

Electric Vehicle Guidance Documents For Communities in the Northeast and Mid-Atlantic

December 2012

In October 2011, the Transportation and Climate Initiative (TCI), a collaboration of state transportation, energy, and environmental agencies in the Northeast, launched a Northeast Electric Vehicle Network and agreed to coordinate on electric vehicle (EV) infrastructure planning and deployment. TCI, in partnership with the New York State Energy Research and Development Authority (NYSERDA) and 16 of the region's Clean Cities Coalitions, received a nearly \$1 million Department of Energy Electric Vehicle Planning grant to support early planning activities for the Network.

Under the grant, five “EV guidance documents” were developed to help policy makers, municipal planners, and others in making their businesses or communities EV-ready. The documents were developed by Energetics Incorporated, an engineering and management consulting firm, and WXY Architecture + Urban Design, an urban design planning firm, and are available for download (see web address below).

EV Guidance Documents: Summary

Electric Vehicle Siting and Design Guidelines. These guidelines identify key siting and design issues that are relevant to local governments, developers, homeowners, businesses, utility providers, and other organizations. The guidelines provide an overview of elements of site selection and design and installation scenarios, including considerations for commercial lots, multi-family residences, on-street charging, service station models, and fleets.

For additional guidance on siting EV charging stations, please refer to NYSERDA's "Site Design for Electric Vehicle Charging Stations," which can be downloaded at www.sustainabletransportationstrategies.com.



COMMERCIAL LOT

Assessment of Current EVSE and EV Deployment. The deployment assessment provides a region-wide look at EV and electric vehicle supply equipment (EVSE) deployment in the Northeast. The report highlights trends in EV ownership and EVSE locations, offers recommendations to maximize the impact of EVSE installations, and offers recommendations for further areas of study. The report finds that EV owners in the TCI region are typically younger, more educated, wealthier, and live in rural or suburban areas surrounding metro centers. Moreover, the assessment shows that a significant portion of the region's EVSE is located at EV dealerships, and that new EVSE should be located as destinations that are within driving distance of EV communities.

EVSE Cluster Analysis. The Cluster Analysis proposes ten land use “clusters” that represent strong areas of current and potential EVSE deployment. The clusters were chosen based on the behavior of the typical user, the site’s operations, external influences like geography and demographics, and the ability of a cluster to provide benefits to the EVSE host and wider public. The analysis also uses case studies to demonstrate how the clusters can effectively support EV use.

EV-Ready Codes for the Built Environment. This document provides an overview of building and electrical codes and their relation to EVs, highlights best practices from around the country, and makes recommendations for jurisdictions in the Northeast and Mid-Atlantic. The report draws several conclusions:

- Existing codes do not present a significant barrier to electric vehicle supply equipment (EVSE) deployment, but there is room within the codes to more clearly encourage EV-readiness.
- Codes can achieve EV-readiness and regional cohesion. For example, a coordinated effort to specify requirements for certain features in new construction and provide for new permitting or inspection protocols can help to streamline EV codes across the region.
- Adopting EV-friendly codes that encourage EVSE deployment can promote economic development in the region.
- Codes can create a high-level planning framework while retaining flexibility at the local level. For example, states can adopt code appendices containing EV-friendly provisions that can be adopted at the local level.
- Adopting EV-friendly codes should be part of a collaboration between partners to create a comprehensive EVSE deployment strategy.

Creating EV-Ready Towns and Cities: A Guide to Planning and Policy Tools. This report provides guidance to practitioners at all levels of state and local governments wishing to take action to implement EVSE deployment in their jurisdictions. It provides discussion and guidance regarding the steps to create, administer, and amend planning processes, rules, and regulations, and explores the potential for jurisdictions to encourage EV charging station installation and use. Tools to promote EV-friendly zoning regulations, parking ordinances, building codes, permitting practices, and partnership and procurement are explored, and examples of streamlined approaches are provided.

Guidance documents are available for download at www.northeastEVs.org.

For more information about the Northeast Electric Vehicle Network and TCI’s EV guidance documents, please visit: www.georgetownclimate.org/tci or contact your Clean Cities Coordinator, Dolores Rebolledo at dolores.rebolledo@des.nh.gov, or 603.271.6751.



U. S. Department of Energy

