

## 5. POLICIES, CODES & STANDARDS

### 5.1 Introduction to Policies, Codes & Standards

Local policies, codes and standards can both help and hinder a community's successful adoption of PEVs. The goal of the Policies, Codes & Standards Working Group is to ensure that policies, codes & standards of local governments and other key stakeholders facilitate appropriate EVSE installation in the Asheville region. During the planning process the group engaged local code enforcement and planning officials to document existing ordinances, policies, and processes that could hinder EVSE installation. A plan was defined to streamline processes and create new ordinances and policies that will prepare the region for PEV adoption. This plan also addresses the need to educate local stakeholders about important state and federal codes and standards affecting EVSE installation. The CVC will work closely with local governments, property managers hosting EVSE, utilities and NC Department of Transportation (NCDOT) staff to put this plan into action.

The US DOE requested that all Clean Cities PEV Planning grantees develop strategies to address the following list of potential PEV adoption barriers related to policies, codes and standards:

#### *EVSE Permitting and Inspection*

Streamlined permitting and inspection processes that provide clear guidance for public and private charging station installations make adoption easier for consumers and simplify the provision of PEV infrastructure for public and private providers alike. While initial volumes of PEV purchases in any single jurisdiction will be small enough to allow plan reviewers and inspectors to identify problems without significant delay, the development of clear processes will help to prevent delays as volume increases.

#### *Americans with Disabilities Act (ADA)*

ADA standards specifically addressing the installation of charging stations in public parking areas (e.g., lots, decks, on-street, etc.) have not been established. However, ADA regulations apply to all government and commercial sites, and charging station installation cannot violate the ADA compliance by making a site or a feature of the site non-compliant. Sites must be designed so that the facility (or part of the facility) is readily accessible to and usable by individuals with disabilities.

#### *Signage and Parking*

Standardized parking signage helps PEV drivers identify public charging stations. Regulatory signage can be coupled with PEV parking policies to preserve PEV access to these stations. Way finding signage on highway exits and on city roads can help PEV drivers navigate to these stations. All types of PEV signage will help to raise public awareness of PEV readiness efforts.

#### *Zoning*

Local zoning ordinances can either hinder or promote EV charging station installation through requirements related to permitted uses, parking rules, signage, and lighting. Zoning codes should clearly define that the installation and use of a charging station is a permitted use and define what if any restrictions apply for specific charging station types or locations. Broad zoning regulations will

allow for jurisdiction-wide charging station deployment. Zoning ordinances can also provide detailed direction on the community's approach to charging station installation that can save time and money for homeowners, businesses, and developers interested in installing charging stations.

### *Building Codes*

Much of the cost of installing EVSE is associated with the process of retrofitting existing sites that are not equipped for charging. One way to address this issue is modifying state building codes relating to new parking lots and garages to require a specific number of spaces be provided with conduit to serve both the power and communication wiring needs of future PEV charging stations. In contrast to locally-controlled zoning ordinances and permitting processes, the state government of North Carolina has jurisdiction over most code modifications and interpretations. Building, electrical and accessibility codes are approved and adopted by the N.C. Building Code Council in the N.C. Department of Insurance.

## 5.2 Existing Community Policies, Codes & Standards

### *EVSE Permitting and Inspection*

The following information on EVSE permitting & inspection policies was collected from the Authorities Having Jurisdiction (AHJs) in the Asheville region by Advanced Energy in June 2012.

**Figure 5.1 Asheville Area EVSE Permitting & Inspection Survey Results**

AHJ	Buncombe County	City of Asheville	Haywood County	Waynesville	Henderson Co and City of Hendersonville	Transylvania County
<b>1. What is the process for obtaining permit?</b>	Commercial: Walk in or fax electric permit application	Licensed electrician apply via e-mail, fax, mail, or walk up	Commercial: Walk in service for electrical contractor	Commercial: Standard electrical permit application with site plan and load projection	Commercial: Two trips, present drawings, return to pick up approved permit	Licensed electrician apply for standard electrical permit via web portal or walk up
	Residential: Walk in or fax electric permit application	Residential: No permit required for prewired plug in type charger. Otherwise licensed contractor must install	Residential: Permitting Department	Residential: Walk in service. Standard bulk permit for residential buildings	Residential: Electric permit, single trip to office	Residential: No permit required for prewired plug in type charger.
<b>2. What agencies are involved in the permitting process?</b>	Commercial: Permitting and Community Planning Department	Commercial: Development Services Center	Commercial: Permitting Department	Commercial: Permitting and Inspections departments	Commercial: Inspections, and Zoning departments	Commercial: Permitting office
	Residential: Permitting department	Residential: Development Services Center	Residential: Permitting department	Residential: Permitting	Residential: Inspections department	Residential: Permitting office

<b>3. How long does it take to secure the permit(s)?</b>	Commercial: 24 hours	Commercial: 5 minutes	Commercial: 30 minutes	Commercial: Varies, typically two weeks	Commercial: Varies, no time estimate given	Commercial: 5 minutes
	Residential: 24 hours	Residential: 5 minutes	Residential: 30 minutes	Residential: 48 - 72 hours	Residential: 15 minutes	Residential: 5 minutes
<b>4. What costs are involved in the permitting process?</b>	Commercial: \$0 - \$5000 = \$75.00 Residential: \$75.00	Commercial: \$0 to \$5000= \$78.00 \$5000 to \$10,000 = \$104.00 Residential: \$78.00	Commercial: \$110.00 Residential: \$55.00	Commercial: Varies, based on project complexity Residential: \$75.00	Commercial: \$7.00 per \$1000 valuation - \$75.00 minimum Residential: \$40.00	Commercial: \$75.00 Residential: \$75.00
<b>5. What has worked well/not well with permitting process?</b>	Streamlined process works well	Streamlining EVSE permits as any other permit works well. Not well: Plans submitted for accessibility are difficult in practice.	Works well, only delay is applicant with incomplete address and/or phone information	Process is streamlined and thorough. Call in advance will streamline commercial permits	Streamlined permitting process in place includes city and county in same location	Works very well, most permits are secured through web portal
<b>6. Recommendations for streamlined permitting process</b>	None	Meet with permitting officials in advance when submitting plans for accessibility	None	Start permitting process before contractor is hired. Develop relationship with city to address conservation, ADA, Zoning.	None	None
<b>7. Contact</b>	Matt Stone	Mark Case, Building Safety Asst. Director	Todd Norman	Jason Rogers	Tom Stauffer	Sherry Reese, Permit Specialist

Madison County and Black Mountain are the only two AHJs in the PEV planning region that did not answer the Asheville Area EVSE Permitting and Inspection Survey.

The City of Asheville was the only jurisdiction that had developed a permit process specifically for EVSE installation. In 2010 the City of Asheville Building Safety Department developed a permit and inspection process for residential and commercial EVSE installation. Based on conversations with EV owners and electrical contractors in the region, local permit and inspection processes for EVSE installation have not been a major barrier to PEV adoption. In several cases permit and inspection processes have slowed the installation of public charging stations. The number of public charging station installations is small enough that organizations considering installation are advised to simply meet with permitting officials in advance.

### Education and Guidance

- Examples of streamlined permit & inspection processes for EV charging stations were reviewed with inspectors from all AHJs in the region at the EVSE Technical Forum in December 2010 and the EVSE Installation Workshop in October 2011.
- Contact information for all permitting offices is posted on [www.CleanVehiclesCoalition.org](http://www.CleanVehiclesCoalition.org).

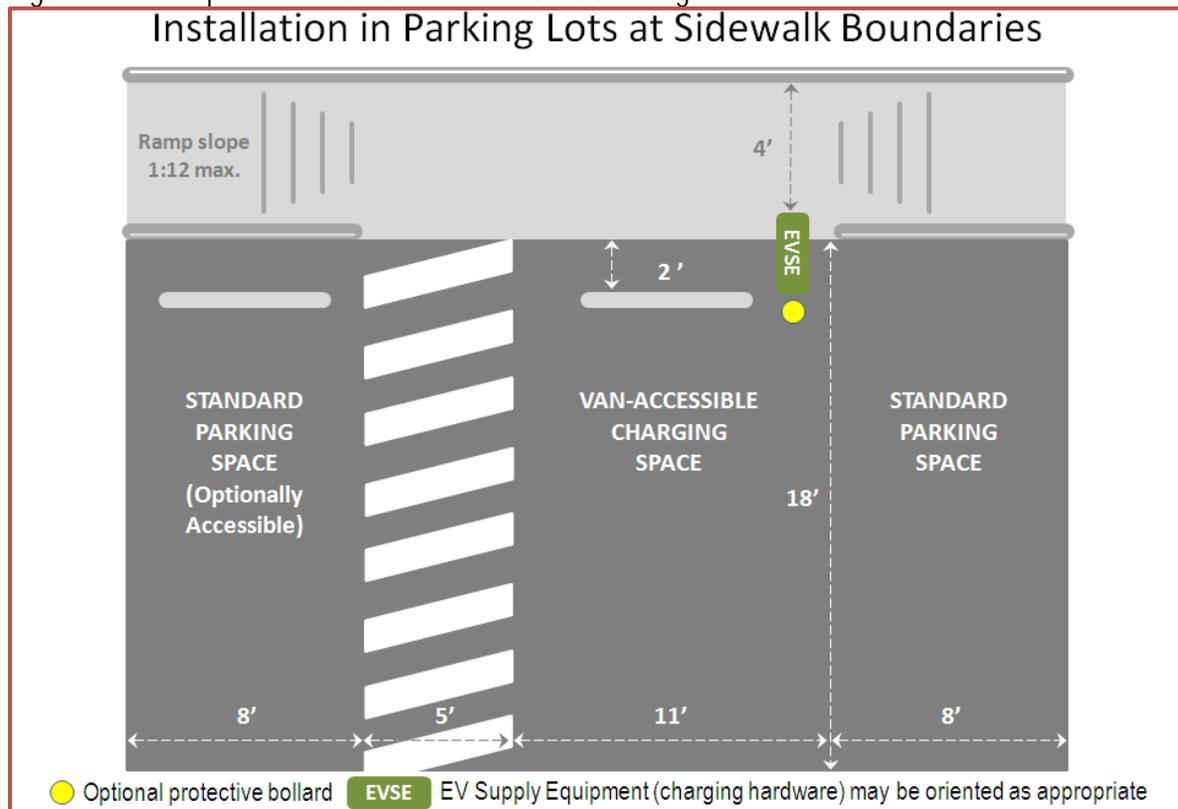
- For a complete guide to EVSE permitting and inspection the CVC has referred electrical inspectors and contractors to the *Advanced Energy Charging Station Installation Handbook* ([www.advancedenergy.org/transportation/](http://www.advancedenergy.org/transportation/)).

### Americans with Disabilities Act (ADA)

The potential for ADA compliance to hinder public EVSE installation was highlighted in 2011 when it was discovered that the charging stations at Biltmore Park were installed at a height that was 48" too high to meet ADA accessibility standards. The charging stations at Biltmore Park were reinstalled by Eaton at no cost to the property manager, but such ADA oversights can be costly and easy to make, and could have a chilling effect on public EVSE installation in the region.

ADA issues related to EVSE installation were covered in the EVSE Technical Forum in December 2010 and the EVSE Installation Workshop in October 2011. These meetings were attended by code officials from every AHJ in the region. At the October 2011 EVSE Installation Workshop, the City of Asheville Building Safety department and Advanced Energy took the opportunity to use the Biltmore Park installation as a case study, and draw out some ADA lessons for local inspectors and electrical contractors involved in EVSE installation projects. ADA best practices were also reviewed with local government staff at the Policies, Codes & Standards Workshop in June 2012.

Figure 5.2 Example of ADA Guidance on EVSE Site Design



During the Advanced Energy Charging Station Grant project in 2011, applicants were requested to develop EVSE site and installation proposals using the following ADA guidance.:

- Federal standards call for a 1:25 parking ratio of parking places to be reserved for accessible spaces
- Plan installation such that the first charging stall at the site is sized for van-accessibility to create an "accessible charging stall." Ideally this would be achieved by configuring the first charging stall as an 11 foot wide parking stall plus a 5 foot wide access aisle. Alternately, it could be configured as an 8 foot wide parking stall plus an 8 foot wide access aisle.
- The accessible charging stall may share an access aisle with an existing ADA stall.
- The accessible charging stall should be located on an accessible path to the facility
- Ensure that any bollards installed do not obstruct the accessible route
- Charging station manufacturers have designed their equipment for compliance with other ADA requirements (e.g. minimum and maximum reach heights for the charging controls) and you must comply with any and all related installation instructions.

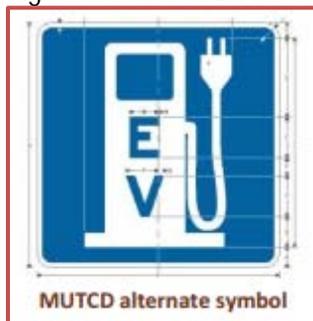
For a complete guide to ADA standards for charging station installation the NC PEV Taskforce recommends referring to the *Advanced Energy Charging Station Installation Handbook* ([www.advancedenergy.org/transportation/](http://www.advancedenergy.org/transportation/)).

### *Signage and Parking*

Parking signage is used at all public charging sites in the Asheville area to help PEV drivers identify stations and in some cases reserve parking for PEVs. There is a wide variation in the color, symbols and language used to identify charging stations installed at these parking spaces.

Through the standardization of signage, charging infrastructure will become more familiar to North Carolinians while increasing confidence in both the safety and reliability of this technology. Standard signage for identifying EV charging stations can be found in the Manual on Uniform Traffic Control Devices (MUTCD) published by the Federal Highways Administration. In 2011 the Federal Highways Administration included the Alternative Electric Vehicle Charging General Service Sign in the Manual on Uniform Traffic Control Devices (MUTCD) and will grant jurisdictions approval to use it upon written request (Figure 5.3). A state may request approval to use the alternate symbol for all jurisdictions in that state.<sup>51</sup>

Figure 5.3 MUTCD Alternative Electric Vehicle Charging General Service Sign



<sup>51</sup> Lindley, Jeffrey A. (2011, April). MUTCD – Interim Approval for Optional Use of an Alternative Electric Vehicle Charging General Service Symbol Sign. FHWA Memorandum to Federal Lands Highway Division Engineers and Division Administrators.

### Regulatory PEV Signage in the Asheville Region

All public charging stations in the Asheville region have been deployed with signage, but this signage is not always used to preserve PEV access to these stations. There are currently five public charging sites in the region using regulatory signage to designate parking spaces as “EV Only”:

- City of Hendersonville Dogwood Parking Lot
- Asheville Area Chamber of Commerce
- Biltmore Town Square Park
- Ingles Market at Skyland Plaza
- Buncombe County College Street Parking Deck

PEV drivers are already beginning to report on EV charging stations stalls in the Asheville region that are frequently occupied by non-PEVs. As PEV use increases in the Asheville region regulatory signage will become increasingly important to preserve PEV access to parking stalls with charging stations. The NC PEV Taskforce recommends using the red on white design and wording shown in figure 5.4 for regulatory signage to keep non-EV drivers from occupying charging station parking spaces (Figure 5.4). Using “No Parking Except for Electric Vehicle Charging” will help prevent Hybrid Electric Vehicles and conventional Internal Combustion Engine vehicles from occupying a charging station parking space.<sup>52</sup> This regulatory signage can be combined with the General Service sign show in Figure 5.3.

Figure 5.4 Regulatory Signage



In order for the regulatory signs to be enforceable, they must be supported by local ordinances. As of October 2012 no jurisdictions in the Asheville region have enacted PEV parking ordinances. Lacking local ordinance enactment, these signs will largely be informational and rely on public acceptance. Where ordinances are in place, the sign should identify that ordinance by number so that the driver is aware that enforcement is by the local authorities rather than the destination owner.

Many property managers that have yet to create “EV only” parking policies have cited a desire to avoid any backlash stemming from unused high demand parking spaces that are reserved for PEVs.

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<sup>52</sup> Puget Sound Regional Council | Washington State Department of Commerce, “Plug in America Webbased Electric Vehicle Consumer Survey”, May 4, 2010.

Figure 5.5 Regulatory “EV Only” Parking Signage at Asheville Area Chamber of Commerce



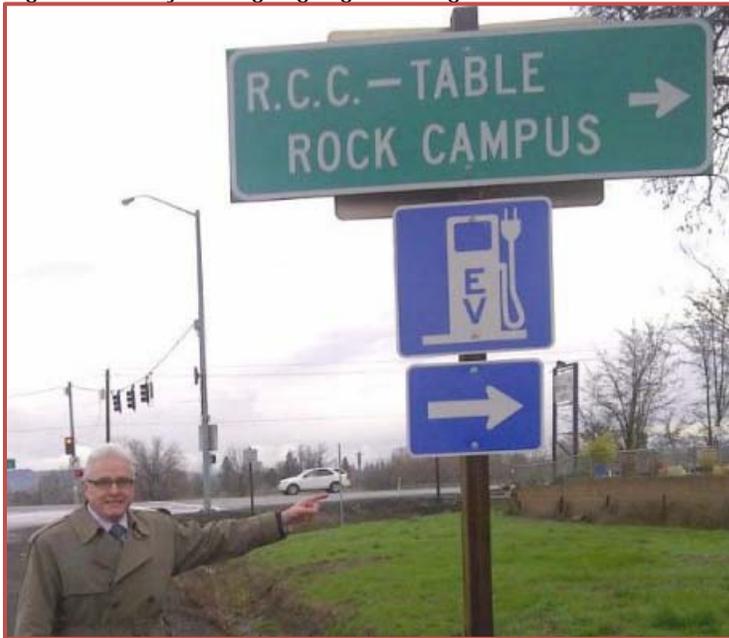
The City of Asheville has attempted to phase in “EV only” parking based on the number of actual PEVs that are registered in the region. In 2012 the City of Asheville developed an EV parking policy that requires the city to designate one of their existing parking spaces with a charging station as “EV only” for every 100 PEVs that are registered in the five county Asheville region, which includes Buncombe, Haywood, Henderson, Madison, and Transylvania Counties. Based on PEV sales projections for the region, this policy would require the first “EV only” parking space on City owned property to be designated in 2013 and an estimated 13 “EV only” spaces by 2015.

Brightfield Transportation Solutions has installed solar charging stations on properties owned by the City of Asheville and Buncombe County, which have yet to designate any parking spaces as “EV only”. To preserve access to EVs, Brightfield has worked with these local governments to install alternative signage requesting drivers the leave charging station spaces open for PEVs if other parking is available.

#### Way-finding Signage

PEV owners in the region have reported that some charging stations have been difficult to find, even with the use of mobile devices that map charging stations locations. In some cases the exact GPS coordinates or address for charging stations can be incorrectly listed by a smart phone application, which can make stations hard to locate, especially in urban settings. Way-finding signage can be an important tool to help PEV drivers navigate to charging stations and to raise general awareness of PEV readiness efforts in the region. There are currently no EVSE way-finding signs deployed in the Asheville region. For the purposes of standardization, future way-finding signage installed in the Asheville region can make use of the MUTCD General Service Sign, along with directional arrows (Figure 5.6).

Figure 5.6 Way-finding Signage in Oregon



Source: [http://www1.eere.energy.gov/cleancities/toolbox/pdfs/ev\\_webinar\\_james.pdf](http://www1.eere.energy.gov/cleancities/toolbox/pdfs/ev_webinar_james.pdf)

The CVC raised the issue of EVSE way finding signage with NC DOT Division 14 and 13 engineers at the Land-of-Sky Rural Planning Organization's Transportation Advisory Council meeting in October 2012.<sup>53</sup> During the meeting it was decided that EVSE owners or Land-of-Sky would request way-finding signs for EVSE through the local NC DOT Division Engineers once standard signage has been approved by the state.

### *Zoning*

There are currently no local governments in the Asheville region with zoning ordinances that specifically refer to EVSE or PEVs. The CVC and Advanced Energy met with Linda Giltz, Senior Planner at Land-of-Sky Regional Council, to discuss zoning standards in the Asheville region that may discourage EVSE installation and recommendations for PEVs and charging infrastructure. Zoning issues were also reviewed with local government staff during the Policies, Codes & Standards Workshop in June 2012. The feedback collected from local government planners and other staff was used to inform the statewide guidance developed by the NC PEV Taskforce on EV-friendly zoning policies.

### *Building Codes*

Since building, electrical and accessibility codes are approved and adopted by the N.C. Building Code Council, the CVC deferred work on this task to the NC PEV Taskforce. During the planning period Taskforce members met with NC Building Code Council officials to discuss the future development of codes that require EVSE wiring in new construction and renovation.

<sup>53</sup> Joel Setzer, NC DOT Division 14 Engineer, Rueben Moore of Division 14 and Mike Calloway, Division 13 Project Manager, attended this meeting. Division 13 includes Madison and Buncombe counties. Division 14 includes Henderson, Transylvania and Haywood counties.

### 5.3 Policies, Codes & Standards Readiness Planning

#### Goals

The goal of the Policies, Codes & Standards Working Group is to ensure that policies, codes and standards in the Asheville region facilitate the deployment of appropriate charging infrastructure and promote PEV adoption.

#### Barriers

The potential PEV adoption barriers in the Asheville region related to polices, codes and standareds were identified as:

- ADA requirements that discourage EVSE deployment
- Lack of parking policies & enforcement
- Lack of clear parking, way-finding and regulatory signage
- Overly burdensome EVSE permit & inspection processes
- Zoning ordinances that unintentionally restrict public EVSE deployment and PEV parking
- Lack of building codes requirements and incentives for pre-wiring new construction for EVSE

#### Strategies

Key strategies to address the barriers related to policies, codes and standards in the Asheville region are detailed in the figure below.

<i>Category</i>	<i>Strategy</i>	<i>Responsible Parties</i>	<i>Time Frame*</i>	<i>Priority Level**</i>
Signage	Facilitate deployment of standard parking and way finding signage based on NC PEV Taskforce guidance	CVC, local governments, NC DOT, NCPEVTF	Mid Term	High
Parking	Development of EV parking policies based on NC PEV Taskforce guidance	Local governments, other public EVSE hosts, NCPEVTF	Mid term	
Permitting	Streamline burdensome EVSE permit and inspection processes based on NC PEV Taskforce guidance	Local governments, NCPEVTF	Mid term	
Zoning	Approach local planning professionals to establish zoning standards based on NCPEVTF recommendations	NCPEVTF, CVC, local governments	Short term	
ADA	Distribute ADA best practices developed by NCPEVTF to local governments	CVC, NCPEVTF	Short term	
Education	Serve as clearing house for	CVC	Ongoing	

	information on local policies, codes & standards, and best practices that affect			
<i>Category</i>	<i>State-level Strategy</i>	<i>Responsible Parties</i>	<i>Time Frame</i>	<i>Priority Level</i>
Building Codes	Provide support to NCPEVTF and work with NC Building Code Council on codes that require EVSE wiring in new construction and renovation	NCPEVTF	Long term	High

\*Short term (1 year or less); Medium-term (1 to 2 years); Long-term (More than 2 years)

\*\*Strategies with a “High” priority level received the highest scores in a survey that asked stakeholders to rank their top 5 strategies. All strategies shown in the table were flagged as priorities by a majority of stakeholders in working group and EV Committee meetings.

### Signage and PEV Parking Policies

PEV-friendly parking will require clear, consistent signage that helps PEV drivers find and access charging stations. As the demand for public charging grows in the region it will become increasingly important to use regulatory signage and parking policies to preserve PEV driver access to parking spaces with charging stations.

- The CVC will **distribute information gathered by the NC PEV Taskforce on PEV parking signage standards and best practices** to municipalities and other local charging station hosts.

**Example:** The City of Raleigh’s City Council passed the first parking enforcement ordinance in the state in 2012. This was reviewed at the NC PEV Taskforce Policy, Codes and Standards Working Group and will be included in the state roadmap. The ordinance indicates that an electric vehicle must be plugged in and charging at electric vehicle parking spaces or will be fined.

- The CVC will also work with NC DOT and local municipalities to install **way-finding signage at highway exits and downtown intersections on city streets**. State-level NC DOT staff will make sure that details and paperwork associated with way finding signage on highway exits is forwarded to local NC DOT division engineers in the Asheville region.

**Example:** Way finding signage approved by the Federal Highway Administration installed by the Oregon Department of Transportation (see Figure 5.6)

- The CVC will work with **public charging station hosts to deploy regulatory signage and develop PEV parking policies**, focusing on locations where PEV access to EVSE is expected to become an issue. NC PEV Taskforce guidance on signage will include best practices regarding parking policies for various scenarios and provide examples of appropriate regulatory signage.

**Example 1:** In 2012 the City of Asheville developed an EV parking policy that requires the city to designate one of their existing parking spaces with a charging station as “EV only” for every 100 PEVs that are registered in the five county Asheville region, which includes Buncombe, Haywood, Henderson, Madison, and Transylvania Counties.

**Example 2:** The City of Raleigh’s City Council passed the first parking enforcement ordinance in the state in 2012. This was reviewed at the NC PEV Taskforce Policy, Codes and Standards Working Group and will be included in the state roadmap. The ordinance indicates that an electric vehicle must be plugged in and charging at electric vehicle parking spaces or will be fined.

### Permitting

- Local governments, with the help of the CVC staff and NC PEV Taskforce guidance, will **streamline EVSE permit and inspection processes** that are determined to be unnecessarily burdensome and slow.

**Example:** The City of Raleigh applied its existing "stand alone" permitting and inspection process to EVSE installations. Getting a permit takes about one hour, and inspections can be performed the day after installation. As a result, the entire assessment, permitting, installation, and inspection process for a simple home-based EVSE project can be completed in as few as two days.

### Zoning

Zoning ordinances that directly address charging stations will ensure that safe and convenient charging is available in appropriate locations.

- The CVC will work with local governments to **develop PEV-friendly zoning ordinances using guidance developed by the NC PEV Taskforce**. Model language and best practices will be used to help local government develop zoning ordinances that:
  - include electric vehicles in the definitions to ensure consistent enforcement,
  - allow for Level 1 and Level 2 EVSE as permitted uses outright in as many districts as possible, clearly stating which types of EVSE are allowed in each district and defining any limitations<sup>54</sup>,
  - define conditions in which DC Fast Charging is zoned for use,
  - ensure proper lighting for safety and for operation of a charging station at night, and
  - ensure that the proper way-finding and informational signage is permitted for charging stations

**Example:** The Michigan PEV Readiness Plan includes sample zoning language for local governments to use in ordinances that will encourage and simplify the establishment of public and private charging stations in their community. Much of the sample language was modeled on the EVSE Zoning Ordinance created by the City of Auburn Hills, which covers

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<sup>54</sup> The fear is that Level 1 and 2 charging stations may be classified as a refueling station which would not be an appropriate comparison because a there is a large difference in how they operate.

permitted locations, specific recommendations or requirements for each zoning district, right-of-way restrictions, accessibility, lighting, safety, usage fees, signage, and maintenance.

### ADA

- The CVC will **distribute ADA best practices developed by NCPEVTF to local governments and property managers interested in installing EVSE**

### Education

- The CVC will **serve as a clearing house for information on local PEV-related policies, codes & standards, and for best practices.**

**Example:** The CVC will post the *EVSE Permit & Inspection Survey* responses from the AHJs in the Asheville region on the CVC website as a resource for organizations and individuals interested in installing a charging station. Charging station owners and electrical contractors can also report issues with local permit and inspection processes that might discourage future EVSE deployment.

### *State-level Policies, Codes & Standards Strategies*

The CVC will address barriers related to Building Codes, ADA compliance, and Zoning through the NC PEV Taskforce. Many of the Policies, Codes and Standards strategies for the Asheville area will center around disseminating guidance developed by the NC PEV Taskforce and supporting their state-level initiatives. Below are state-level strategies recommended by the NC PEV Taskforce's Policy, Codes & Standards Working Group.

### NC PEV Taskforce Policies, Codes & Standards Strategies

- **Americans with Disabilities Act (ADA):** Recommend standards based on national trends, local case-studies, and NC Department of Insurance guidance.
- **Signage:** Develop guidebook for signage based on federal recommendations and other emerging standards.
- **Building Codes:** Work with NC Building Code Council to develop and adopt design regulations and guidelines that require or encourage the installation of conduit for EVSE as a component of new construction and expansion of parking facilities
- **Permitting & Inspection:** Recommend expedited permitting & inspection process for EVSE
- **Zoning:** Establish guidance for local governments in North Carolina on zoning for PEVs and charging infrastructure
- **Technical Training:** coordinate with Education & Outreach Working Group to develop training opportunities for electrical inspectors and contractors
- **Case Studies:** Collect case studies of local ordinances that facilitate the installation of publicly available charging infrastructure and support public access.
- **Legislative Considerations**
  - Gas Tax Issue

- Third party sale of electricity in North Carolina
- **Model Plans:** Identify and collect local plans and policies; i.e., Durham City-County Electric Vehicle and Charging Station Plan

## 6. EDUCATION & OUTREACH

### 6.1 Introduction to Education & Outreach

There is a large segment of the population unaware that PEVs are on the market, or that they are highway-ready vehicles that perform similarly, and in some cases better than, conventional gas vehicles. Many others have incomplete or incorrect information about PEVs and their benefits. In addition to these basic education and outreach concerns, there is also a need to develop PEV training for occupations that will encounter PEVs and charging stations in the workplace. Stakeholders at the regional level are particularly well equipped to address the significant hurdle of educating their community about PEVs.

The goals of the Education & Outreach Working Group were to

- Educate car buyers and the general public about PEV technology and benefits
- Provide training to key stakeholders that will work with PEVs and charging stations

The Education & Outreach Working Group developed education and outreach strategies to inform the general public and key stakeholders about PEVs, marketing strategies to incentivize car buyers to buy electric vehicles, and PEV training at community colleges for occupations that must work with PEVs. The CVC will work with a wide range of regional stakeholders to implement education & outreach strategies in this plan. The participation of local community colleges and universities, media outlets and auto dealers will be especially important to the success of these strategies.

#### *Types of Education & Outreach Strategies*

##### Education

For the purpose of PEV readiness planning, the term *education* is defined as developing and or disseminating information on PEVs and their benefits. Education may be disseminated via presentations or seminars, or through *educational materials* such as printed handouts, website content, and videos.

##### Outreach

*Outreach* is defined as educating the general public about PEVs through events, media outlets, websites and social media. Outreach seeks to reach a broader audience with a more basic goal of generating awareness of PEVs.

##### Training

*Training* is defined here as workforce training for occupations, primarily offered at Community Colleges through courses that students can earn credits for attending. Key stakeholders that will require training are auto technicians, first responders, and electrical inspectors. Training also includes less formal one-day workshops offered by the CVC and other groups.