

# **EV Readiness Guide**

# **Prepare for Electric Vehicles in Your Community**



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#### **Using The Guide:**

Recognizing that each community's planning and implementation begins from a different starting point with respect to knowledge, existing capacity, codes, economic need, and demographics, the guide has been organized into colorcoded sections. Relevant sections can support any point in your planning process:

# IntroEV Uses & ChargingCommunity PlanningImplementationAppendices

# **NTRO**

# About This Guide

The future of transportation is electric. Ameren Illinois is working across our service territory to ensure that no community gets left behind as the transition to electric vehicles (EVs) unfolds. Local governments play a key role in this transition, securing the necessary resources for transportation electrification and deploying them in an effective and equitable way throughout their communities.

We hope communities and municipal leaders find this **EV Readiness Guide for Communities** to be a valuable resource. Use it to support your thinking as you develop local infrastructure plans, seek federal and state funding, and establish programs that bring clean transportation to your area. Ameren Illinois stands ready to partner with all communities across our service territory — large and small, rural, exurban, suburban and urban — by offering industry best practices and helping communities adopt and promote electrified transportation to fleet owners, residences, and local businesses. Supporting residents and businesses as they move to electric is critical and requires collaboration between cities, counties, and local stakeholders to ensure a smooth transition.

#### What You'll Find Inside

- Planning Guidance
- Charging Use Cases
- Permitting Approaches
- Funding Opportunities
- Environmental Justice & Equitable Inclusion

In line with the State of Illinois' electrification goals, Ameren Illinois has been building a foundation to support and facilitate EV readiness across our service territory. Ameren Illinois delivers energy to 1.2 million electric customers across 1,200 communities over 44,000 square miles. More than 100 of the state's 1,084 public charging stations operate in Ameren Illinois' service territory. The pool of EVs located in our service territory today is small relative to the millions of vehicles that travel our roads each day. But the rate of adoption is growing aggressively and will continue to expand in coming years. To support that transition, Ameren Illinois offers EV Rate Programs for residential and business customers, as well as incentives to install charging at multifamily complexes, educational institutions, and transit agencies. Companies along identified major travel corridors and other public locations may qualify for additional incentives. We encourage you to <u>visit our</u> <u>website</u><sup>1</sup> for updates and EV-related information.

# Background

Increasing EV choices that fit the needs of residents and commercial fleet owners will drive adoption rates across Illinois and throughout the U.S.



**Figure 1:** EV adoption rates from 2010-present and including forecast through 2030 Source: Adapted from the 2020 Argonne National Laboratory Electric Vehicle Adoption in Illinois report



**Figure 2:** Major auto manufacturer EV commitments 2021 - 2030



# Illinois Is Meeting the Challenges Head On<sup>2</sup>

# **DRIVE ELECTRIC ILLINOIS**<sup>3</sup>

- \* Set goal of <u>1 million EVs</u><sup>4</sup> on its roads by 2030
- \* Created an EV Coordinator position at the Illinois Environmental Protection Agency
- \* Launched an <u>EV rebate program</u><sup>5</sup>



**Figure 3:** Source of greenhouse gas emissions in Illinois by Tailpipe (TTW) and Well to Wheels (WTW)

#### **EVs Benefit Drivers and Communities**



**Lower operating costs:** EVs have far fewer moving parts that may require replacement than traditional vehicles, typically resulting in less maintenance.



**Quiet and smooth ride:** EVs operate quietly and smoothly, without the noise and vibration associated with gasoline-powered vehicles.



**Innovation and technological advancement:** The growing EV market drives innovation, spurring new developments in battery technology, charging infrastructure, and more.



**Job creation:** New job opportunities have already been created across a variety of sectors in Illinois, including manufacturing, construction, and research and development to meet the demand for producing and maintaining EVs and their related components and infrastructure. Communities that offer workforce training programs for these new, skilled labor careers not only augment their residents' employment options but will also draw jobs to areas where a trained pool of workers is based.



**Increased investment:** As companies seek to develop new technologies and infrastructure, the increased investment can spur further economic growth and development. Communities can attract this investment by offering tax incentives and preparing a skilled labor force that is ready to fill jobs in these new areas. Municipalities can entice researchers and manufacturers in these new fields to locate their facilities in their community by offering tax incentives, infrastructure assistance and a local skilled labor force.



**Reduced energy costs:** EVs, which typically operate more efficiently than their gas counterparts, help to reduce energy costs for consumers and businesses, allowing households and businesses to spend those savings locally.



**Export opportunities:** As global demand for EVs continues to grow, so do the opportunities for countries to become leaders in the production and export of EVs and their components.



**Improved public health:** EVs help reduce the negative health impacts associated with air pollution from vehicles — including respiratory problems like asthma — and help mitigate other pressing environmental challenges like climate change.

# **Partnership**

#### **Consumers, Governments, and Utilities All Have a Role to Play**

Technological advances, incentives, and growing consumer demand all can help drive down costs of EV ownership and charging station installations.

#### Illinois Invests in EVs: Rebuild Illinois and the Climate and Equitable Jobs Act (CEJA)

<u>Rebuild Illinois</u><sup>6</sup> and <u>CEJA</u><sup>7</sup> aim to establish Illinois as one of the best states in the nation for driving and manufacturing EVs. State programs complement federal funding opportunities for Illinois available via the Infrastructure Investment and Jobs Act (<u>IIJA</u><sup>8</sup>), the Inflation Reduction Act (IRA), and other initiatives.

- **Charging infrastructure:** Investing \$150 million in the development of a public charging station network in the state.
- Financial incentives: Offering several financial incentives<sup>9</sup> to encourage the adoption of EVs, including CEJA rebates of up to \$4,000 for the purchase of new EVs and incentives for the installation of home charging stations.
- Education and outreach: Promoting awareness and education about EVs through campaigns like "Drive <u>Electric Illinois</u><sup>10</sup>," which provides resources and information to consumers about EVs and the benefits of driving electric.
- Regulatory support: Passing legislation<sup>11</sup> that supports the adoption of EVs, including requiring that, by 2025, 25% of light-duty vehicles purchased by state agencies must be EVs and that new buildings and homes must be EV ready.



#### Challenges To Adoption in Rural Counties

The Illinois Center for Transportation's <u>Electric Vehicle Infrastructure Plan</u><sup>12</sup> found that the state's rural counties have the highest number of gas stations, lowest number of charging stations, and lowest EV adoption rate. Installing charging stations in rural areas even before driver demand for them materializes will encourage greater adoption and ensure that the needs of long-distance drivers are met.



#### How Ameren Illinois is Preparing for EV Charging Adoption

As part of its efforts to prepare for a statewide surge in EV charging demand, Ameren Illinois has taken several steps, including:



- Adapting rate structures: Implementing rate structures for EV charging that take into account the unique characteristics of charging station installations, such as high-power demand and potential for off-peak charging. These rate structures are designed to be cost-effective for both station owners and users.
- Partnering with stakeholders: Ameren Illinois has formed partnerships with a variety of stakeholders, including government agencies and EV charging station providers to encourage charging station installations and EV adoption throughout the region.
- Creating an information hub: The Ameren Illinois website hosts <u>an extensive guide</u> for residential and business consumers that provides information, savings calculators, and FAQs on rebates, available vehicles, home charging installation, fleets, and more.

Ameren Illinois is working aggressively to prepare new EV charging station installations. As we continue to work closely with key stakeholders and develop innovative rate structures and incentives, we are committed to working with our customers to support EV adoption throughout our service territory.

• Conducting an EV infrastructure assessment: Ameren Illinois has conducted a comprehensive assessment of its service territory to identify locations where EV charging stations would be most beneficial. This assessment includes analysis of factors such as population density, transportation corridors, and existing charging infrastructure. Our interactive <u>Ameren Illinois EV Corridors</u><sup>13</sup> map color codes the feasibility of adding EV charging along travel corridors throughout the state: Green indicates the location is ready for EVSE installation without upgrades; Yellow/Orange indicates EVSEs may be installed with some infrastructure upgrade work done first; and Red indicates that the infrastructure support is not yet there for EVSE installation but still has the potential to be added.





#### **Municipalities**

This **EV Readiness Guide for Communities** prepares municipal partners to address important questions from their constituents and to plan from the beginning for the equitable distribution of charging stations. Such preparation can help ensure that each community maximizes their access to the technological, infrastructural, and economic benefits the EV shift represents.





# **EV USES & CHARGING**

# **Key Terms & Abbreviations**

Before diving into planning, familiarize your team with some of the terms and abbreviations used throughout the guide and related to EVs more generally.

#### Vehicle Terms

Battery Electric Vehicle (BEV): An all-electric vehicle that uses an electric motor for power.

*Electric Vehicle (EV):* Powered by electricity and uses a battery to store energy and power the motor. Unless otherwise noted, EV refers to all plug-in vehicles in this report. When referencing Illinois' goal of having 1 million EVs on its roads by 2030, they are referring to all-electric vehicles or BEVs.

*Fuel Cell Electric Vehicles (FCEV):* Vehicles that produce electricity using hydrogen gas and have no harmful tailpipe emissions.

*Heavy-Duty Vehicle (HD):* Any Class Seven and above motor vehicle having a Gross Vehicle Weight Rating over 26,000 pounds. Typically a fleet vehicle.

*Internal Combustion Engine (ICE):* Vehicles that have an engine and are powered by fossil fuel (gas or diesel). This type of vehicle is associated with tailpipe emissions.

*Light-Duty Vehicle (LD):* Any Class One or Two motor vehicle designed primarily for transportation of persons and having a design capacity of twelve persons or less with a Gross Vehicle Weight Rating of 8,500 pounds or less. This includes sedans, full size pick-ups, and minivans.

*Medium-Duty Vehicle (MD):* Any Class Two to Six motor vehicle having a Gross Vehicle Weight Rating between 8,500 and 26,000 pounds. Typically a fleet vehicle.

*On-Road:* On-Road vehicle means any motor vehicle intended for use on the road, being complete or incomplete, having at least four wheels and a maximum design speed exceeding 15 mph.

*Off-Road:* Refers to operating any vehicle on a road not maintained by a federal, provincial, state, or local agency or to any vehicle which cannot be licensed to drive on a public road and is designed and manufactured primarily for off-road usage.

*Plug-in Hybrid Electric Vehicle (PHEV):* Vehicles with both an internal combustion engine and electric motor that can be powered either by gas or electricity through a rechargeable battery.

*Transit Vehicles:* Vehicles that carry passengers or public riders, not including school buses or charter buses.

#### **Charging Terms**

*Employee/Workplace Charging:* EV charging infrastructure provided by an employer for employee use while at work.

*Electric Vehicle Supply Equipment (EVSE):* An EV charging station, including all related hardware (e.g., connectors, fixtures, devices, and other components).

*Fleet Charging:* EV charging infrastructure to accommodate a light-, medium-, or heavy-duty fleet. Fleet charging infrastructure may consist of Level 2 and DC Fast Chargers based on fleet operator's needs.

*Public Charging:* Public charging covers a wide range of places where EV chargers are made available for public use, like libraries, parks, shopping centers, and museums.

#### **Additional Terms**

*Bike Share:* A service where bicycles are available for shared use to individuals on a short-term basis.

*Car Share:* Service that offers members access to an automobile for short-term use, usually by the minute, hour, or day.

*Electric Bike (E-Bike):* E-bikes are bicycles with an electric motor that can be used as propulsion assist.

**EV Equity:** Includes increasing access to and use of EVs among low- and moderate-income communities to reduce impacts of climate change attributed to greenhouse gas emissions and health impacts attributed to air pollution.

*EV Infrastructure Building Codes:* Requirements added to building codes for new construction to include the electrical equipment necessary to enable installation of EV charging stations. EV building codes give more people the option to drive an EV by increasing the number of charging stations and by bringing down charger installation costs by 75% or more compared to installing EV chargers during a building retrofit.

*Micromobility:* Use of a low-speed travel mode or use by a single person and includes use of e-scooters and bikes to travel distances five miles or less and often to or from another mode of transportation (bus, train, car).

*Multimodal:* Travel that encompasses the use of several different travel modes or options.

*Shared Mobility:* Shared use of a travel mode.

*Transportation Network Companies (TNCs):* Programs, like ride-hailing apps, that provide prearranged and ondemand transportation services for compensation by connecting drivers of personal vehicles with passengers through mobile applications.



# **EV Use Cases & Charging Options**

EVs are used across a wide array of contexts. To adequately and equitably accommodate and plan for the needs of different EVs and their drivers, municipalities should evaluate those use cases and their different charging requirements.

	Residential	<ul> <li>The vast majority of EVs on today's roads are light- duty (LD) vehicles owned and operated by individual households. To ensure adequate charging infrastructure, planning must take into account the diverse living situations across a particular community, including any combination of the following:</li> <li>Single-dweller homes with the ability to install charging at home</li> <li>Multi-unit dwellings with shared lots</li> <li>On-street parking with permitted or restricted parking</li> <li>Lots with assigned spaces, whether paid or free</li> </ul>
Credit: Amazon	Commercial	Vehicle fleets represent a wide variety of use cases, from single-occupant LDs used around town to large delivery systems moving goods much longer distances. Fleet sizes also impact charging needs, ranging from municipal fleets with a handful of cars to commercial fleet operators with dozens, hundreds, or more vehicles. The needs of auto dealers as commercial electricity consumers are changing, too, as EV inventory on lots increases.
Credit Citylen Color Citylen Ci	Transit	Electric transit options are becoming increasingly common. Many transit operators have begun the long- term process of electrifying bus fleets.
RY ECT CHARGING PORT	Educational Institutions	Educational institutions of all types may need to install charging for faculty-, staff-, and student-owned personal EVs, for the institution's fleet, and/or for electric buses. Higher education institutions have also begun incorporating EV-specific curricula aimed at preparing workers for the emerging EV economy.
Ameren BEGuaret	Special Purpose Vehicles	EVs are being adapted for a wide array of applications from police departments to public works vehicles. These may range from LDs to HDs.

# **Charging Options**

Supporting EV charging stands at the center of the EV rollout. Municipalities aiming to support EVs must become familiar with charger types, potential locations, and the range of benefits that public charging can provide communities.

#### Why Install Charging Stations?

Charging offers a wide array of benefits for communities, both by serving EV operators within the community and by attracting tourists and travelers in need of a charge. Destination charging at restaurants, shopping malls, theaters, and retail establishments can provide readily available charging options for drivers moving around town. Fast charging along highway corridors support those on longer trips and provide a resource for commercial fleets. Hotels, airports, and other tourist destination locations have begun incorporating charging as an amenity to support travelers as well as taxi, bus, shuttle, and ride-share companies. Charging installations can require potentially expensive upgrades to electricity systems, which places a premium on careful planning processes and implementation of charging projects. Hiring trained, certified contractors ensures the safety of charging installation projects.

Charging Station Types	L1	L2	DCFC
	SAE. 11772	SAE. 11772	CCS (Combined Charging System)
Voltage Requirements	Standard household 120-volt outlet	240-volt outlet	480-volts or more
Speed (miles/hr charged)	Slow: 3-5 mph	Faster: 25 mph	Fastest: up to 400 mph
Power Consumption	Low: about as much as a standard hair dryer	High: often the highest-consumption device in a home	Very high
Most Often Installed For	Home use	Home, public lots, highway corridors	Public lots, large fleets, highway corridors
Benefits	Easy to install, requiring little to no cost or wiring upgrades	Often eligible for rebates, relatively inexpensive	Fast charging can support multiple vehicles quickly
Challenges	Slow speeds	Requires professional installation and, in some cases, electrical upgrades.	Far more expensive and can require electric infrastructure upgrades

#### **Plug Types**

Because there is no single, standard plug type, EV manufacturers install a variety of different ports on vehicles. In North America, manufacturers incorporate CCS, J-1772, CHAdeMO, and Tesla/NACS charging ports into EVs. Different drivers in your community very likely will require access to the full array of charger types. An Illinois Commerce Commission (ICC) Certified <u>Electric Vehicle Charging Station Installer</u><sup>14</sup> can help you determine the most likely charging stations and plug configurations that will be required, and the <u>U.S.</u> <u>Department of Transportation website</u><sup>15</sup> also provides a good overview of available types.



# **COMMUNITY PLANNING**



# **Community-Centered Electric Transportation Planning**

Communities large and small require assistance in deploying electric transportation options. The transition to EVs can pose challenges to all communities, especially in underserved and rural areas.

#### Steps in the Process:

- Goal Setting
- Data Gathering
- Community Engagement
- Incorporating Equity Considerations

# **Goal Setting**

The transportation planning process should begin with a goal-setting exercise that includes the appropriate staff, elected officials, and any local or external parties that can help support the process. Your municipality will need to develop not only the goals themselves, but also the impact they will have on your long-range plans, how to implement them, and what community needs they serve. Goals might include:

- EV adoption how many EVs should our community be ready to serve?
  - Current demand from your residents and businesses
  - Travelers who might stop in the community, both passing through to charge and as tourists staying in town
  - Forecasting how many EVs will be in your community well into the future
- Charging deployment
  - Where should charging be located in our community?
  - How many, of what types, and serving which kind of drivers?
- Community engagement
  - Who needs access to charging infrastructure and what are their patterns of use?
  - For the most complete picture of needs, be sure to solicit input from residents from a variety of ages, incomes, and housing situations; businesses, both small and large; and municipal departments that use (or plan to use) EVs.
- Equity
  - What marginalized or traditionally-excluded groups exist in your community, and how will you measure the benefits they receive from your programs as compared to the community at large?
  - Will you make specific outreach or programs available to those groups?

Goal-setting should factor in the unique needs of your community and also include input, as appropriate, from your key local leaders.

## **Data Gathering**

Gathering data about demand and future usage that accounts for your identified stakeholders should inform your technical planning for electric transportation. Information about rates of EV production and adoption, forecasts for those elements into the future, anticipated shifts in demographics in your area, and electrical supply and demand should all factor into your data gathering approach.



#### **Sources of EV Data in Illinois**

<u>Illinois Secretary of State</u><sup>16</sup> maintains a database of all registered vehicles in the state, including EVs. This database includes information such as the make and model of the vehicle, as well as the owner's address and registration date.

<u>Illinois Environmental Protection Agency (IEPA)</u><sup>17</sup> collects data on emissions from vehicles in the state, including EVs. This data is used to track the environmental impact of different types of vehicles and to inform policy decisions related to transportation.

<u>U.S. Department of Energy's Alternative Fuels Data Center</u><sup>18</sup> provides a wealth of data on EVs and charging infrastructure across the country, including information on charging station locations, types, and usage.

<u>Illinois Commerce Commission</u><sup>19</sup> regulates utilities in the state, including those that provide electricity for EV charging. The ICC collects data on electricity usage and rates for EV charging, which can be used to inform policy decisions related to EV adoption.

<u>Illinois Department of Transportation (IDOT)</u><sup>20</sup> collects data on transportation trends in the state, including the use of EVs and other alternative fuel vehicles.

Municipalities may also opt to contract with local transportation planners to assess trip and vehicle counts related to particular areas, major intersections, dense population centers, or several other factors.

At the data gathering stage, consider a range of charging scenarios, including:

**Public On-Road Charging** – On-road charging meets the needs of residents and visitors moving around and through town. Moreover, on-road options are crucial for residents in multi-unit dwellings and other locations where at home charging is not readily accessible. DCFC stations, for example, may be difficult for private entities to provide, given their installation costs and electrical upgrades. Providing these as a public solution may be an option that offers access to drivers of all types.

**Transit & School Buses** – Transit and school bus planning requires understanding the relative replacement costs for vehicles, assessing performance considerations related to range, terrain, and weather, exploring operator capacity to incorporate charging resources, and developing plans for overhauling fleets over specific timeframes. Be sure to gather information about usage patterns and ridership for public transit buses, school buses, and any regional transit authority or employer-operated buses.

**Fleets** – Surveying fleet operators, both public and private, can help assess needs and opportunities as more fleet vehicles come online. Utilities can at times provide these types of resources, such as through Ameren Illinois' Fleet Assessment program.

**Electrical upgrades** – Assess current electrical capacity and anticipate future electrical needs as charging demand increases. Once your goals have been established, utilities can be important partners both in identifying areas with adequate existing infrastructure and in identifying where facilities may need to be expanded to augment the existing capacity. Accounting for these necessary investments upfront can alleviate delays or unexpected costs during the implementation phase.



# **Community Engagement**

Engaging community stakeholders in the planning process is a crucial component of any municipal project. The more input you obtain during the planning stages — and the more transparent you make the planning process — the more included all the stakeholders will feel by the end of the implementation phase.

Community engagement can take many forms: public meetings, surveys, door-to-door canvassing, collecting comments through an email or website, attending community organizations' meetings to answer questions, and sending out information either digitally or through print sources. Choose the tools that make the most sense for your community in the context of previous successful projects. A sample community engagement plan can be found in <u>Appendix C</u>, but a few basic principles include:

*Be clear about what kind of input you want.* Frame questions to solicit specific feedback. Open-ended questions like "how many EV chargers do you think the town should install?" or "where should they be located?" likely will not yield helpful answers, because stakeholders lack access to broader planning data.

*Target direct, personal experience.* Asking "how often would you personally be likely to charge at a public charging station?" encourages the respondent to think about their own situation without speculating about what the whole town needs. Aggregating many respondents' answers will give you a better sense of anticipated usage patterns.

*Provide multiple opportunities* — *across times, places, and modalities* — *for feedback.* A single public forum will never reach all potential respondents. You might consider having multiple meetings at different times of day or meeting with smaller constituent groups (e.g., a daytime meeting aimed at business owners one day and an evening meeting on a different day that is more likely to draw working parents; or separately attending meetings like Rotary Club, a black citizens' organization, or an interfaith council to reach different people). Consider that some groups find electronic communication challenging.



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# An Equity-Focused Approach to EV Infrastructure



**Identify equity goals:** Begin by setting an explicit goal. The first step may include increasing access to EVs and charging infrastructure for low-income and minority communities, reducing transportation-related emissions in areas with high levels of pollution, and providing job training and employment opportunities in the EV industry for underrepresented populations.



**Housing and community income levels** both significantly impact the availability of home charging installation.

- What types of housing do you have in your community: apartments, rental homes, duplexes and fourplexes, freestanding single-family homes?
- Where do residents park: assigned spaces, permitted street parking, attached garages, driveways, open public lots, underground garages?



- **Incentives and rebates for individuals** to purchase EVs and charging equipment are offered at every level of government and by many utilities and other entities.
- How do the people who qualify for these programs know they might qualify?
- What are their information sources, and are those sources different from other community channels?
- Do materials need translation into other languages? Are interpreters available, if required?



What kinds of accommodations are available to reflect different physical acccessibility needs? For example, accommodations for EV drivers who also use handicapped parking spaces.

**Aside from individual ownership**, low-income populations can potentially access EVs through ridesharing or carsharing programs.

- Do these already operate in your area? Can you partner with them, or are there opportunities to create such a program from the ground up?
- Are there other multimodal or mass transit options that could reach new demographics that aren't being served?



**Ensure access to charging infrastructure:** Access to charging poses an even more critical barrier to EV adoption for those who can't afford or have no place to install an individual home charging unit. People who live in apartments with shared parking lots, for example, need to know that charging infrastructure is conveniently available before they can even consider purchasing an EV. Your program may prioritize the installation of charging infrastructure in underserved areas or explore innovative solutions such as community solar-powered charging stations.



**Provide sustained education and outreach:** Education and outreach form important components of any EV program but are particularly critical for equity-focused programs. Your program may provide education and training on the benefits of EVs and how to operate and maintain them, as well as outreach to raise awareness of the program and its offerings. Outreach efforts should be ongoing to the maximum extent possible.

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## **Incorporating Equity Considerations**

EVs support equity across many dimensions in communities.

Significant reductions in EV prices have made them more accessible to consumers. By 2029, EVs are expected to reach price parity with the average vehicle purchased by a low-income household, and by 2030, 95% of households could <u>save in their overall budget<sup>21</sup></u> by replacing at least one vehicle with an EV. In addition to serving and integrating traditionally underserved groups, however, municipalities can also realize many benefits across their community by accelerating EV adoption. Reductions in noise and improvements in air quality benefit all residents.

The growth of the EV industry also has the potential to create new job opportunities in the manufacturing, installation, and maintenance of EVs and their charging infrastructure, including the electrical grid. Upskilling and retraining programs give low-income populations access to these new employment opportunities, which in turn boost household income and additional local investment. Supporting charging infrastructure deployment and job training programs can extend the benefits of electrification beyond those driving vehicles.

By taking a thoughtful and intentional approach to equity considerations, your EV program can help to address long-standing disparities in access to transportation, reduce emissions and improve air quality, and create new economic opportunities for underrepresented populations. Additional information on equity programs at a municipal level, including workforce development, can be found in <u>Appendix E</u>.



# **MPLEMENTATION**



With the relevant data, community feedback, and an understanding of current infrastructure and electrical capacity in hand, determining where to locate charging infrastructure across your community can begin. Some or all of the following may require updates:

# **Zoning and Permitting**

Permitting requirements for EV charging infrastructure in Illinois vary by location and project scope. Local building codes and zoning ordinances can influence the permitting process across municipalities or counties in Illinois, but generally must comply with ICC regulations. The ICC has established rules and regulations for the installation of EV charging infrastructure by utilities and third-party vendors, which include permitting requirements. Your local codes and permit structures may need revision in order to meet ICC requirements.

# **EV-Ready Municipal Codes**

In addition to zoning and permitting changes, your municipal codes may require updates. Elements to assess include:

- Identifying EVSE as a permitted land use;
- Providing make-ready standards to ensure that construction projects identify future needs for EV charging whenever applicable;
- Setting municipal standards for EV charging equipment (EVSE);
- EV parking space design and location;
- Setting required EV parking capacity & minimum EV parking requirements;
- EV-designed parking use standards and protections; and
- Signage and general safety standards

Municipalities can take advantage of a growing catalog of resources for aligning their code requirements to support the EV rollout. Guides from the <u>U.S. Department of Energy</u><sup>22</sup>, the <u>International Code Council</u><sup>23</sup>, the <u>Great</u> <u>Plains Institute</u><sup>24</sup>, and <u>Clean Cities coalitions</u><sup>25</sup> may prove helpful in assessing and (re)drafting your local codes.

# **Parking Considerations**

Parking ordinances and signage may need to be adapted to accommodate EVs and EV charging stations. For example, setting clear restrictions on the use of EVSEs (eligible vehicles, duration, times of day, etc.) provides the municipality and/or EV charge station owners the authority to regulate their use. Clear enforcement policies ensure EV infrastructure availability for EV drivers when needed.

#### Considerations related to parking might include:

- Establishing both minimum and maximum requirements for the numbers of EV parking spaces in local ordinances;
- Signage clarifying that spaces at charging stations are intended only for parking and active charging at those stations by EVs, as opposed to any other vehicle use;
- Establishing a process, including removal, for EVs parked in designated charging spots but not actively charging;
- Affirming EVs' eligibility to use any space designated for public parking, regardless of its connection to a charge station; and
- Enforcing that traditional vehicles do not occupy spaces designated for use by EVs.





# **New Construction Codes**

A number of cities across the country have adopted EV-ready building requirements. Illinois legislators have also **passed statewide bills**<sup>26</sup> that would require new residential builds to incorporate either EV charging directly or include sufficient wiring and electrical capacity for future installation. Broadly speaking, construction codes for EVs typically address minimum parking standards and EVSE requirements (either installation or make-ready provisions), and they may target multifamily dwellings or other specific use scenarios. The U.S. Department of Energy catalog of state and local EV ordinances<sup>27</sup> provides one source for example ordinances, and other examples of codes from around the country are in Appendix A.



## **Equity Considerations**

Ensuring equitable access to the benefits of EV transportation — such as less noise, cleaner air, and lower maintenance and fueling costs — requires proactively building a strategy to reach underserved constituents. People in traditionally marginalized communities may engage with this topic differently from other community members, and they likely have different tradeoffs and barriers to EV adoption. Communities with little access to EV charging have little incentive to adopt clean energy technologies like electric cars.



Continued engagement with these constituencies through the implementation process assures that they are part of solutions that work for and with their residents, rather than imposing solutions onto their community with little say from within.



### **Ameren Illinois Is Your Partner**

At every stage, Ameren Illinois is ready to be your partner in developing a local plan for your community. Whether it's understanding your grid capacity and planning for new demand, helping spread the word about incentives and rebates to EV customers, or answering technical questions about electrical upgrades, our team members can help answer your questions. As we continue building our partnership capabilities, we can craft public engagement programs tailored to your community and identify expert resources that can aid your planning efforts.

#### **Contact us to get started today!**

Email:	<u>ElectrifyIL@ameren.com<sup>28</sup></u>
<b>Residential</b> :	<u>AmerenIllinois.com/EVEnroll<sup>29</sup></u>
Commercial:	AmerenIllinois.com/EVCharge <sup>30</sup>



# **Appendix A: Case Studies**

- Case Studies: EV Ready Building Requirements
- Case Studies: EV Fleets in Illinois
- Case Studies: <u>Shared Use</u>
- Case Studies: Carbondale EV Project

Case Studies: Rockford EV Readiness Plan

# **EV Ready Building Requirements**

#### Middletown, CT

New developments that require 25 or more parking spaces in Middletown must have a minimum of 3% of the total number of spaces established as EV parking spaces. EV parking spaces must have a Level 2 or direct current fast charging (DCFC) station or connection. Developments that exceed the minimum 3% requirement for EV parking spaces may request a reduction in the total number of required parking spaces. This reduction may be equal to the number of EV parking spaces above the 3% minimum requirement, but the reduction may not exceed 10% of the total amount of parking spaces for the proposed development. For more information, see the Middletown Planning and Zoning Code<sup>31</sup> Section 40.02.

#### Orlando, FL

The City of Orlando requires all new construction to install Level 2 EV charging stations at 2% of parking spaces. New construction must also install 40 ampere panel capacity and conduit for the future installation of EV charging stations at a minimum of 10% of parking spaces. Additional requirements and conditions apply. For more information, see the City of Orlando's <u>EV Readiness Policy</u><sup>32</sup> website and <u>Ordinance No. 2021-47</u><sup>33</sup>.

#### San Jose, CA

The City of San Jose requires new multifamily housing, residential parking facility, hotel, and motel developments to install EV charging stations at 10% of parking spaces. These building types must also include panel capacity and conduit for future EV charging stations in 70% of parking spaces, and full circuit installations at 20% of parking spaces. Additional requirements may apply. For more information, see the San Jose's <u>Code of Ordinances 24.10.200</u><sup>34</sup>.





# **EV Fleets in Illinois**

Organizations and municipalities across Illinois are taking steps to support EV adoption. The following case studies demonstrate that EV fleets can be successfully implemented in a range of settings, from large municipalities to smaller organizations. By investing in charging infrastructure and selecting the right mix of vehicles for their specific needs, organizations can realize the cost savings and other benefits that accrue from electrifying their fleets. Examples include:

#### Chicago

Chicago has one of the largest municipal EV fleets in the country, with over 200 EVs in service. The fleet includes a range of vehicles, from sedans to heavy-duty trucks, and the city has made substantial related charging infrastructure investments. Drive Electric Chicago<sup>35</sup> provides a resource for activities across the area.



**University of Illinois** 

The University of Illinois' fleet includes over 30 EVs, including sedans, vans, and trucks. The university has invested in charging infrastructure on campus to support the fleet and has also implemented a vehicle sharing program for employees.

#### **Central Illinois Regional Airport**

The Central Illinois Regional Airport in Bloomington-Normal has implemented an EV fleet for airport operations, including shuttle buses and maintenance vehicles. The airport has also installed charging infrastructure for public use.

#### **City of Evanston**

The City of Evanston has a fleet of more than 50 EVs, including sedans, vans, and trucks. The city has invested in charging infrastructure at city facilities and is working to expand the infrastructure to support public charging.

#### **City of Peoria**

The City of Peoria utilized a \$5.3 million grant from the state of Illinois' Rebuild Illinois capital program to add to their "CityLink" bus fleet. Peoria had three electric buses and used the funding to add five more.

#### Village of Oak Park

The Village of Oak Park has implemented an EV fleet for municipal operations, including sedans and SUVs. The village has also invested in charging infrastructure at village facilities and is working to expand the infrastructure to support public charging.



# Shared Use

Carsharing programs provide individuals and companies with vehicles for limited use. These programs have various structures, including round-trip station-based, one-way station-based, or one-way floating. In round-trip carsharing systems, shared vehicles are co-located at central docking stations, and individuals check out and return the vehicle to the same location. In one-way station-based programs, participants check out a vehicle at one central docking location and return it to another docking station in a different location. One-way floating carsharing programs allow individuals to locate a shared vehicle that is parked nearby in a publicly available parking stall, drive to their destination, and find another public stall in which to park. Modern car share programs are often app-based and use technology to locate, check availability, and even unlock and start the vehicle.



#### Chicago

The Chicago EV Shared Mobility Program, which was launched in 2019, formed a partnership between the city and four different electric car-sharing companies — BlueIndy, Car2Go, Gig, and Zipcar. Together, they aim to provide affordable and convenient transportation options for residents while also reducing greenhouse gas emissions.

Under the program, the electric car-sharing companies have agreed to deploy a total of 500 EVs in Chicago, with a focus on underserved communities on the city's South and West sides. The cars are available for rent through a smartphone app and can be picked up and dropped off at designated parking spots throughout the city.

<u>The EV Shared Mobility Program</u><sup>36</sup> has successfully increased access to EVs in Chicago, particularly in low-income neighborhoods where car ownership is often limited. The program has also helped to <u>reduce</u> <u>emissions from transportation</u><sup>37</sup>, one of the largest sources of greenhouse gas emissions in the city.

The EV Shared Mobility Program demonstrates the potential for innovative partnerships between local governments and private companies to promote the adoption of EVs and to address transportation challenges in urban areas.

Electrification of carshare vehicles compounds the benefits of carsharing by eliminating tailpipe emissions and lowering vehicle operating costs. Examples of electric car share programs in the U.S. include, but are not limited to, <u>Blue LA</u><sup>38</sup> (Los Angeles, California), <u>Evie</u><sup>39</sup> (Minneapolis – Saint Paul, Minnesota), and <u>Good2Go</u><sup>40</sup> (Boston, Massachusetts). The U.S. Department of Energy's Alternative Fuels Data Center also tracks <u>carsharing programs around the country</u><sup>41</sup>, including noting which have partially or fully electrified their fleets.

# **Carbondale Electric Vehicle Project**

The Carbondale Electric Vehicle Project offers a fully-developed EV case study from Southern Illinois. This project was initiated by the City of Carbondale in 2015 with the goal of promoting the use of EVs across the region.

The Carbondale Electric Vehicle Project involved the installation of several EV charging stations throughout the city, which were made available to the public free of charge. The city also purchased two Nissan Leaf EVs, which were used for city fleet vehicles.

The project was successful in promoting EV adoption in Carbondale and the surrounding area. It helped to increase awareness of EVs and the benefits they provide, such as reduced emissions and lower fuel costs. It also provided valuable data on the use of EVs in a mid-sized city, which can be used to inform future EV infrastructure planning and deployment.

Since the initial launch of the Carbondale Electric Vehicle Project, several other southern Illinois communities have also installed EV charging stations and taken steps to promote the adoption of EVs. These efforts are helping to build a more sustainable and resilient transportation system in the region, while also supporting economic development and reducing environmental impacts.

There are currently 63 charging stations in the Carbon-Marion area (<u>Plugshare</u><sup>42</sup>). In Dec 2022, The City of Carbondale issued a request for proposal (RFP) for funding, inviting contractors to install EV charging (<u>Construction Journal</u><sup>43</sup>).



# PlugShare

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# **Rockford Region EV Readiness Plan**

The Rockford Region published a comprehensive <u>EV Readiness Plan</u> in 2021. Crafted in cooperation with the US DOT, FHA, FTA and Illinois Department of Transportation, the plan provides a framework for evaluating and supporting EV deployment throughout the Rockford Metropolitan Planning Area. The plan articulated key goals and related strategies for the region:

#### Goal #1 Establish a robust network of public charging station infrastructure within the study area.

- Strategy 1.1. Identify and prioritize key locations for electric vehicle supply equipment (EVSE) installation.
- Strategy 1.2. Promote and establish incentives for the installation of EVSE by businesses and in commercial developments.
- Strategy 1.3. Provide wayfinding signage to help electric vehicle drivers navigate to public charging stations.
- Strategy 1.4. Upgrade or install new conduit to accommodate EV charging infrastructure during roadway construction projects, where appropriate.



#### Goal #2 Integrate electric vehicle supply equipment (EVSE) into public policies and planning efforts.

- Strategy 2.1. Update zoning ordinances to identify what types of EVSE are allowable by land use type.
- Strategy 2.2. Establish building codes to specify standards that ensure EVSE installations are safe and accessible.
- Strategy 2.3. Streamline the permitting process for the installation of EVSE on residential and commercial properties.
- Strategy 2.4. Develop and maintain electric vehicle parking standards that address the design and location of parking spaces as well as minimum space requirements.
- Strategy 2.5. Incorporate EV readiness in local and regional planning documents, including, but not limited to, comprehensive plans and corridor studies.
- Strategy 2.6. Educate inspectors on the electrical capacity necessary to accommodate future EVSE.
- Strategy 2.7. Connect interested property owners and managers, homeowner associations, and businesses to educational resources and contacts relating to EVSE implementation.

#### Goal #3 Act as a leader in coordinating efforts to make Northern Illinois EV-Ready.

- Strategy 3.1. Coordinate with regional partners to leverage procurement and funding opportunities.
- Strategy 3.2. Partner with utility providers and companies to leverage public-private partnerships for the installation of EV charging infrastructure.
- Strategy 3.3. Assist in the development of a regional forum dedicated to leading electric vehicle initiatives.
- Strategy 3.4. Advocate for state-wide policies and funding programs to support the installation of public electric vehicle infrastructure.
- Strategy 3.5. Encourage the use of battery electric vehicles (BEV) or hybrid electric vehicles (HEV) in municipal fleets.
- Strategy 3.6. Promote the use of clean and/or renewable energy sources to power electric vehicle charging stations.

Resources provided in the document include procurement guides, EVSE mapping, templates for zoning and parking ordinance, building codes, and EVSE permitting, and installation check-lists for EVSE projects.

# **Appendix B: Regional Trends**

According to the Office of the Illinois Secretary of State, Illinois was home to <u>64,989 EVs as of March 15, 2023</u><sup>44</sup>. Those vehicles included both battery-electric (BEV) and plug-in hybrid (PHEV) EVs. Within Ameren Illinois' service territory alone, there were nearly 8,500

EVs registered at the end of March 2023. The first quarter of 2023 alone (8,423) represents 10% growth over the last quarter of 2022 (7,641) and year-over-year growth of 43% since the end of the first quarter of 2022 (5,894). Illinois residents are embracing EVs at high rates, and municipalities will need to keep up with demand.

According to the U.S. Department of Energy's Alternative Fuels Data Center, as of March 2023 Illinois is home to roughly 50 public EV charging stations. Stations can be found in Peoria, Springfield, Normal, Bloomington, Carbondale, and Harrisburg among other locales. The <u>Illinois EV Roadmap</u><sup>45</sup> aims to install 500 new DC fast charging stations across the state by 2024. Some of those stations will be located downstate as charging locations throughout the region continue to grow.

Several Illinois municipalities have taken steps to promote EVs and have installed EV charging stations on cityowned property. Carbondale has been promoting the use of EVs since 2012 through their <u>Carbondale Electric</u> <u>Vehicle Project</u>. The City of Marion installed an EV charging station at the Tower Square Plaza in 2019 that is free to use and open to the public. The <u>EV Town initiative</u><sup>46</sup> – a collaboration between Bloomington and Normal and the business community business community in that region that aims to establish that area as a "model electric vehicle community."

Factors driving demand for EV charging infrastructure in Illinois include:

- Increasing EV adoption: According to <u>2022 data from Electrek</u><sup>47</sup>, Illinois' 40% year-over-year growth rate for EV adoption lags slightly behind the national average of 42% growth. However, <u>EV adoption</u> <u>in Illinois</u> <sup>48</sup>exceeds the rate of neighboring states by as much as double. As more EVs are sold and registered across the region, there will be a greater need for charging infrastructure to support them.
- Growing public charging stations: Public charging stations are important to support longer trips and to provide charging options for those who don't have access to a home charger. While many EV owners primarily charge their vehicles at home, public charging infrastructure is an important option while on the road and to attract



EV-driving visitors. Illinois' <u>EV Deployment Plan</u><sup>49</sup> prioritizes major corridors across the state, including I-80, I-55, I-70, and I-74, where National Electric Vehicle Infrastructure (NEVI) plan funds will be spent to install EV charging stations.

- Expanding charging networks: A number of charge-station network providers have targeted adding Southern Illinois to their systems, including Electrify America (in Springfield, Bloomington, and Collinsville).
- Supportive policies: Federal, state and local policies that provide incentives for charging stations are helping to bring more infrastructure to the region. More of these resources are available in <u>Appendix E</u>.

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# **Appendix C: Sample Outreach Plan**

#### Title: Electrifying Your Ride: The Benefits of EVs

Intent: By creating an engaging and informative EV education campaign, we can help more people learn about the benefits of EVs and encourage them to make the switch to cleaner, more efficient transportation.

Target audience: Residents interested in purchasing a new vehicle or who want to learn more about EVs

#### **Objectives:**

- Raise awareness about the benefits of EVs
- Encourage consumers to consider purchasing an EV
- Provide information about the charging infrastructure in their area
- Educate consumers about the cost savings associated with EV ownership

#### Key messages:

- EVs are fun to drive and easy to fuel and maintain.
- EVs are environmentally friendly and produce no tailpipe emissions.
- EVs are cheaper to operate than traditional gas-powered vehicles.
- The network EV charging stations continues to grow, this means there are thousands of stations across the country.
- Federal and state incentives are available to help offset the cost of EV ownership.

#### **Campaign elements:**

- 1. **Social media:** Create a series of social media posts highlighting the benefits of EVs, featuring facts and infographics about the cost savings, environmental impact, and convenience of driving an EV.
- 2. **Video series:** Develop a series of short videos featuring real EV owners sharing their experiences and insights about driving an EV, charging infrastructure, and cost savings.
- 3. **Public events:** Host public events such as test drives or EV meetups, where interested individuals can learn more about EVs and speak with local EV owners about their experiences.
- 4. **Website:** Create a website that provides information on the benefits of EVs, the charging infrastructure in their area, and available incentives and tax credits.
- 5. **Advertising:** Place print and digital ads in local publications and websites to promote the campaign and encourage EV adoption.
- 6. **Partnerships:** Partner with local dealerships, utilities, and community organizations to promote the campaign and reach a wider audience.

#### Measures of success:

- Attendance at public events
- Website and social media views
- Growing number of partnerships, reviewed every month
- Engagement by traditionally underrepresented demographics



# **Appendix D: Planning Checklist**

As you embark on your data gathering and planning processes, refer back to this checklist to make sure you are capturing and addressing as many aspects of the community's needs as possible.

#### 1. Needs Assessment

- □ How many EVs are currently registered in our community?
- □ What's the balance between residential and commercial use of EVs now?
- □ What percentage of users (of any type) have ready access to charging already?
  - Home \_\_\_\_\_ %
  - Workplace \_\_\_\_\_ %
  - Commercial fleet yards \_\_\_\_\_ %
- $\square$  How many charging stations are already installed within the borders of the town?
  - Publicly owned \_\_\_\_\_\_
  - Privately owned \_\_\_\_\_\_
- $\Box$  On a weekly (or monthly) basis, how many charging sessions are used by travelers through the town?
- □ What's your best estimate for EV ownership in your community in the future?
  - 1 year from now \_\_\_\_\_
  - 5 years from now \_\_\_\_\_
  - 10 years from now \_\_\_\_\_
  - 20 years from now \_\_\_\_\_

#### 2. Capacity Assessment

- $\Box$  What share of the electrical demand currently goes to EV charging?
- $\square$  Based on the future usage estimates above, what share do you expect EV charging to represent?
  - 1 year from now \_\_\_\_\_
  - 5 years from now \_\_\_\_\_
  - 10 years from now \_\_\_\_\_
  - 20 years from now \_\_\_\_\_\_
- □ Will these assessments alone require additional capacity town-wide?

#### 3. Community Engagement

□ Choose which tools you will use to conduct engagement:

- Survey(s)
- Public meetings
- Individual or small group meetings with key constituencies or organizations
- Website
- Email (sending and receiving information)
- Social media platforms
- □ Have you considered the equity components of your community engagement? Are you making adequate attempts to reach populations that have not traditionally engaged in public policymaking in your area?

#### 4. Planning

- □ How many EVSE stations will you install?
- $\Box$  Where will they be installed?
  - Have the locations been informed by conversations with underserved communities?
- □ Have you reviewed the following for necessary changes?
  - Parking regulations, enforcement, and signage
  - Land uses and zoning
  - Permit language and processes
  - Pay structure (if charging for use)
  - Building and construction codes
- □ Have you investigated sources of partnership or funding for EVSE installation?
  - Corporate
  - Utilities
  - Regional transit authorities
  - State
  - Federal

□ Will any of the stations require upgraded infrastructure (transformers, running new wire, etc.)?

#### 5. Implementation

- □ Coordinate funding/financing with town budget
- □ Notify abutters and stakeholders of timelines, locations
- □ Initiate infrastructure upgrades
- □ Communicate changes to zoning, parking regulations
- Create any tools (app, website, etc.) that will track uptime and availability of EVSEs (if applicable)
- □ Communicate policies, charges, and other information widely and frequently when stations open for use

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# **Appendix E: Reference & Resources**

Workforce Development Incentives & Grants Resources: Federal Resources: State Resources: General

## **Workforce Development**

Growing demand for EVs is creating workforce development needs across a variety of sectors. This creates an opportunity for municipalities to leverage economic development gains in a number of ways: securing funding for training courses aimed at upskilling or retraining; courting emerging industries to locate their facilities in your town; encouraging residents to take advantage of new training and employment opportunities that raise their household income. Municipalities may find significant return on these efforts in the form of community investment by businesses and increased disposable income for their residents.

Industry areas with significant workforce development opportunities include:

- Manufacturing: Producing EVs and their components requires specialized manufacturing, such as battery assembly and electric motor manufacturing. Charging stations, too, require specialized manufacturing.
- Installation and maintenance of charging infrastructure: After installation, EVSEs require ongoing maintenance and repair, presenting a good opportunity for employees with electrical engineering or construction backgrounds to retrain into these positions.
- Sales and marketing: The adoption of EVs depends on consumer awareness and demand, offering a new path for sales and marketing professionals to educate consumers on the benefits of EVs and how they work.
- Research and development: Ongoing research and development to improve battery technology, increase vehicle range, and reduce costs comprises another area of job growth. Workers with backgrounds in engineering, materials science, and computer science can upskill to fill jobs in these emerging technologies.



- Recycling and repurposing: Recycling and repurposing of batteries and other components requires specialized training in materials recovery. Ensuring that growth in the EV market remains economically and environmentally sustainable rests, in part, on developing large-scale recovery and recycling operations.
- Fleet operators: The complexity of scheduling, recharging, and deploying EV fleets presents a new challenge for fleet operators. Training (or retraining) fleet operators to understand how to maximize the efficiency of their fleet requires new skills and represents an opportunity for new employees to enter this emerging field.

# **Incentives & Grants**

A range of state and federal funding opportunities exist to help support electrification activities.

#### **State Funding**

Illinois stands to receive \$148 million over the next 5 years with a focus on installing DCFC charging along interstate highway corridors, as part of the federal Infrastructure Investment and Jobs Act (IIJA). This money has been specifically earmarked to build out (or upgrade existing) charging stations along previously identified interstate highway corridors no more than 50 miles apart and no more than 1 mile off the highway.

The Illinois Department of Transportation is working closely with other state agencies in Illinois, including the <u>Illinois Environmental</u>



<u>Protection Agency (IEPA)</u><sup>50</sup> and the <u>Department of Commerce and Economic Opportunity (DCEO)</u><sup>51</sup> to implement these programs. One key responsibility for IDOT is strategically deploying EV charging stations in an interconnected network, particularly on key Illinois travel corridors.

State funding initiatives for which your community may be eligible include:



#### Electric Vehicle (EV) Charging Station Rebates

Rebates through IEPA to public and private entities for the installation and maintenance of Level 2 and DCFC stations. Rebates may cover up to 80% of the eligible project costs. Installing EV charging stations in underserved and environmental justice communities may qualify for additional rebates. For more information, see the <u>CEJA website</u><sup>52</sup>.

#### Driving a Cleaner Illinois



The IEPA's **Driving a Cleaner Illinois**<sup>53</sup> program funds projects to reduce diesel emissions and retrofit school buses with more fuel-efficient or alternative-fuel engines (including electric).

Contact:

Darwin Burkhart, Manager, Clean Air Programs Illinois Environmental Protection Agency (217) 524-5008 | <u>darwin.burkhart@illinois.gov</u><sup>54</sup>



#### Fleet User Fee Exemption

The Illinois Secretary of State's office exempts electric vehicles from annual fleet user fees, which normally assess a \$20 charge per vehicle in addition to registration fees for fleets operating 10 or more vehicles in certain parts of the state. <u>Established by statute</u><sup>55</sup>.

#### **Federal Funding**

Metropolitan planning organizations and local government agencies are eligible to compete for a number of competitive federal grant programs including:

#### U.S. EPA Diesel Emissions Reduction Act (DERA) Program

The EPA's DERA Program funds grants and rebates that protect human health and improve air quality by reducing harmful emissions from diesel engines. The program can be used to replace heavy-duty diesel vehicles and equipment with electric vehicles and chargers. DERA has multiple grant programs for different types of applicants and projects including <u>National Grants</u><sup>56</sup>, <u>Tribal and Insular Area Grants</u><sup>57</sup>, <u>State Grants</u><sup>58</sup>, and <u>School Bus Rebates</u><sup>59</sup>.

#### U.S. Department of Transportation Discretionary Grants Dashboard

The DOT maintains a <u>searchable database</u><sup>60</sup> of grant opportunities across a wide range of transportation and infrastructure activities.

#### U.S. Department of Transportation EV Infrastructure Database

The DOT aggregates funding opportunities from all the agencies authorized under the Bipartisan Infrastructure Law (BIL) and the Inflation Reduction Act (IRA) in an <u>overview grouped by agency</u><sup>61</sup>.

#### Federal Highway Administration Competitive Grant Programs<sup>62</sup>



#### Local Source Ameren Illinois EV Rate Program

While Ameren does not have charging incentives for municipalities, there are various incentives and rebates for the following:

#### **EV Rate Program**:

#### a. Residential:

**Standard Charges:** Customers receiving service under this rider will continue to be charged all monthly charges applicable under Rate DS-1 – Residential Delivery Service.

**Electric Vehicle Bill Credit**: Customers who elect to take service under this program will receive a monthly bill credit of \$4.00 per month for the first 12 consecutive monthly billing periods the customer remains on this plan.

**Preferred Charging Period (PCP) Delivery Credit:** A PCP delivery credit will be applied to customer bills for each kWh delivered to the customer during PCP hours during each billing period as follows: 2.000¢ per kWh during the summer months; 1.000¢ per kWh during non-summer months.

**Period Peak Hourly Delivery Charge:** A peak hourly delivery charge of \$0.65 per kilowatt-hour shall be charged each month based on the customer's peak non-preferred charging period usage during the billing period.**Business:** 

**DS-2 CHARGING PROGRAM AVAILABILITY** \* Service under this program is available at the customer's request for any non-residential customer who is served under Rate DS-2 Standard Charges, and is a multi-family facility, education facility, fleet facility, transit facility, or public charging facility and meets the criteria as outlined in the Electric Vehicle Facility Specifications Information Sheet, as applicable at the time of application for service. Fleet facilities and public charging facilities will become eligible for the program beginning on or before the January 2024 billing period.

**Electric Vehicle Bill Credit:** Customers who elect to take service under this program will receive a monthly bill credit of \$15.00 per month for the first 12 consecutive monthly billing periods the customer remains on this plan.

**PCP Delivery Credit:** A PCP delivery credit will be applied to customer bills for each kWh delivered to the customer during PCP hours during each billing period as follows: 2.300¢ per kWh during the summer period; 1.200¢ per kWh during non-summer months.

**Period Peak Hourly Delivery Charge:** A Peak Hourly Delivery Charge of \$0.46 per kilowatt-hour shall be charged each month based on the customer's peak.

More information can be found at Ameren Illinois' website: <u>https://www.ameren.com/illinois/business/</u>electric-vehicles/rate.



NOTE: Only DELIVERY CHARGES are impacted by the EV Rate Program. No adjustments will be made under the ENERGY SUPPLY section.

\* Delivery credit applied for ever kWh used during this time frame.

\*\* Highest hour of usage from the billing period used during this time frame is billed at a higher rate.

## **Resources: Federal**

- <u>Clean Cities program</u>:<sup>63</sup> Provides information and support to municipalities and fleets interested in alternative fuels, including EVs (Department of Energy)
- EV Charging Action Plan<sup>64</sup> (White House)
- <u>EV Charging Infrastructure Trends from the Alternative Fueling Station Locator</u><sup>65</sup> (National Renewable Energy Laboratory)
- <u>EV Working Group</u><sup>66</sup> (Joint Office of Energy and Transportation)
- Infrastructure Investment and Jobs Act<sup>67</sup> (White House)
- U.S. Department of Energy Alternative Fuels Data Center<sup>68</sup>

## **Resources: State**

- A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future<sup>69</sup>
- Electric Vehicle Infrastructure Plan in Illinois<sup>70</sup>
- <u>Illinois Department of Commerce and Economic Opportunity</u>.<sup>71</sup> Offers grant opportunities for the installation of EV infrastructure, including charging stations
- Illinois Department of Transportation EV Designated Corridors<sup>72</sup>
- Illinois Electric Vehicle Infrastructure Deployment Plan<sup>73</sup>
- <u>Illinois Green Fleets program:</u><sup>74</sup> Provides funding and technical assistance to municipalities to help them transition their fleet to cleaner fuels, including EVs
- Illinois NEVI Plan<sup>75</sup>
- <u>Illinois Sustainable Technology Center (ISTC)</u>:<sup>76</sup> Offers free technical assistance to help municipalities with the planning and implementation of EV infrastructure projects
- Reimagining EVs Illinois<sup>77</sup>

# **Resources: General**

- <u>Climate Mayors:</u><sup>78</sup> A collaboration of 750 member cities (across the country; 19 cities are from Illinois) to leverage their collective buying power and accelerate the conversion of municipal fleets to electric.
- <u>Electric Vehicle Infrastructure Training Program (EVITP)</u>:<sup>79</sup> Offers training and certification for electricians and other professionals involved in the installation of EV charging infrastructure.
- <u>PlugShare app:</u><sup>80</sup> Provides a comprehensive map of EV charging stations across the country, including locations and availability.
- A guide to equity considerations<sup>81</sup> in transportation planning
- <u>Charging Up America: Assessing The Growing Need For U.S. Charging Infrastructure Through 2030</u><sup>82</sup> (International Council for Clean Transportation)
- EV Buying Guide<sup>83</sup> (Consumer Reports)
- Global EV Outlook 2021<sup>84</sup> (International Energy Agency)

#### **Document Links**

- 1 AmerenIllinois.com/EV
- 2 https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/ transportation-system/planning/drive-electric/Illinois%20State%20Electric%20 Vehicle%20Plan.pdf
- 3 https://idot.illinois.gov/transportation-system/environment/drive-electric.html
- 4 https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/ 46 transportation-system/planning/drive-electric/Illinois%20State%20Electric%20 47 Vehicle%20Plan.pdf
- 5 https://www2.illinois.gov/epa/topics/ceja/Pages/Electric-Vehicle-Rebates. aspx
- 6 https://idot.illinois.gov/transportation-system/rebuild-illinois.html
- 7 https://epa.illinois.gov/topics/ceja.html
- 8 https://www.transportation.gov/briefing-room/bipartisan-infrastructure-lawwill-deliver-illinois
- 9 epa.illinois.gov/content/dam/soi/en/web/epa/topics/ceja/documents/evrebate-program-faq.pdf
- 10 https://idot.illinois.gov/transportation-system/environment/drive-electric.html
- 11 https://afdc.energy.gov/laws/all?state=IL
- 12 https://www.ideals.illinois.edu/items/125560
- 13 https://www.arcgis.com/apps/webappviewer/index. html?id=c1be35bccc1f4ae9a8af5a1e2a69c268
- 14 cc.illinois.gov/authority/electric-vehicle-charging-station-installer
- 15 https://www.transportation.gov/rural/ev/toolkit/ev-basics/charging-speeds
- 16 https://www.ilsos.gov/departments/vehicles/statistics/home.html
- 17 https://epa.illinois.gov/topics/air-quality/mobile-sources.html
- 18 https://afdc.energy.gov/fuels/electricity.html
- 19 https://www.icc.illinois.gov/authority/electric-utility
- 20 https://idot.illinois.gov/transportation-system/Network-Overview/highwaysystem/illinois-travel-statistics
- 21 https://theicct.org/publication/when-might-lower-income-drivers-benefitfrom-electric-vehicles-quantifying-the-economic-equity-implications-ofelectric-vehicle-adoption/
- 22 https://www.energycodes.gov/sites/default/files/2021-07/TechBrief\_EV\_ Charging\_July2021.pdf
- 23 https://codes.iccsafe.org/content/ICCEVBCSGGR2021P1/current-approachesto-ev-integrated-codes
- 24 https://www.betterenergy.org/wp-content/uploads/2019/06/GPI\_EV\_ Ordinance\_Summary\_web.pdf
- 25 https://smpdc.org/vertical/Sites/%7B14E8B741-214C-42E2-BE74-5AA9EE0A3EFD%7D/uploads/Zoning\_and\_ordinances\_guide\_FINAL\_(1).pdf
- 26 https://pantagraph.com/news/state-and-regional/govt-and-politics/illinoislawmakers-pass-bill-requiring-new-homes-be-equipped-for-ev-chargingstations/article\_a7ccd242-eba0-11ed-8c58-fbcb48536f24.html
- 27 https://afdc.energy.gov/laws
- 28 ElectrifyIL@ameren.com
- 29 AmerenIllinois.com/EVEnroll
- 30 AmerenIllinois.com/EVCharge
- 31 https://www.middletownct.gov/DocumentCenter/View/1547/Section-40--Off-Street-Parking-and-Loading-PDF
- 32 https://www.orlando.gov/Our-Government/Departments-Offices/Executive-Offices/CAO/Sustainability-Resilience/Initiatives/Electric-Vehicle-and-Transit-Initiatives/Electric-Vehicle-Readiness-Policy
- 33 https://orlando.novusagenda.com/AgendaIntranet/CoverSheet. aspx?ItemID=57297&MeetingID=2202
- 34 https://library.municode.com/ca/san\_jose/codes/code\_of\_ ordinances?nodeld=TIT24TECO\_CH24.10CAGRBUSTCO\_ PT2REMAMECACH4 24.10.200ELVEEVSIDECACH4106.4.3
- 35 https://www.chicago.gov/city/en/progs/env/drive\_electric\_chicago.html
- 36 https://static1.squarespace.com/static/62540cbf3a854032f8983fde/t/628f0eb730 83 2da34d872036de/1653542585323/Shared+Mobility+2030+Fact+Sheet.pdf
- 37 https://learn.sharedusemobilitycenter.org/benefitcalculator/
- 38 https://blinkmobility.com/
- 39 https://eviecarshare.com/
- 40 https://evgood2go.org/
- 41 https://afdc.energy.gov/conserve/ridesharing.html

- 42 https://www.plugshare.com/directory/us/illinois/carbondale-marion
- 43 https://www.constructionjournal.com/projects/details/ d2366da7fcd14248a0b6d4428dec0505.html
- 44 https://www.ilsos.gov/departments/vehicles/statistics/electric/home.html
- 45 https://ev.illinois.gov/illinois-commitment/state-ev-support.html
- 46 http://www.evtown.org/faq/evtown-faq.html#how-did-evtown-get-started
- 47 https://electrek.co/2022/08/24/current-ev-registrations-in-the-us-how-doesyour-state-stack-up/
- 48 https://www.greencarreports.com/news/1138974\_these-7-us-states-lead-thenation-in-ev-registrations
- 49 https://www.fhwa.dot.gov/environment/nevi/ev\_deployment\_plans/il\_nevi\_ plan.pdf
- 50 https://www2.illinois.gov/epa/topics/ceja/Pages/Electric-Vehicle-Rebates. aspx
- 51 https://dceo.illinois.gov/
- 52 https://epa.illinois.gov/topics/ceja.html
- 53 https://www2.illinois.gov/epa/topics/air-quality/driving-a-cleaner-illinois/ Pages/default.aspx
- 54 darwin.burkhart@illinois.gov
- 55 http://www.ilga.gov/legislation/ilcs/ilcs.asp
- 56 https://www.epa.gov/dera/national
- 57 https://www.epa.gov/dera/tribal
- 58 https://www.epa.gov/dera/state
- 59 https://www.epa.gov/dera/rebates
- 60 https://www.transportation.gov/grants/dashboard
- 61 https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-funding-andfinancing/federal-funding-programs
- 62 https://www.fhwa.dot.gov/bipartisan-infrastructure-law/grant\_programs.cfm
- 63 https://cleancities.energy.gov/
- 64 https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/13/ fact-sheet-the-biden-harris-electric-vehicle-charging-action-plan
- 65 https://www.nrel.gov/docs/fy22osti/82987.pdf
- 66 https://driveelectric.gov/ev-working-group
  - 67 https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/06/ fact-sheet-the-bipartisan-infrastructure-deal
  - 68 https://afdc.energy.gov/stations/states
  - 69 https://dceo.illinois.gov/content/dam/soi/en/web/dceo/documents/ illinoiseconomicplan2019-10-9-2019.pdf
  - 70 https://www.ideals.illinois.edu/items/125560
  - 71 https://dceo.illinois.gov/
  - 72 https://experience.arcgis.com/
    - experience/34ae9e0b64c246c6aea1f31df533a9e7
  - 73 https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/ transportation-system/planning/drive-electric/Illinois%20State%20Electric%20 Vehicle%20Plan.pdff
  - 74 https://dceo.illinois.gov/
  - 75 https://idot.illinois.gov/transportation-system/environment/drive-electric.html
  - 76 https://tap.istc.illinois.edu/services/
  - 77 https://dceo.illinois.gov/businesshelp/rev.html#:~:text=The%20 Reimagining%20Energy%20and%20Vehicles,electric%20vehicle%20and%20 renewables%20sectors
  - 78 https://climatemayors.org/
  - 79 https://www.evitp.org/
  - 80 https://www.plugshare.com/
  - 81 https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-planning/ equity-considerations
  - 82 https://theicct.org/publication/charging-up-america-assessing-the-growingneed-for-u-s-charging-infrastructure-through-2030/
  - 83 https://www.consumerreports.org/cars/hybrids-evs/electric-cars-101-theanswers-to-all-your-ev-questions-a7130554728/
  - 84 https://www.iea.org/reports/global-ev-outlook-2021/policies-to-promoteelectric-vehicle-deployment





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