAGEN (VW) SETTLEMENT

Funding from the Volkswagen (VW) Settlement is also being used to build charging stations in Minnesota. The VW Settlement was a result of Volkswagen violating the federal Clean Air Act by selling cars that emitted air pollution over the legal limit (MPCA, 2026b). Minnesota will receive a total of \$47 million by 2028 from Volkswagen's Environmental Mitigation Trust, which will be used to clean up air pollution by reducing emissions (MPCA, 2026a, 2026b). There would be three phases of fund disbursement.

- Phase 1 (2018 - 2019): Resulted in \$11.75 million in funds. In 2019, the Minnesota Pollution Control Agency (MPCA) awarded more than \$1.4 million in grant funds to install 22 EV fast-charging stations along highway corridors in Greater Minnesota.
- Phase 2 (2020 - 2023): Resulted in \$23.5 million in funds. MPCA invested \$3.5 million in Level 2 EV charging stations, and Phase 2 worked to expand the state-wide charging network by at least 2,500 miles.
- Phase 3 (2024 - 2027, currently ongoing). The MPCA will invest \$14 million. Phase 3 will work on filling gaps along key charging corridors around the state. Continuing a priority from Phase 2, grant programs will fund eligible electric vehicles and invest in charging stations, such as heavy-duty electric vehicles like trucks and transit buses, electric school buses, and expand the state's charging station network.

3.4 LOCAL-SPECIFIC FUNDING

State-level funding streams are also available for the deployment of EV charging infrastructure in Minnesota. One example is the EV Spot Network, which is a network of charging locations in Minneapolis and St. Paul (City of Saint Paul, 2026). The program offers public EV charging for all EV owners, alongside the carshare program charging. It also offers an EV car share that residents can use for transportation, without owning a personal vehicle. This program is a joint initiative between the City of Saint Paul, the City of Minneapolis, HOURCAR, and Xcel Energy. The EV Spot Network was funded by the Saint Paul Foundation, McKnight Foundation, 3M Gives, Otto Bremer Trust, Minneapolis Foundation, Metro CERT, Energy Foundation, and Bloomberg Philanthropies American Cities Climate Challenge (City of Saint Paul, 2023). Additionally, this project was a recipient of the Federal Congestion Mitigation and Air Quality funding via the Metropolitan Council's Regional Solicitation process, as well as the DOE grant.

3.5 NATIVE NATIONS INITIATIVES

Native Nations in the upper Midwest have led initiatives to install EV infrastructure on reservations and in underserved communities. Historically, indigenous communities have experienced pollution and harmful health impacts from fossil fuel production on or near their land (Yañez-Barnuevo, 2022). In November 2021, the Native-led nonprofit organization Native Sun Community Development received \$6.7 million from the DOE to deploy EV charging stations in Tribal community areas (DOE, 2021; Yañez-Barnuevo, 2022). This project, called the Upper Midwest Inter-Tribal EV Charging Community Network (also known as Electric Nation), was one of the largest awards given out by the Low Greenhouse Gas

Vehicle Technologies Research, Development, and Deployment fund (Yañez-Barnuevo, 2022). The award began in 2022 and lasted through 2025 to develop plug-in EV charging infrastructure within Tribal communities and their main travel routes (Quinnell & Hill, 2023). The scope of the Upper Midwest project was to install 59 DC fast charger (DCFC) hubs and 63 Level 2 charging stations; ensure that all 23 Native Nations in North Dakota, South Dakota, and Minnesota have at least one Level 2 charging station; and distribute 19 EVs for use by Tribal governments, utilities, schools, and businesses. Native Nations targeted in Minnesota include Red Lake, White Earth, and Leech Lake, among others.

Native Sun Community Development has also received DOE funding to expand regional electric vehicle supply equipment (EVSE) Access in Native Nations. This is a three-year initiative that started in 2023 and will last through 2026 (Hill, 2026). This project targets the Native Nations located in Minnesota, Wisconsin, and Michigan. The objective is to identify opportunities for deployment of EVSE, install 15 EVSE, and evaluate the impact of EVSE in six communities.

Between 2023 and 2025, the Red Lake Nation installed six charging stations, the Leech Lake Nation installed one (but contains a total of two), and White Earth Nation installed two. In June 2025, Native Sun Community Development's CEO announced that there would be an installation of a DCFC outside the Red Lake Nation Embassy in south Minneapolis (Olson, 2025).

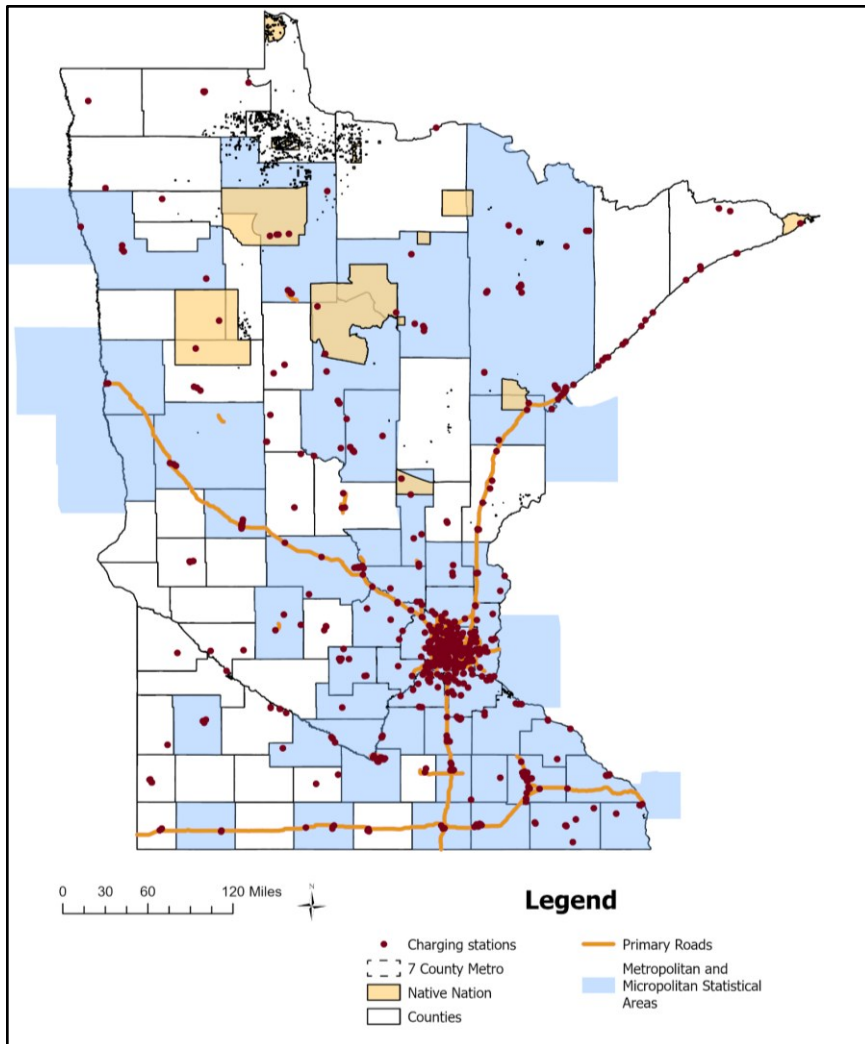
CHAPTER 4: DISTRIBUTION OF ELECTRIC VEHICLE INFRASTRUCTURE IN MINNESOTA

The following analysis examines trends in EV charging station and port counts across Minnesota and provides a visual snapshot of the current state of EV charging infrastructure.

4.1 STATEWIDE OVERVIEW

As of 2025, Minnesota had 1,092 charging stations and 2,973 charging ports, representing 1.35% of all stations and 1.14% of all ports in the United States (DOE, 2026a). In Minnesota, charging stations are heavily skewed towards highly populated areas (Figure 4.1). The Metro district, which includes the Seven-County Metro Area and Chisago County, contains 668 stations, accounting for approximately 61.2% of all stations in the state. The broader Minneapolis - St. Paul - Bloomington Metropolitan Statistical Area (MSA) contains fourteen counties and 703 stations, which is approximately 64.4% of all stations.

A high volume of stations is also observed in other MSAs such as Duluth, Rochester, Mankato, St. Cloud, La Crosse/Onalaska area, and the Fargo-Moorhead and Grand Forks areas, as well as their surrounding smaller towns. At the end of 2025, 17 counties had zero stations, with most being located in the rural western part of the state.



Notes: All stations and ports opened as of December 31, 2025. Source: (DOE, 2026a).

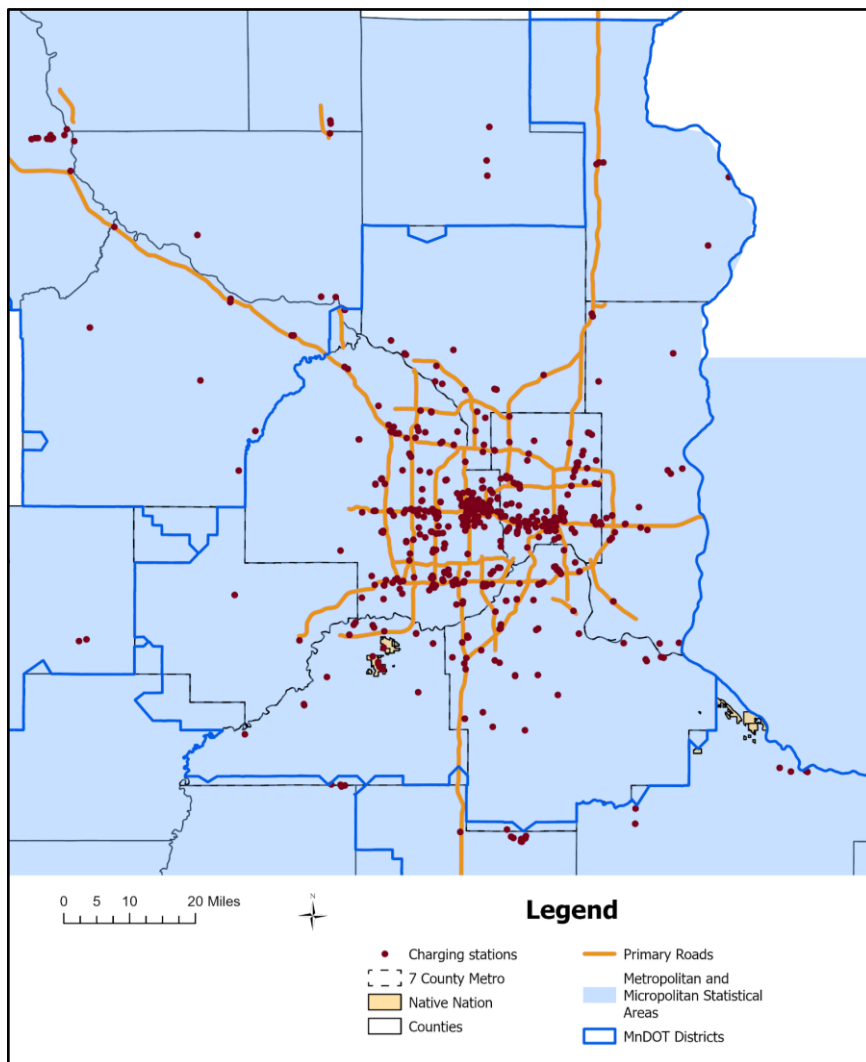
Figure 4.1 Map of EV charging stations in Minnesota

The Duluth MSA, composed of two Minnesota counties, has 39 stations (3.6% of all stations), while the surrounding rural non-MSA counties of Lake, Cook, Pine, Itasca, and Koochiching have almost the same amount at a combined total of 35 stations (3.2% of all stations). The Rochester MSA (four counties) contains 73 stations (6.7% of all stations), with Olmsted County having the overwhelming majority of the stations at 80.8% in that MSA. The Mankato and St. Cloud MSAs (each with two counties) have 28 and 16 stations, respectively. Lastly, the La Crosse/Onalaska, Fargo-Moorhead, and Grand Forks MSAs (each with one Minnesota county) have each five or fewer stations.

It is worth noting from Figure 4.1 that several Native Nations sharing geography with Minnesota have charging stations within their boundaries or located near reservations. For example, the Fond du Lac reservation has only one station on the southeastern border of the land at Black Bear Casino, but the surrounding cities of Cloquet, Steelton, and especially Duluth have multiple stations. The Prairie Island

Community has no stations, but it is near the cities of Hastings and Red Wing, each having four or more stations. Lastly, the Upper Sioux Community also does not contain any stations, but the closely located city of Granite Falls has one station.

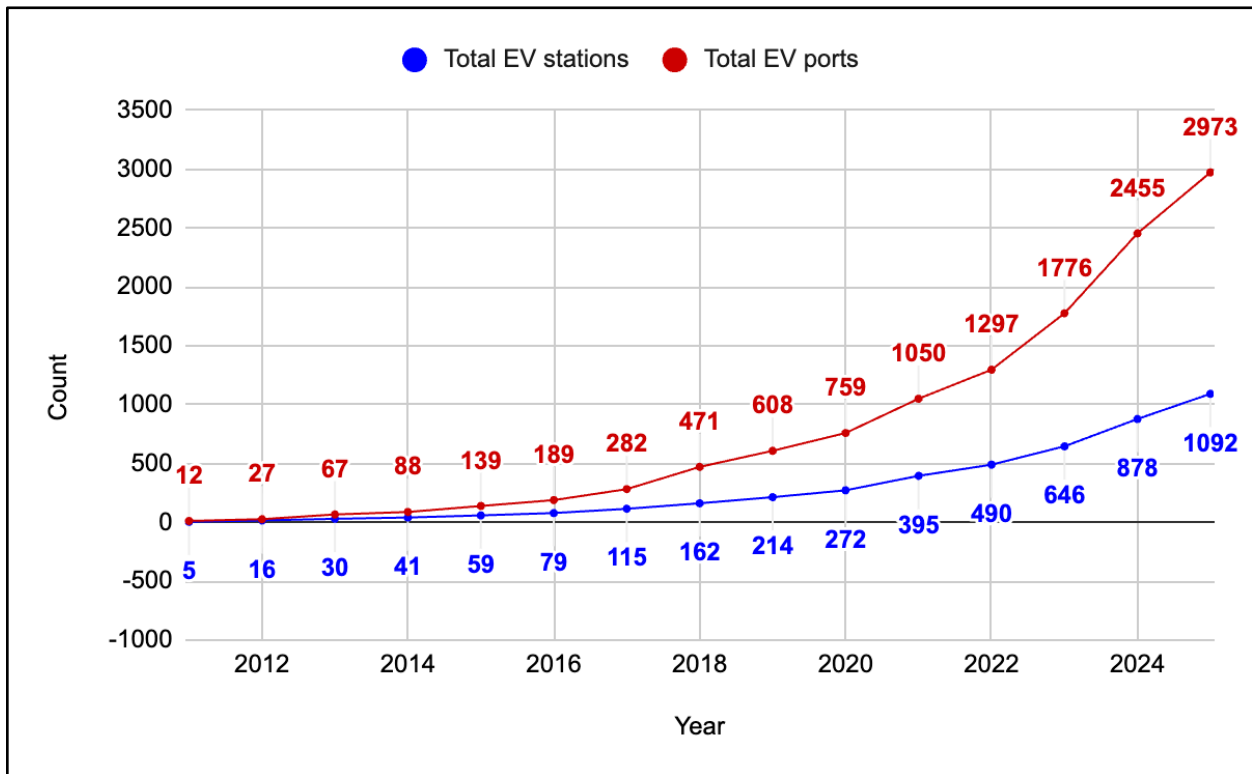
Across the Metro district in Minnesota, charging stations are mostly concentrated in Hennepin and Ramsey counties, particularly the Minneapolis-St. Paul-Bloomington area and its suburbs (Figure 4.2). Hennepin County and Ramsey County have 339 and 176 stations, respectively (that is, 31% and 16.1% of the whole state, and 50.7% and 26.4% of the Metro district, respectively). The rest of the 22.9% of stations in the Metro district are disbursed across the outer areas in Scott, Anoka, Dakota, and Washington counties. The Chisago and Carver counties are outliers compared to the rest of the Metro district area, with only five and two stations, respectively.



Notes: All stations and ports opened as of December 31, 2025. **Source:** (DOE, 2026a).

Figure 4.2 Map of EV charging station in MndOT Metro district

The number of EV charging stations and ports has grown exponentially over the past decade in the state (Figure 4.3). The number of charging stations increased from five in 2011 to 1,092 in 2025. Overall, both stations and ports experienced a more rapid growth throughout the 2010s, with an average growth rate of 63.1%, followed by a slowdown in the 2020s, with a growth rate of 32.3%. Despite the growth rates, the absolute number of stations and ports added on average each year significantly increased in both periods. From 2011 to 2019, an average of 24 stations and 68 ports were added annually, compared to 146 stations and 394 ports from 2020 to 2025. The exponential increase in counts seen towards the end of the 2010s and during the early 2020s directly aligns with the timeline of funding initiatives mentioned above, especially between 2023 and 2025. In addition, the trend mirrors the national trend, despite Minnesota accounting for only 1% of all US stations.



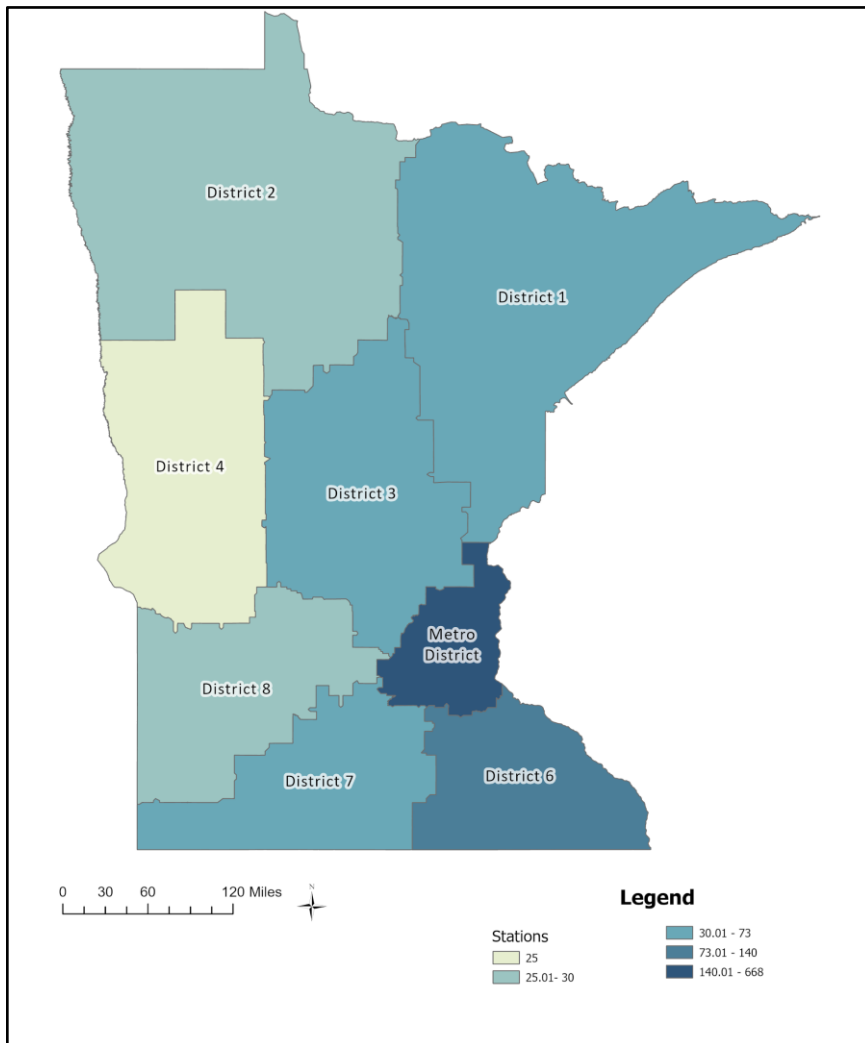
Notes: All stations and ports opened as of December of the year included. **Source:** (DOE, 2026a).

Figure 4.3 Total EV charging stations and ports in Minnesota over time

Over time, the average ports per station for the entire state remains relatively stable, ranging from 1.89 to 2.91 across the study period. Despite the statewide stability, the range of ports per individual stations varies significantly, with some stations containing a single port and others having close to twenty ports (which are mostly part of the Tesla Supercharger network).

4.2 CHARGING INFRASTRUCTURE BY AREA TRANSPORTATION PARTNERSHIP/MNDOT DISTRICT

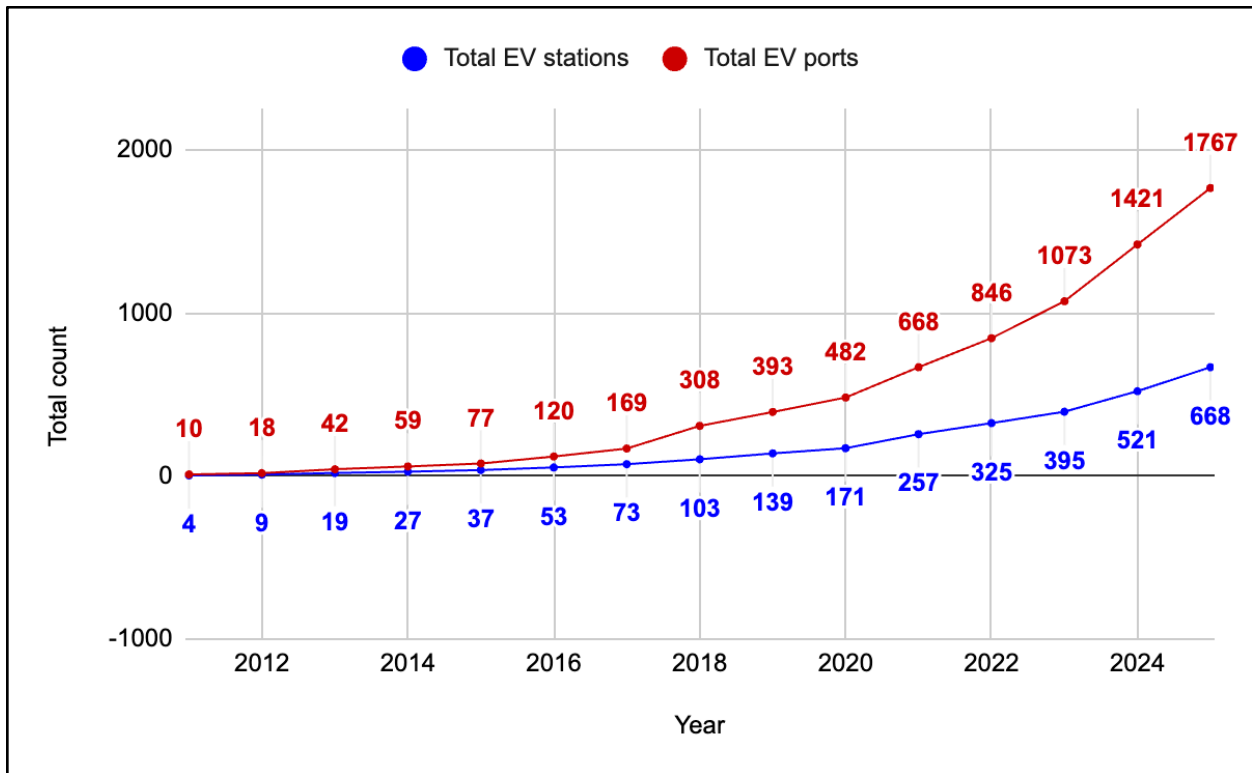
As of 2025, the Metro district (District 5) contains the most charging stations and ports compared to the rest of greater Minnesota, as shown in Figure 4.4. The Metro district alone concentrates 61.2% of the total stations in the state. District 6 in southeastern Minnesota has the second-most stations, with 12.8% of all stations. District 3, which contains Duluth, has the third most stations, with approximately 6.7%. Districts 2, 4, and 8 (all western Minnesota) have the smallest count of stations with 30 or fewer in each; combined, they make up only 7.8% of the total stations in Minnesota. Districts 3 and 7 maintain the fourth and fifth most, respectively, which aligns with them both containing alternative fuel corridors despite being in rural parts of Minnesota.



Notes: All stations opened as of December 31, 2025. **Source:** (DOE, 2026a).

Figure 4.4 Count of charging stations across transportation districts

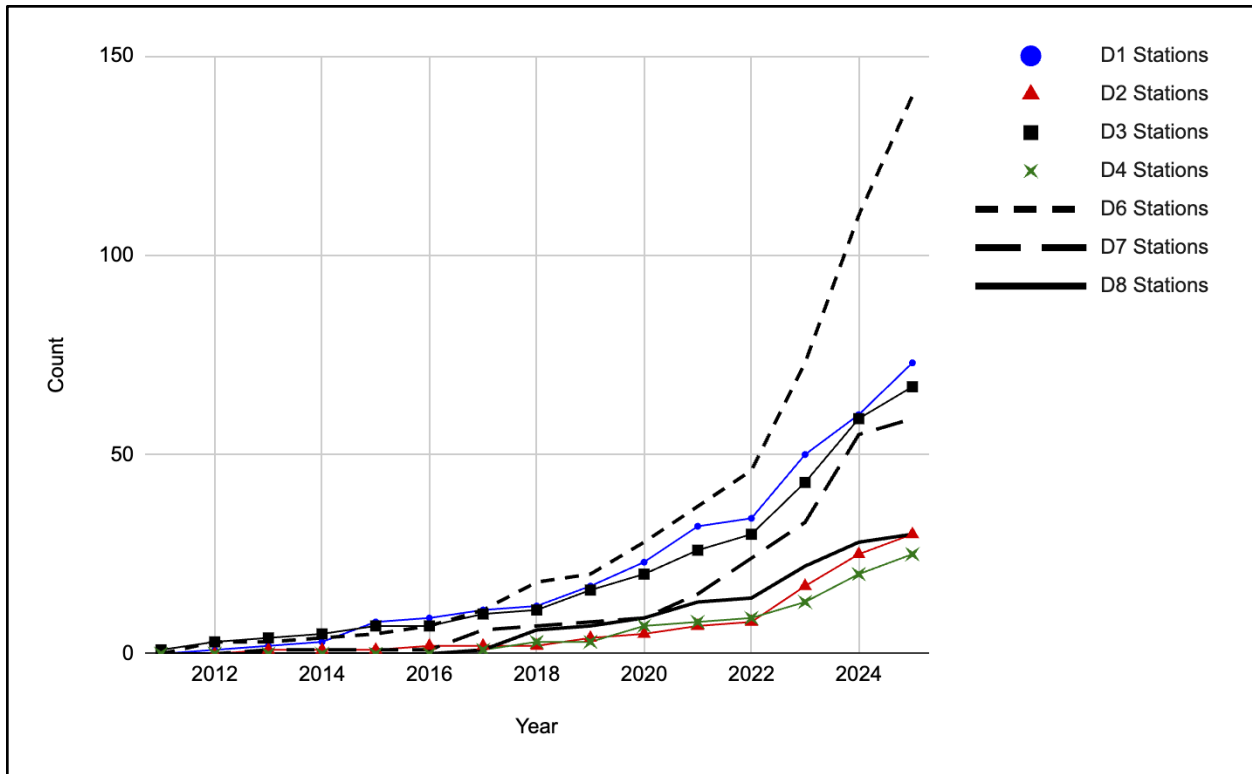
The Metro district (District 5) experienced steady growth in both stations and ports until 2018, when exponential growth began (Figure 4.5). Between 2011 and 2025, the district’s average station growth rate was 46.7%. From 2017 to 2019, the number of ports more than doubled, from 169 to 393, and that steep growth rate continued each year, especially after the start of the 2020s. This pattern aligns with funding from the VW settlement fund disbursement and NEVI program. While stations did not increase as rapidly as ports, the district still experienced a 290% increase in the number of stations from 2020 to 2025.



Notes: The Metro district includes Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, and Washington counties. All stations and ports opened as of December of the year referenced. **Source:** (DOE, 2026a).

Figure 4.5 Total count of EV charging stations over time in the Metro district

Across Minnesota, Districts 3 and 5 were the early adopters of charging stations, with infrastructure installed in 2011. Other districts gradually added charging infrastructure over time (Figure 4.6). District 4 and District 8 (both in western Minnesota) did not see infrastructure adoption until 2017.



Notes: Includes all MnDOT districts/ATPs in Greater Minnesota. Excluded the Metro district. All stations opened as of December of the year referenced. **Source:** (DOE, 2026a).

Figure 4.6 Total count of EV charging stations over time in the Greater Minnesota Districts

As previously mentioned, District 6 (which includes Rochester) ended 2025 with the most stations, excluding the Metro district, but did not become the leader in greater Minnesota counts until 2018. In 2011, District 6 had zero stations. From 2012 to 2025, the average growth rate was 35.6%. From 2018 to 2025, the growth rate was over 670%, which was higher than the Metro district growth rate at approximately 550%. This trend in District 6 aligns with the VW settlement and NEVI program funding timeline to expand the fast-charging stations along key interstates and state highways, particularly in the 2020s. Cities like Faribault, Owatonna, and Albert Lea are located along I-35, one of the alternative fuel corridors in the state. Additionally, cities like Red Wing, Cannon Falls, Rochester, and St. Charles are along state highways that saw an increase in infrastructure adoption because of the settlement (MPCA, 2026a).

Districts 1 (which includes Duluth) and 3 (which includes St. Cloud) maintained their second and third positions over time. District 1 did not have any stations in 2011; the average growth rate from 2012 to 2025 was 44%. District 3 did have one station in 2011, and the average growth rate from 2011 to 2025 was 40.1%.

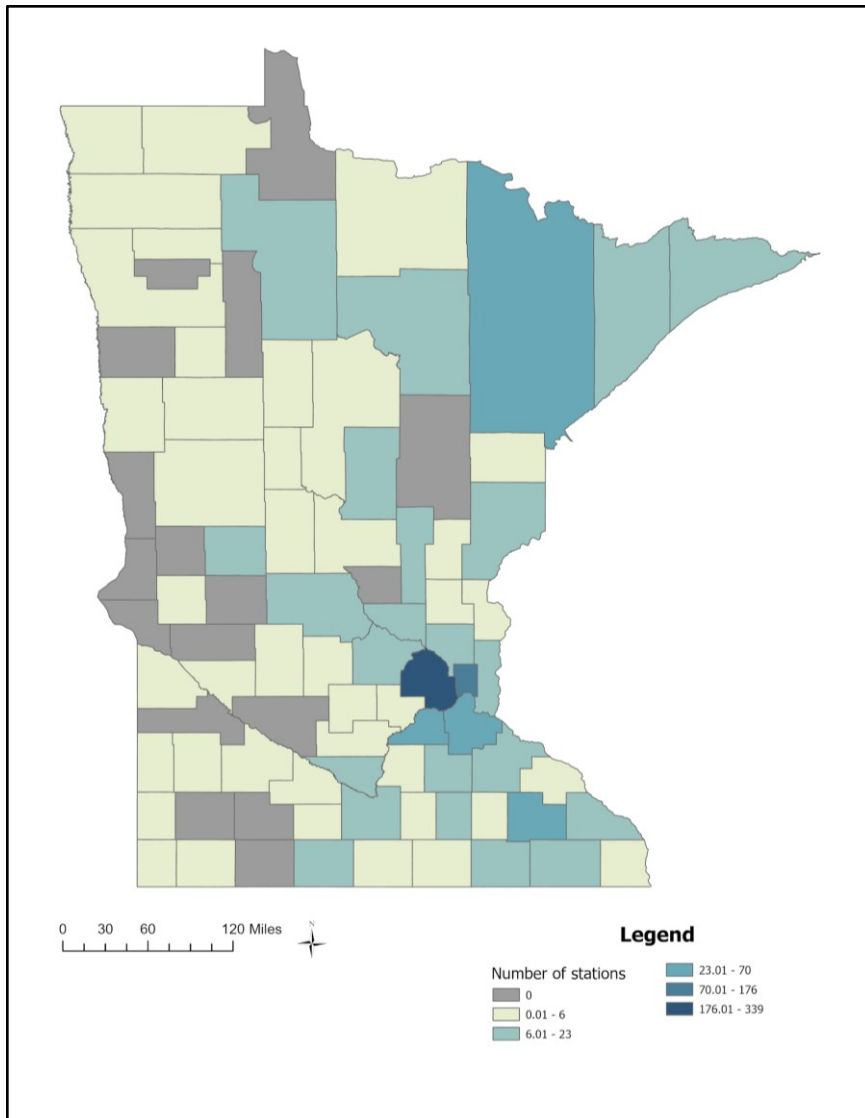
For both stations and ports, Districts 2, 4, and 8 (all western MN districts) consistently had the lowest counts during the entire study period. Districts 2 and 4, which contain Native Nations, saw a significant increase in charging stations from 2022 through 2025 compared to the 2010s and early 2020s, aligning

with the Electric Nation project timeline. From 2022 to 2025, District 2 saw a growth rate of 275%, compared to the previous years, where there were additions of only one to two stations each year. Similarly, from 2022 to 2025, District 4 saw a growth rate of 177.8%, again, compared to the previous years that only added one to four a year.

4.3 CHARGING INFRASTRUCTURE BY COUNTY

Charging stations are unevenly distributed across Minnesota counties (Figure 4.7). On average, each county in Minnesota in 2025 had 12.6 charging stations, with a range varying between 0 and 339. Hennepin (339), Ramsey (176), Dakota (70), Olmsted (59), and St. Louis (34) counties have the most stations and the highest station density per square mile (see Figure 9). While these counties have the most stations in the state, they do not have the most stations per capita: Hennepin (0.0003), Ramsey (0.0003), Dakota (0.0001), Olmsted (0.0004), and St. Louis (0.0002). The county with the most stations per capita is Cook County, with 0.001.

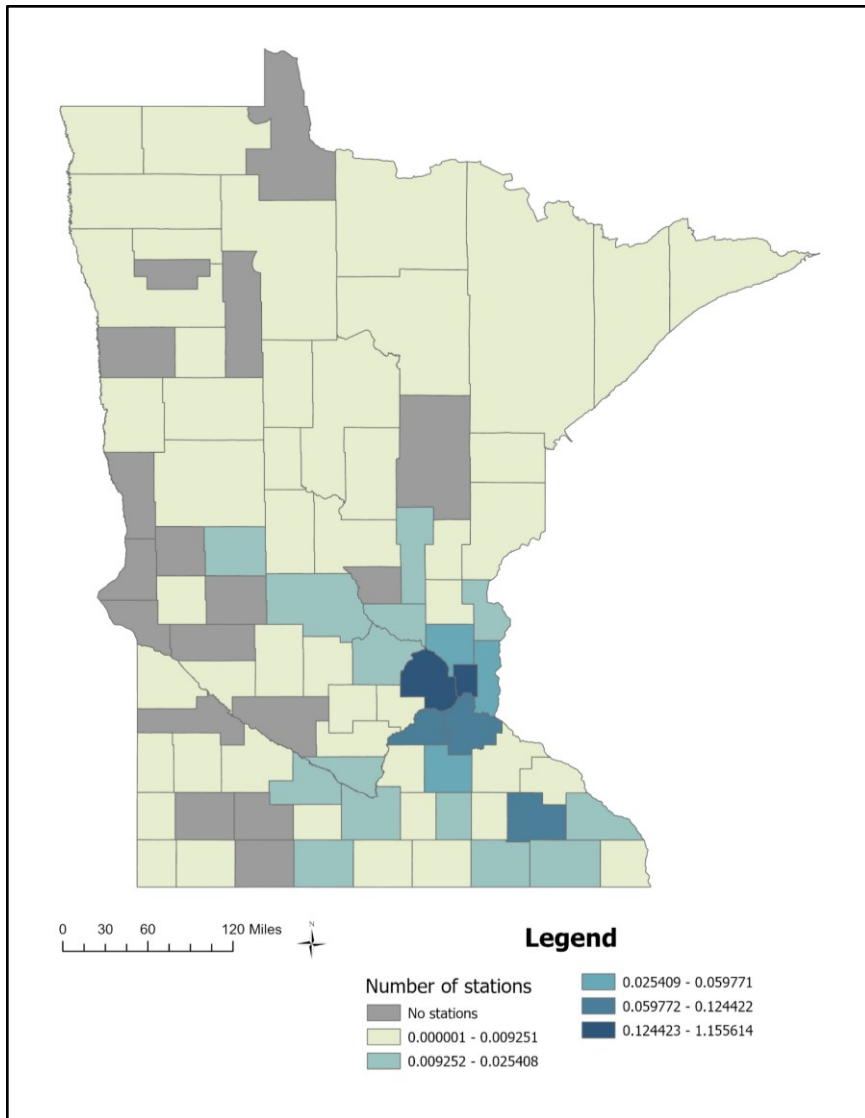
In contrast, the counties with the fewest stations, excluding zero-station counties, are Koochiching, Marshall, Kittson, Lac qui Parle, Pennington, Mahnomen, Lincoln, and Dodge counties, all with one station. Through the end of 2025, 17 counties have no stations: Aitkin, Benton, Big Stone, Clearwater, Cottonwood, Grant, Jackson, Lake of the Woods, Murray, Norman, Pope, Red Lake, Renville, Swift, Traverse, Wilkin, and Yellow Medicine.



Notes: All stations opened as of December 31, 2025. In gray, counties with no charging stations. **Source:** (DOE, 2026a).

Figure 4.7 Count of charging stations per county in Minnesota

Hennepin, Ramsey, and Dakota counties lead both in absolute station counts and stations per square mile (Figure 4.8). The counties with the highest per-square-mile count are Ramsey (1.16), Hennepin (0.61), Dakota (0.12), Scott (0.09), Olmsted (0.09), Washington (0.06), and Anoka (0.05). Excluding the counties with zero stations, the range of stations per square mile is 0.0003 to 1.16. Excluding the zero-station counties, the counties with the lowest counts of stations also have varying, but low, stations per square mile counts: Koochiching has 0.0003; Pennington, Mahnomon, Lincoln, and Dodge have 0.002 each; and Marshall, Kittson, and Lac qui Parle have 0.001 each.

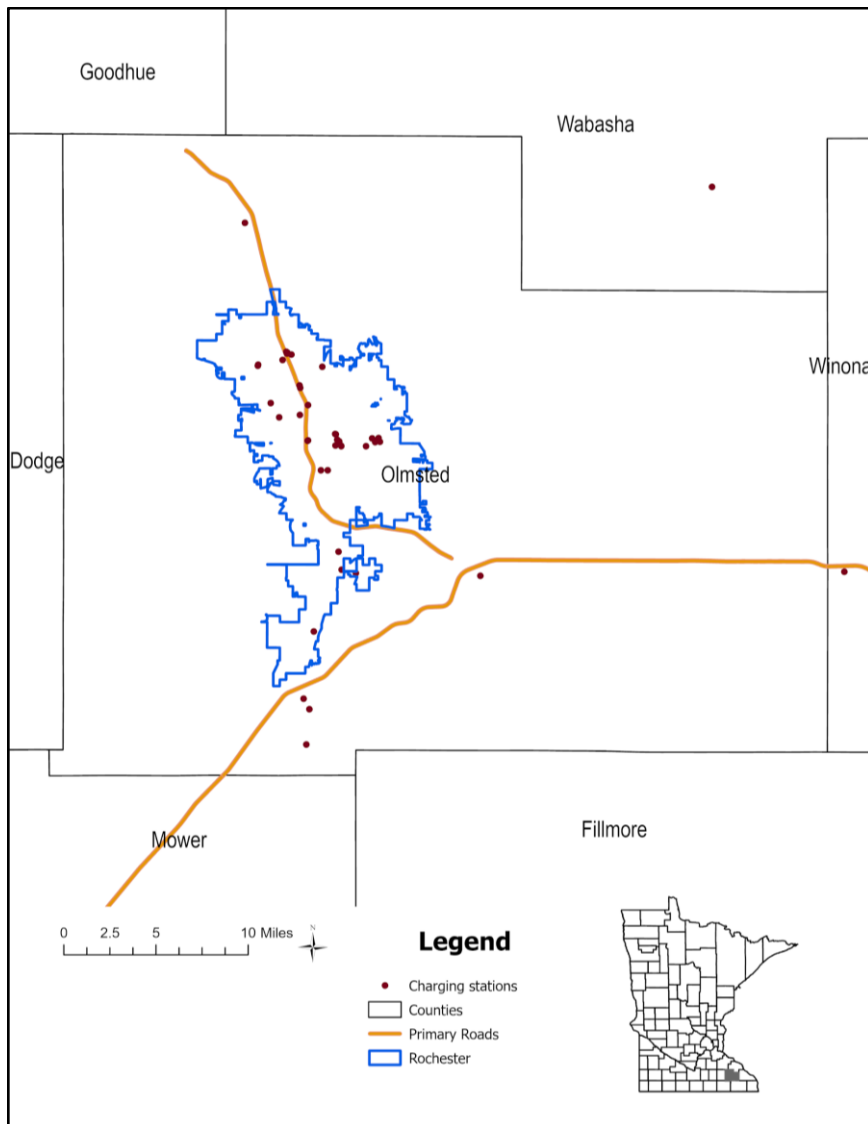


Notes: All stations opened as of December 31, 2025. **Source:** (DOE, 2026a).

Figure 4.8 Charging stations per square mile by Minnesota County

In Greater Minnesota, Olmsted and St. Louis counties have the highest counts of stations, though their stations per square mile align with those of other Greater Minnesota counties. Both counties are highly populated compared to their surrounding rural counties and are home to important state industries. While Olmsted is known for its industrial and medical infrastructure and activity, St. Louis is known for its natural resources.

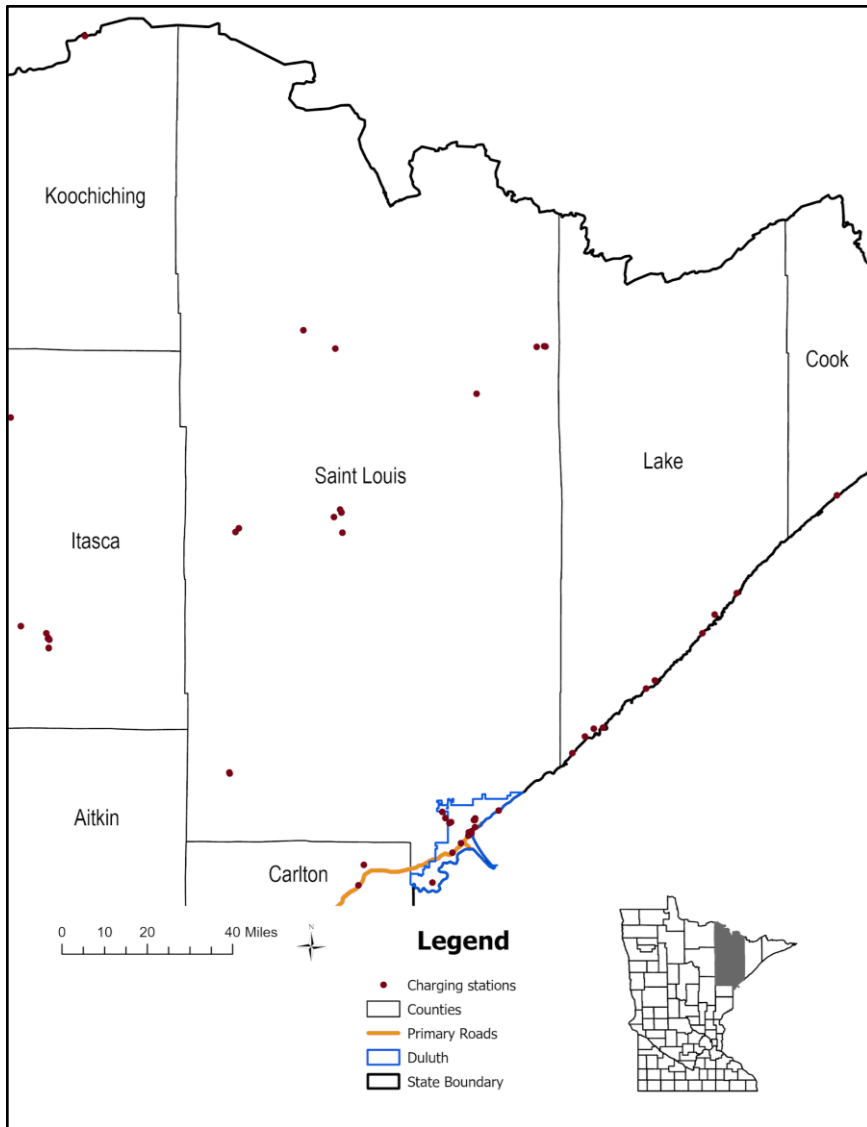
Charging stations in Olmsted County are particularly concentrated in the Rochester area (Figure 4.9). While Olmsted as a whole has the fourth most stations in the state, Rochester contains approximately 88.1% of all stations in the entire county. From 2020 to 2025, Rochester added 47 stations, or 79.7% of total stations in the city. In addition to those, there are a fair number of stations in Northfield, Faribault, Owatonna, Austin, and Winona.



Notes: All stations opened as of December 31, 2025. **Source:** (DOE, 2026a).

Figure 4.9 Distribution of stations in Olmsted County

St. Louis County has the fifth most stations in the state, with Duluth (the most populous area) containing exactly 50% of all stations in the county (Figure 4.10). Between 2020 and 2025, Duluth added 13 stations, approximately 76.5% of the total stations in the city. The other half of the stations in St. Louis County are disbursed in the less populated northern and western parts of the county, many in tourist areas like parks, hotels, and trailheads.



Notes: All stations opened as of December 31, 2025. **Source:** (DOE, 2026a).

Figure 4.10 Distribution of stations in St. Louis County

CHAPTER 5: CONCLUSIONS

The adoption of EV charging infrastructure in Minnesota has grown rapidly over the past decade, reflecting broader national trends. Between 2011 and 2025, the number of stations and ports has significantly increased from a handful to 1,902 stations and 2,973 ports, aligning with targeted funding programs and the growing demand for EV infrastructure. However, the growth has not been evenly distributed. Charging stations are concentrated in urban and populated areas, particularly in the Metro district. Minnesota has also seen increasing EV charging infrastructure adoption across Greater Minnesota, particularly in areas such as Duluth, Rochester, and other larger cities. Despite this progress, disparities remain in rural areas.

Overall, federal initiatives, such as the NEVI program and the VW Settlement, along with local and Tribal funding initiatives, seem to have been instrumental in the deployment of EV charging infrastructure. The timelines of these programs align closely with station installation across the state, particularly during the early 2020s.

While this report focuses on the distribution of EV charging infrastructure in Minnesota due to data availability, it does not capture how this infrastructure serves users. Future research should focus on the accessibility of that infrastructure, analyzing the ease of accessing it (e.g., do users pay to access it? Do they require certain credentials to access it?) and station reliability (e.g., how often is the station out of service?). Analyzing these dimensions would provide a more comprehensive understanding of how the existing infrastructure works and how it supports the adoption of EVs. This information would also inform future planning and decision-making.

REFERENCES

- Bestvater, S., & Shah, S. (2024). *Electric Vehicle Charging Infrastructure in the U.S.* Pew Research Center. <https://www.pewresearch.org/data-labs/2024/05/23/electric-vehicle-charging-infrastructure-in-the-u-s/>
- Brown, A., Lommele, S., Eger, R., & Schayowitz, A. (2020). *Evolution of Plug-In Electric Vehicle Charging Infrastructure in the United States*. Presented at the 33rd Electric Vehicle Symposium (EVS33). <https://afdc.energy.gov/files/u/publication/evolution-pev-charging-infrastructure.pdf>
- Christianson, M. (2023). *Tracking Electric Vehicle Investments in the Infrastructure Investment and Jobs Act and Inflation Reduction Act*. Environmental and Energy Study Institute. <https://www.eesi.org/articles/view/tracking-electric-vehicle-investments-in-the-infrastructure-investment-and-jobs-act-and-inflation-reduction-act>
- City of Saint Paul. (2023). *EV Spot Network Project Planning*. EV Spot Network. <https://www.stpaul.gov/departments/public-works/transportation-and-transit/ev-spot-network/ev-spot-network-project>
- City of Saint Paul. (2026). *EV Spot Network*. Transportation and Transit. <https://www.stpaul.gov/departments/public-works/transportation-and-transit/ev-spot-network>
- Craddock, I. (2025). *NEVI is back: Navigating new rules and retailer opportunities with Electric Era*. Electric Era. Electric Era. <https://electricera.tech/resources/nevi-is-back-navigating-new-rules-and-retailer-opportunities-with-electric-era-1eea2>
- DOE. (2021). *Fiscal Year 2021 Low Greenhouse Gas (GHG) Vehicle Technologies Research, Development, Demonstration and Deployment*. U.S. Department of Energy. https://www.energy.gov/sites/default/files/2021-10/FY21_VTO_2475_Low_GHG_selections_table-for_release.pdf
- DOE. (2025). *Alternative Fuel Infrastructure Tax Credit*. Alternative Fuels Data Center: Laws and Incentives. <https://afdc.energy.gov/laws/10513>
- DOE. (2026a). *Alternative Fueling Station Locator* [Station Location]. <https://afdc.energy.gov/stations#/find/nearest>
- DOE. (2026b). *National Electric Vehicle Infrastructure (NEVI) Formula Program*. U.S. Department of Energy. Alternative Fuels Data Center. <https://afdc.energy.gov/laws/12744>
- Domonoske, C. (2025). *After a freeze, Trump administration reluctantly agrees to fund EV chargers*. <https://www.npr.org/2025/08/15/nx-s1-5501584/ev-charger-nevi-funding>
- Electrification Coalition. (2025). *National Electric Vehicle Infrastructure (NEVI) Program Updated Guidance*. Electrification Coalition. <https://electrificationcoalition.org/resource/national->

electric-vehicle-infrastructure-nevi-program-updated-guidance/#:~:text=Key%20Changes:,of%20physical%20and%20cybersecurity%20strategies

- FHWA. (2016). *Federal Highway Administration Unveils National 'Alternative Fuel and Electric Charging' Network*. Federal Highway Administration. Briefing Room. <https://www.fhwa.dot.gov/pressroom/fhwa1656.cfm>
- FHWA. (2022). *National Electric Vehicle Infrastructure Formula Program*. Federal Register. <https://www.federalregister.gov/documents/2022/06/22/2022-12704/national-electric-vehicle-infrastructure-formula-program>
- FHWA. (2023). *Biden-Harris Administration Celebrates Opening of Nation's First NEVI-Funded EV Charging Stations in Ohio and New York*. Newsroom. <https://highways.dot.gov/newsroom/biden-harris-administration-celebrates-opening-nations-first-nevi-funded-ev-charging#:~:text=Biden%2DHarris%20Administration%20Celebrates%20Opening,Ohio%20and%20New%20York%20%7C%20FHWA>
- Hill, S. (2026). *Expanding regional EVSE access with Tribal Nations based on community priorities*. Center for Energy and Environment. <https://www.mncee.org/expanding-regional-evse-access-tribal-nations-based-community-priorities>
- IRS. (2026). *Alternative Fuel Vehicle Refueling Property Credit*. Internal Revenue Service. Clean Energy and Vehicle Credits and Deductions. <https://www.irs.gov/credits-deductions/alternative-fuel-vehicle-refueling-property-credit>
- Joint Office of Energy and Transportation. (2026). *Electric Vehicle Charging Infrastructure Growth*. Joint Office of Energy and Transportation. https://driveelectric.gov/stations-growth?level_2=true&dc_fast=true&available=true&start_month=2021-01&end_month=2026-02
- King, A. (2026). *The United States of NEVI: The Current Outlook on the NEVI Program at the State-Level*. ACT News. <https://www.act-news.com/news/the-united-states-of-nevi/#:~:text=Key%20Takeaways,new%20funding%20rounds%20in%202026>
- MnDOT. (2025). *Minnesota Electric Vehicle Infrastructure Plan—FFY 2022-2026*. Minnesota Department of Transportation. https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=38959541
- MnDOT. (2026a). *Area Transportation Partnerships (ATPs)*. Minnesota Department of Transportation. Project Development. <https://www.dot.state.mn.us/project-development/functional-groups/area-transportation-partnerships.html>

- MnDOT. (2026b). *National Electric Vehicle Infrastructure Program in Minnesota*. Electric Vehicle Infrastructure. <https://www.dot.state.mn.us/ev-infrastructure/nevi.html>
- MPCA. (2026a). *Electric vehicle charging stations*. Volkswagen Settlement Grants. <https://www.pca.state.mn.us/air-water-land-climate/electric-vehicle-charging-stations>
- MPCA. (2026b). *Using Volkswagen settlement for clean transportation*. Minnesota Pollution Control Agency. <https://www.pca.state.mn.us/air-water-land-climate/using-volkswagen-settlement-for-clean-transportation>
- Olson, M. (2025). Native-led EV program connects south Minneapolis neighborhood to growing energy network. *Native News*. <https://www.mprnews.org/story/2025/06/30/native-led-ev-program-south-minneapolis-neighborhood-energy-network>
- Quinnell, J., & Hill, S. (2023). *Upper Midwest Inter-Tribal EV Charging Community Network*. Center for Energy and Environment. <https://www.mncee.org/upper-midwest-inter-tribal-ev-charging-community-network>
- USDOT. (2025). *President Trump's Transportation Secretary Sean P. Duffy Unveils Revised NEVI Guidance to Allow States to Actually Build EV Chargers*. Newsroom. <https://www.transportation.gov/briefing-room/president-trumps-transportation-secretary-sean-p-duffy-unveils-revised-nevi-guidance>
- Yañez-Barnuevo, M. (2022). *Indigenous Communities to Launch EV Charging Network in Midwest*. Environmental and Energy Study Institute. <https://www.eesi.org/articles/view/indigenous-communities-to-launch-ev-charging-network-in-midwest>