GREAT PLAINS INSTITUTE

Utility Engagement Playbook

Acknowledgements

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Definitions

The following definitions are sourced from the Great Plains Institute's Electric Vehicle Glossary and Drive Electric Minnesota.

Electric vehicle (EV): A vehicle that is at least partially powered by one or more electric motors using electricity stored in rechargeable batteries.

Battery electric vehicle (BEV): An electric vehicle that operates entirely on electricity stored in its onboard battery pack. BEVs do not have an internal combustion engine and produce zero tailpipe emissions.

Plug-in hybrid electric vehicle (PHEV): A type of hybrid EV that combines an internal combustion engine with an electric motor and a rechargeable battery. PHEVs can operate in all-electric mode for a certain range before switching to the combustion engine or hybrid mode.

Zero-emission vehicle (ZEV): A vehicle that produces no tailpipe emissions of pollutants during operation. Emissions may still occur in other phases of the vehicle's lifecycle. Examples include BEVs and hydrogen fuel cell vehicles.

Charging Levels

Level 1 charging: Charging a vehicle at "Level 1" means plugging into a standard 120-volt outlet (a typical household electrical outlet).

Level 2 charging: Charging a vehicle at "Level 2" means plugging into a 240-volt outlet (the same kind that powers appliances like dryers). On average, Level 2 stations provide 10 to 50 miles of range per hour the vehicle is connected.

Direct current fast charger (also DC fast charger, DCFC, or Level 3 charger): A high-speed public charger for EVs designed to significantly reduce the time it takes to replenish an EV's battery. While fast charging is convenient for quickly adding range, it can lead to faster battery degradation over time compared to using Level 1 and 2 chargers.

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Introduction

This is one of four playbooks intended to help local governments advance through their transportation electrification journey, providing step-by-step guidance on supporting EV adoption and expanding public charging infrastructure.

This playbook focuses on how local governments can engage with their local electric utility on transportation electrification collaboration opportunities. Other playbook topics include:

- Planning for EVs
- Municipal fleet electrification
- Expanding EV charging infrastructure

Each state may have unique contexts to consider when implementing the actions outlined in this playbook. We recommend reviewing your state's rules and regulations before pursuing the suggested actions. You can reach out to the Great Plains Institute for assistance. In many cases, we can assist your organization at no cost.

Playbook Structure

Actions within this playbook are organized into the following sections:

Start Here: Actions within this section are suitable for communities beginning their electrification journey and can typically be accomplished with minimal capacity and resources. These actions are often the first steps that lay the foundation for subsequent actions.

Ramping Up: These actions include more advanced steps that communities can take to facilitate EV adoption and expand charging infrastructure. They may require more time and resources.

Full Speed Ahead: These actions represent advanced tasks that communities should consider after a solid foundation has been laid, and the community is prepared to advance to cutting-edge transportation electrification efforts.

The playbook also provides real-world **community examples** of implementation and success, **cost considerations**, action-specific **resources and assistance**, as well as additional implementation considerations such as **staff time** required, **department roles**, **county roles**, and **partners**. Furthermore, implementation considerations are categorized using the

notations **minimal, moderate, and significant** to indicate the amount of time, effort, or resources that may be expended to complete the action.

Degree of difficulty	 Amount of time, effort, or resources to complete an action, categorized as minimal (yellow), moderate (orange), or significant (red).
Staff time	The amount of staff time a community should plan to spend completing an action, and the key factors that may influence required staff time.
Departments involved	The city departments that may be involved in completing an action.
County role	Potential options for counties to support local governments on an action, or ways in which the county may directly address the action.
Partners	Potential partners that may support local governments or be involved in an action.

Playbook Purpose

While this playbook takes a broad view of the various strategies local governments can pursue to support transportation electrification via engaging with electric utilities, it is not intended to be comprehensive.

The strategies highlighted in this playbook are actions identified as being particularly useful, those that would benefit from additional expert guidance, and those with the highest impact on emissions reduction. Other topics, like engaging and educating the public on sustainable transportation, are not the focus of this resource. Other free resources are available on these topics from programs like Charging Smart.

WHY FOCUS ON TRANSPORTATION ELECTRIFICATION?

The transportation sector is one of the leading sources of emissions at the national level and contributes more direct emissions than any other sector.[1] Emissions from transportation have a direct negative impact on public health, the climate, and the economy, making the

[1] "Sources of Greenhouse Gas Emissions," Environmental Protection Agency, last updated March 31, 2025.

decarbonization of the transportation sector an increasingly high priority for many communities.

Addressing the environmental impact of the transportation sector will require multiple solutions working together. One such strategy that communities are increasingly pursuing is transportation electrification. More specifically, local governments are increasingly taking action to facilitate and support the transition from gas-powered cars to EVs. Reflecting this growing trend, many communities have expressed interest in tools and resources to better understand the actions they can take to facilitate this transition.

While a mass transition to EVs on its own won't fully mitigate the transportation sector's environmental impact, it is a necessary step and one that can benefit communities in a variety of ways in both the short and long term. As electrified transportation becomes more prevalent and accessible, transitioning to EVs can rapidly reduce emissions.

EVs can produce as little as zero tailpipe emissions, and despite being resource-intensive to manufacture, over their useful lifespan, EVs emit approximately 110 grams of carbon dioxide (CO_2) per mile driven compared to 410 grams per mile for new internal combustion engine cars.[2] EVs have the highest potential to reduce emissions when the electricity powering them is generated from renewable sources. Howeverm, recent research suggests that EVs still produce significantly less CO_2 than traditional vehicles, even when the electricity is generated by fossil fuels.[3]

Emission reductions provide public health benefits by improving air quality and reducing noise pollution. Increased transportation electrification also provides opportunities for economic development by creating new jobs related to EVs and attracting EV-driving visitors to communities and businesses that have invested in charging infrastructure. It is increasingly feasible to realize these and other benefits in your community as new EV models become cost-competitive with traditional vehicles.

CHARGING SMART

Much of the content and information within this playbook is adapted from the technical assistance and designation program Charging Smart, of which the Great Plains Institute is a lead partner. Charging Smart is a program funded by

[2] River James, "Carbon Footprint Face-Off: A Full Picture of EVs vs. Gas Cars," Recurrent Auto, January 20, 2025.

[3] Emmy Curtis, Gabrielle Olson, M. Moaz Uddin, "Lifecycle Emissions Study: EVs vs. Conventional Vehicles," Great Plains Institute, April 28, 2025.

the US Department of Energy's Vehicle Technologies Office (VTO) that offers free technical assistance to local governments, giving them the tools to facilitate and accelerate transportation electrification in a way that ensures its benefits are accessible to all. Participants work toward achieving Bronze, Silver, or Gold designation—with each subsequent designation level signifying increasingly advanced actions. Achieving a Charging Smart designation demonstrates that a community has taken steps to become EV-friendly by addressing planning, zoning, permitting, and coordinating with the local utility. This playbook contains callout boxes—designated by the hexagonal EV charger icon—that indicate how certain actions can support Charging Smart designation. Send an email to info_communities@gpisd.net for more information on Charging Smart and details on how to participate.

Utility Engagement

1.1 Start Here: Discuss EV collaboration opportunities with the electricity provider

As an important early action, local governments should meet with their electric utility to discuss opportunities to collaborate on topics related to transportation electrification. Topics may include siting EV chargers, grid capacity, managed charging, utility incentives, and collaboration opportunities for educational campaigns and events.

Meeting with utilities to discuss EV collaboration opportunities is required for Bronze designation within Charging Smart.

Local governments should also engage their electric utility as early as possible to coordinate the community's development plans and EV adoption goals with energy generation and grid capacity, recognizing that increased EV adoption may necessitate grid upgrades.

It is recommended that communities use RMI's GridUp: Accelerating Charging in Communities (GUACC) tool or a similar tool to develop an estimate of future EV charging demand, which can help facilitate conversations with the utility and lay a strong foundation for collaboration. In some locations, communities are served by multiple electric utilities. In these instances, local governments should meet with each utility to discuss EV programs and initiatives.

RESOURCES + ASSISTANCE

Electric for All utility EV program lookup: This database, developed by Veloz, enables users to easily search for electric utility EV program, incentives, and rates by entering their local ZIP code.

eRoadMAP: This mapping tool from the Electric Power Research Institute (EPRI) allows users to estimate the energy needed to electrify transportation at the local community level.

GridFAST: This tool from EPRI is designed to support EV infrastructure project development by enabling customers and utilities to connect and communicate more efficiently. It provides tailored advice from a utility advisor.

GUACC tool: The GUACC tool from RMI allows communities to forecast when and where demand for electricity associated with transportation electrification will increase, helping determine where investments in the electrical grid will be needed to support future EV charging demand.

Local Government Roadmap to Engaging Utilities on Electric Vehicles: This resource, developed by GPI, is a guide for communities when engaging with their electric utility on EV programs and incentives.

1.2 Start Here: Promote existing utility EV programs

Promoting EV programs and rates your electric utility offers can help educate residents and commercial property owners about rebates, time of use rates, managed charging, and other EV incentives.

Communities should collaborate with their utility to ensure that educational materials are accessible to groups such as renters, non-English speakers, and people living in multifamily housing. This helps to ensure the transition to electrified transportation occurs equitably.

Promotional and educational activities could include adding information on utility EV programs to the municipal website and newsletters, as well as co-hosting events such as ride-and-drives.

COMMUNITY EXAMPLES

City of Lafayette, Indiana: Lafayette includes a link to its local utility's EV incentives and rebates on its EV web page, which also features a link to a third party map of local charging stations.

City of Milwaukee, Wisconsin: The city promotes both We Energies EV pilot programs, one for residential EV chargers and one for commercial EV chargers. More information can be found directly on the EV landing page of the municipal website.

RESOURCES + ASSISTANCE

Utility Finder (U-Finder): This database, created by the US Department of Energy's Office of Energy Efficiency and Renewable Energy, helps communities identify electric utility incentive programs by state or ZIP code. An alternative database is Veloz's searchable electric utility EV incentive database.

Ride and Drive Toolkit: This resource from Drive Electric Minnesota provides step-by-step guidance for planning and conducting a successful ride and drive event. Local governments can invite local electric utilities to table at the event to educate community members on available programs.

ADDITIONAL IMPLEMENTATION CONSIDERATIONS

Degree of difficulty	Minimal
Staff time	Including information on EV programs and utility rates in existing communication channels should require minimal time and effort. Additional staff time may be needed if communities are actively creating new materials and resources, or if new outreach channels are being established.
Departments involved	Sustainability, planning.
County role	Counties may take the lead on this action or act as a coordinator or facilitator, bringing together multiple communities with similar goals to collaborate with the electric utility.
Partners	Property owners, electric utilities, metropolitan planning organizations, regional planning commissions.

2.1 Ramping Up: Work with the electric utility on the service connection process

In tandem with the electric utility, communities should create a guide to connecting EV chargers to the grid, aiming to make the process as transparent and streamlined as possible. Communities and utilities should also consider developing maps that display the current electrical capacity throughout the community. These actions can collectively reduce barriers to deploying EV infrastructure.

COMMUNITY EXAMPLES

Dane County, Wisconsin: Charge Up Dane County is an initiative aimed at expanding charging infrastructure throughout the county. A core component of the program is the partnership with electric utilities, including MGE, Alliant Energy, and WPPI, to deploy EV chargers.

RESOURCES + ASSISTANCE

Emerging Best Practices for Electric Vehicle Charger Interconnection: This report, developed by the Interstate Renewable Energy Council, describes key considerations for connecting EV chargers to the grid. Pages 7–11 describe the interconnection process and common challenges faced during it, which may be helpful to understand before working with the local utility to determine a streamlined process.

ADDITIONAL IMPLEMENTATION CONSIDERATIONS

Degree of difficulty	Minimal to Moderate
Staff time	This action will be a semi-moderate lift for communities. It may require multiple meetings with the electric utility, time dedicated to reviewing and revising processes, and collecting feedback from community members and stakeholders.
Departments involved	Sustainability, planning.
County role	Counties may take the lead on this action or act as a coordinator or facilitator, bringing multiple communities with similar goals to the table to collaborate with the electric utility.
Partners	Businesses, property owners, neighboring communities, electric utilities, county, metropolitan planning organizations, regional planning commissions, tribal nations.

2.2 Ramping Up: Work with the electric utility to support private fleet electrification

Local governments can support the electrification of private fleets by facilitating coordination between private entities and the local electric utility. This will support private fleet owners by ensuring the feasibility of electrifying their fleet by evaluating grid capacity for the corresponding charging infrastructure. This will also support the local electric utility by allowing them to adequately plan for any upgrades to the grid that will be required.

Local governments may also consider collaborating with their electric utility to develop incentives specifically targeted at increasing private fleet electrification, such as rebates and tax credits, to reduce the cost of procuring EVs and their associated infrastructure.

RESOURCES + ASSISTANCE

Overview of Utility Transportation Electrification Plans: Best Practices and Good Examples from Across the Country (p. 9–11): Although this report, created by Western Resource Advocates, was primarily developed for utilities and regulators, it offers best practices and

highlights successful utility programs from across the country that can provide valuable knowledge to inform your approach to the utility. Its descriptions of fleet charging programs, which are accompanied by an explanation of their importance, best practices, and model programs may be of particular interest.

ADDITIONAL IMPLEMENTATION CONSIDERATIONS

Degree of difficulty	 Minimal to Moderate
Staff time	Connecting entities seeking to electrify their fleets with the local electric utility will require minimal time and effort. Additional capacity may be required if the local government chooses to work with the electric utility provider to develop new programs.
Departments involved	Sustainability, planning.
County role	Counties can also work to connect entities seeking to electrify their private fleets, acting as a central point for coordinating between the electric utility and the interested group.
Partners	Businesses, property owners, chambers of commerce, electric utilities, tribal nations.

3.1 Full Speed Ahead: Collaborate with the electric utility to create new EV programs and rates, including managed charging initiatives

Municipalities can work with their electric utility to develop and promote EV programs, incentives, and rates. These EV charging programs may include time of use rates, EV and EV charger rebates, and make-ready programs.

As a best practice, communities should discuss with their electric utility how to best address and/or alleviate demand charges for EV charging infrastructure. Demand charges can hinder the deployment of EV chargers due to the significant increase in operational costs.

Communities can also collaborate with their utility to develop managed charging programs and incentives. Managed charging, which automatically adjusts EV charging based on current electricity demand, can improve grid efficiency and resilience while simultaneously reducing charging costs for EV owners.

Due to the wide range of utility types serving communities across the country, the degree to which a local government can influence and collaborate with its electricity providers varies. However, coalitions may present opportunities for multiple communities served by the same utility to join together to advocate for new EV programs.

RESOURCES + ASSISTANCE

Electric for All utility EV program lookup: This database, developed by Veloz, enables users to easily search for electric utility EV program, incentives, and rates by entering their local ZIP code.

Managed Charging Programs: Maximizing Customer Satisfaction and Grid Benefits: This resource from the Smart Electric Power Alliance discusses how managed charging and load management programs can succeed and explores customer engagement techniques to ensure program uptake.

Overview of Utility Transportation Electrification Plans: Although this report, created by Western Resource Advocates, was primarily developed for utilities and regulators, it offers best practices and highlights successful utility programs from across the country that can provide valuable knowledge to inform your approach to the utility. Each program type is described, accompanied by an explanation of its importance, best practices, and model programs. Residential programs can be found starting on page 3, multifamily housing programs on page 5, and direct current fast charging programs on page 7.

ADDITIONAL IMPLEMENTATION CONSIDERATIONS

Degree of difficulty	Moderate to Significant
Staff time	For communities served by electric utilities that already have EV-specific programs, this action will likely require less staff time and capacity. However, the degree of difficulty and amount of staff time required will increase if these programs need to be developed from scratch.
Departments involved	Sustainability, planning.
County role	Counties may take the lead on this action or act as a coordinator or facilitator, bringing together multiple communities with similar goals to collaborate with the electric utility.
Partners	Businesses, property owners, neighboring communities, county, electric utilities, tribal nation.

3.2 Full Speed Ahead: Work with the electric utility to integrate renewable energy and EV charging

To maximize the sustainability benefits of EVs, communities should work with their electric utility to promote or develop programs that encourage the pairing of renewable energy with EV charging.

Potential programs may include special rates for charging EVs during times of high renewable energy production, incentives for pairing EV chargers with on-site renewable energy generation and battery storage systems, and educational campaigns that highlight the benefits of combining EVs and renewable energy.

Counties can play a vital role in this process by helping organize multiple municipalities within their jurisdictions to negotiate an increase in renewable energy production with the local utility.

RESOURCES + ASSISTANCE

4 Emerging Ways to Pair Electric Vehicles and Renewable Energy: This article by the World Resources Institute describes four different methods for integrating renewable energy with

EV charging and how these methods are being explored across the country. These options can provide a starting point for discussions with your electric utility.

ADDITIONAL IMPLEMENTATION CONSIDERATIONS

Degree of difficulty	Moderate to Significant
Staff time	For communities served by electric utilities with existing programs for combining EVs and renewable energy generation, this action will likely require less staff time and capacity. However, the degree of difficulty and staff time required will increase if these programs need to be developed from scratch.
Departments involved	Sustainability, planning.
County role	Counties may take the lead on this action or act as a coordinator or facilitator, bringing multiple communities with similar goals to the table to collaborate with the electric utility.
Partners	Electric utility, county, business owners, property owners, tribal nations, neighboring communities.