PLANNING AND ENGAGEMENT

Municipal EV Readiness Toolkit

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Introduction

Maine's transportation sector accounts for 49% of the state's greenhouse gas (GHG) emissions. The state's climate action plan, *Maine Won't Wait*, outlines key strategies to reduce GHG emissions including putting 150,000 light-duty battery electric (BEV) and plug-in hybrid vehicles (PHEVs) on the road in Maine by 2030.

Communities, planning organizations, local and state governments, tribal nations, and other decision makers can help accelerate the transition to clean energy by implementing policies that support electric vehicle (EV) adoption and EV infrastructure development. They can also set an example by incorporating EVs into their own municipal fleets and disseminating information about EVs through stakeholder and public outreach.

EV infrastructure deployment also plays an important role in tourism, one of Maine's largest industries supporting 151,000 people, and contributing nearly $5.6 billion to Maine's households in 2022. As EV owners from Maine or tourists from the surrounding states plan trips, charging infrastructure can influence where they will visit, including where they get their groceries, shop, dine, and stay.

This guide details the best practices for municipalities to plan for the transition to EVs, as well as how to effectively engage community members and stakeholders in your community. It provides an overview of the current vehicle electrification goals in the State of Maine and examples of municipal planning and engagement practices. This guide can be succeeded by our other toolkits that expand on policy and regulation, and siting, funding and procurement for municipal fleet electrification.

Planning

EV Readiness Planning Framework

Guide your planning efforts by researching what statewide and regional plans exist already. Many areas have goals set around EVs or reducing transportation emissions, consider how your efforts might align with these. This section will outline Maine's state goals relevant to EVs and give examples of local plans that support EV adoption.

State Goals

To reduce statewide emissions from transportation, the state of Maine has set ambitious vehicle electrification goals. In Maine's climate action plan, *Maine Won't Wait*, a primary strategy is to "Embrace the Future of Transportation in Maine". Actions in this strategy include accelerating Maine's transition to light-duty electric and plug-in hybrid vehicles, and the adoption of zero-emission medium- and heavy-duty vehicles. The action plan sets goals for the state including:

- Put 150,000 light-duty battery electric and plug-in hybrid vehicles on the road in Maine by 2030.
- Expand public EV charging infrastructure with a goal of more than 700 publicly funded EV charging ports installed by 2028, including in underserved and rural communities.
- Advance policies that make lower- and zero-emissions vehicles more attractive choices for consumers and improve overall vehicle efficiency, including through information on the emission and efficiency benefits of non-plug-in hybrids.
- By 2028, launch pilot projects for zero-emission trucks, municipal and school buses, ferries, and boats to demonstrate and evaluate performance, reliability, and cost savings.
- Launch near-term fleet advisory services to help medium- and heavy-duty vehicle fleets adopt clean vehicles.
- Develop an incentive program for zero-emission medium- and heavy-duty vehicles.
- Advance policy options, including collaborative utility and regulatory approaches that accelerate the adoption of zero-emission medium- and heavy-duty vehicles.

These state-level goals are resulting in policies and programs that can be acted upon at the local level. Maine municipalities may use these to guide municipal planning for EVs and participate in new state programs and incentives.

Local Plans

Prioritizing EV use and the development of EV charging infrastructure in local plans enables municipal decision-making on EV-related programs and regulations. The primary policy tool available to Maine municipalities is the Comprehensive Plan. Alternatively, municipalities may choose to plan for EVs in a Climate Action Plan or a specific EV strategy or plan.

Policies for supporting EVs and EV infrastructure could fit under a single chapter in a plan (i.e., transportation) or be incorporated throughout the plan (i.e., in transportation, housing, economic development, land use, etc.). EV policies should address the strategies presented throughout the Municipal EV Readiness Toolkit, including:

1. Addressing EV infrastructure in zoning and ordinances
2. Incorporating EVs into the municipal fleet

3. Addressing EVs in permitting and inspection processes
4. Support for the development of public EV charging stations
5. Show leadership and support for EVs

Examples of existing plans in Maine include:

Portland & South Portland, One Climate Future
This plan outlines adjustments to city codes to expand EV charging including:

a. Requiring that any new municipal parking lots or garages install a minimum number of EV charging stations.
b. Developing policies for who can use which chargers; some chargers should be prioritized for municipal vehicles, while others should be available to members of the public.
c. Requiring that any new municipal garages include the electrical infrastructure necessary for the installation of future charging stations at every parking spot.
d. Requiring that all municipal parking spaces, including existing lots and garages, install a minimum percentage of EV-ready spots.
e. Rewarding EV ownership and utilization by locating EV charging spots at higher-demand and more convenient locations within lots and garages.
f. Supporting electric taxis, shuttles, and short-haul delivery vehicles by investing in DC fast chargers at key sites along routes frequented by taxi drivers and short-distance haulers.

Yarmouth Comprehensive Plan 2024
Yarmouth incorporated EVs throughout their comprehensive plan, including in their plans for Housing, Transportation, and even Historic and Archaeological Resources. The plan recommends energy upgrades to prepare for increased electric appliances including EV chargers, and promoting the switch to electric vehicles by adding EV charging stations throughout the town. The increase in chargers is also meant to facilitate the transition to EVs for the towns fleet, leading the way for the residents and businesses of Yarmouth.

Biddeford Comprehensive Plan 2024
Biddeford's comprehensive plan includes the transition to electric transit through Biddeford Saco Old Orchard Beach Transit, with a plan to have a zero-emission fleet by 2045. The plan lists a goal to "safely preserve and improve the transportation system" by planning for increased demand in EV charging infrastructure. The comprehensive plan also lays out the intention to include EV charging in new municipal parking structures; "Ensure climate-oriented infrastructure (e.g. EV charging stations, bike racks) is included at all public parks, playgrounds, trails, and playing fields".

Infrastructure and Readiness Planning

Amount of EVs and Charging Needs

Understanding the current need and future demand of EVs is an important first step in planning for EV charging infrastructure. A 2022 study by the National Renewable Energy Lab (NREL) projects that by 2030 EVs could account for 30-42 million light-duty vehicles on the road. This increase in EV adoption is estimated to require 2,300 charging ports in Maine by 2030.

To assess your own charging needs, start by exploring the following tools:

- **EVI-Pro** to calculate the typical daily charging needs for running errands and commuting.
- **EVI-RoadTrip** to project the charging infrastructure needed to make long-distance travel along national highways feasible.
- **EVI-OnDemand** to estimate the charging infrastructure needed for ride-hailing fleets to electrify their operations.
- **Transportation Energy & Mobility Pathway Options (TEMPO) model** to estimate the number of EVs that might be on the road under different adoption scenarios.
- **Region-specific analysis** to guide local investments into EV charging infrastructure.

Funding

Infrastructure costs for EV charging stations can be significant, the basics of funding are covered in this section with more details in the "Siting, Funding, and Procurement" guide.

The most inexpensive projects are those that are already EV-ready, or when the project is done in tandem with repaving. Including charging station infrastructure in municipal plans can help lower costs for future projects and eliminate the costs of trenching for new conduits and wiring when charging stations are eventually added.

For information on up-to-date funding opportunities, use the following resources:

- Database of State Incentives for Renewables and Efficiency
  Source: NC State University
  Contains state incentives for EVs and charging infrastructure.
- Alternative Fuels Data Center
  Source: U.S. Department of Energy
  Provides federal and state laws and incentives surrounding EVs and charging infrastructure including tax credits and clean vehicle standards.
- Efficiency Maine
  Source: Efficiency Maine Trust
  EV incentives and rebates for Maine residents.

Locations

With the increase in EV adoption, charging stations can help encourage people to visit and support the local economy while charging by exploring nearby businesses. Locations near popular roadways can reduce range anxiety and help promote traveling long distances, or to more rural areas, with EVs.

Planning and engagement are essential for deciding charging station locations. Consider the types of places people will want to charge at recreational facilities, shopping centers and restaurants, parks and trails, or maybe a central location downtown. Surveys and public meetings can help narrow down where the community wants charging infrastructure. Providing maps for people to pinpoint where exactly they'd like to see charging and recording their reasoning is a useful practice.

To further guide your decision on siting best practices, consult the Siting, Funding, and Procurement Guide. Short outlines of key influences on siting and location can be found below:

1. ***Accessibility***
   Big picture: Consider if the locations you are reviewing are accessible to everyone; terrain type, distance from amenities, and overall size of the site can be factors in this decision. Think long-term when choosing an area to place EV charging infrastructure; is there potential for this area to change, and will that have an impact on the accessibility of the lot or site being considered?

   Site specific: A reasonable amount of chargers should be accessible for people who use mobility devices, keep in mind the size of the spaces you may need in this case and what spaces on location can support these. Review recommendations by the U.S. Access Board for Design Recommendations for Accessible Electric Vehicle Charging Stations.

2. ***Existing Infrastructure***
   Site specific: Consider structural elements like curbsides, landscaping, and walkways that can add costs to a project for removal. Construction costs can be the most expensive part of adding EV charging stations. When possible, avoiding hardscapes and trenching through landscaping can help lower the costs, keeping in mind that the mount still must be on a solid surface.

3. ***Electric Demand***
   Big picture: Talk to utilities early on in your planning process. The load hosting capacity of an area will drastically affect where you can place charging or required upgrades may be an added expense if additional infrastructure is needed. Central Maine Power provides a Load Hosting Capacity Map for the public to view and can give you a basic idea of how feasible a new project may be based on capacity.

   Site specific: What electric meter will the charging stations be connected to? Consider what is already connected to the meter, and the impact electrical additions might have on demand.

4. ***Future EV Charging Infrastructure***
   Big picture: Consider how your project might grow in the future. Where 1 charging station might be enough now, as EVs have become more popular you may find the need for more ports, or a bank of charging stations. Finding a location with enough space and load capacity for the future need of chargers can help lessen the burden of future projects.

   Site specific: Finding opportunities for underground utility upgrades for future charging infrastructure and modifying your plans now can save costs in the long run.

Engagement

Through the increase in adoption of electric vehicles, stakeholder engagement has emerged as a critical component of successful project development and implementation. Effective stakeholder engagement identifies and responds to the needs and concerns of all individuals and groups who may be affected by a project. It is essential for building trust, resolving conflicts, and ensuring the long-term success of EV adoption.

Engagement Best Practices

Meaningful community engagement involves building trusting relationships and community connections to your project. This requires sustained efforts to maintain relationships built, and to continuously get community input.

Key considerations for effective engagement include:

1. *Stakeholder Involvement*
   Your plan should be informed by representatives from the community and industry stakeholders. Consider how you will identify these groups and how they can provide input for parts of your plan including infrastructure needs, engagement, siting, funding, and procurement. With the community fairly represented and considering input from all stakeholders, you can then work to ensure that EV charging infrastructure is fairly distributed.

   Continue this process throughout the project by asking; who is showing up to your meetings, responding to surveys, and engaging with your project? More importantly, who is not? Consider how to reach the underrepresented groups, and what barriers you can eliminate for engagement. Common barriers might include:
   - Language and literacy
   - Transportation
   - Childcare
   - Time of day

2. *Trust*
   Citizens may be distrustful of public engagement due to historical patterns of decision-making not reflecting public input. Demonstrate that you are willing to engage honestly and be up front with them. Being transparent in your team's roles and your limitations will help manage expectations and create an even playing ground at the start. Keep this trust throughout the process by acknowledging any mistakes and holding yourself and your team accountable.

3. *Effective Communication*
   People you collaborate with will come from all backgrounds. Be sure to use clear and simple language to avoid confusion or misinterpretation. Providing multiple channels for engagement and feedback can invite stakeholders to be more involved in the process and result in a more impactful project. Consider engaging not only in-person, but also online through emails, newsletters, and even social media.

4. *Meeting Spaces*
   Will you be meeting in person, online, or a mix of both? If in person, consider choosing a location accessible by public transportation, and central to the community you want to engage. Meeting in a familiar and accessible space may encourage more engagement.

5. *Needs Assessments*
   Needs assessments can help guide work to make sure planners are meeting the priorities of an area. If an assessment already exists for your area, review the transportation priorities to ensure you are moving in the right direction.

Ways to Engage

There's no one way to exchange information - meetings and presentations are common practices, but not always the most engaging. Get people involved and giving input through hands-on activities, like adding desired charging areas to local maps, or starting conversations at local community events.

Manage municipal programs to encourage EVs and EV infrastructure

Municipalities can implement short or long-term programs to familiarize community members with EVs and encourage charging station installation. Many programs are public education efforts. These may include outreach events such as a Drive Electric event or EV parade. It may also include sharing consumer education and informational materials (such as those available from Efficiency Maine).

Another important public education effort is targeted and sustained outreach to low- and moderate-income communities. Great partners for outreach events include:

- Efficiency Maine
- Maine Clean Communities
- Drive Electric Maine
- Local dealerships
- Local community-based organizations
- Regional planning organizations
- Electrical Utility Representatives

Public Education Examples:

Green Home and Energy Show EV Expo

A grassroots chapter of Drive Electric Maine based in the Greater Portland area volunteered at the Green Home and Energy Show to showcase electric vehicles and talk to the public about their mission to increase plug-in EV adoption in Maine. Vehicles were sourced from local dealerships, organizations, and volunteers, and were available to view and even test drive.

Biddeford-Saco-Old Orchard Beach Transit Workshop
Biddeford-Saco-Old Orchard Beach (BSOOB) Transit was one of the first agencies to integrate an electric bus into their fleet. They hosted a workshop including a presentation about EV charging and technology, a tour of their bus and facilities, and even an overview of their intended microgrid to power their buses.

Participate in EV stakeholder groups

EV technology and the landscape of state and federal incentives are rapidly changing. To stay up to date on technology development and EV opportunities, you can participate in Maine EV stakeholder groups.

Stakeholder Groups:
Maine Clean Communities
A government/industry partnership, coordinated by the U.S. Department of Energy and administered by the Greater Portland Council of Governments, that is working to expand the use of alternative fuels. Municipalities can become stakeholders to receive technical assistance, outreach event support, and peer learning opportunities.

Drive Electric Maine
A public and private-sector EV stakeholder group that works to drive the adoption of plug-in EVs and EV charging infrastructure through state-based opportunities. The group meets quarterly to share state-level updates, car industry developments, and EV technology information.

Partner with municipalities on EV infrastructure development

Maine municipalities have significant control over the development of the state's EV charging infrastructure. They determine how public EV charging stations are regulated and approved, and they often install and operate public EV charging stations themselves. Because of their important role, it is vital that Maine municipalities work together to:

- Ensure that the EV charging station network meets the range and location needs of EV users as they drive throughout the region.
- Identify, respond to, and collaborate on funding opportunities to enhance EV adoption.
- Ensure that EV charging permitting processes are consistent throughout the region to ease permitting and inspection burdens.
- Increase the effectiveness of public education efforts throughout the region.

Regional Partnership Examples:
Portland x South Portland
These cities partnered to create a climate action plan, One Climate Future, which specifies transitioning municipal operations to 100% clean renewable energy by 2040. Together they are using demand aggregation through the Climate Mayors Electric Vehicle Purchasing Collaborative to help fund their electric fleets. They also worked together to agree on a minimum of EV chargers required on municipal lots and garages, creating a more cohesive plan for the region.