

# SOUTHEAST REGIONAL EV READINESS WORKBOOK

## SECTION 2



U.S. DEPARTMENT OF  
**ENERGY**



**June 2013**  
*2nd Edition*

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#### ***Questions? Corrections? Suggestions?***

Please send an e-mail [EVReadiness@cte.tv](mailto:EVReadiness@cte.tv) with any suggestions for improvements or new case studies for future editions of the Southeast Regional EV Readiness Workbook.

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## Introduction to Section II

Section II includes an in-depth examination of the roles of various stakeholders, including:

- Government
- Fleet Managers
- Property and Facilities Managers

Section II includes stakeholder checklists of various actions each stakeholder group may consider in order to enhance their community's efforts to become EV Ready. Each stakeholder checklist is followed by a detailed description of each action listed in the checklist. Examples of each of the recommended EV Readiness activities are also included as part of Section II.

Many of the actions included in the checklists relate to the activities evaluated as part of the U.S. Department of Energy's Plug-In Electric Vehicle Readiness Scorecard. The PEV Readiness Scorecard is used to assess a community's progress toward EV Readiness. Information about the PEV Readiness Scorecard is provided in Section IV of this workbook. Checklist activities that are evaluated as part of the PEV Readiness Scorecard are highlighted with a reference to the related scorecard category.

Stakeholder checklists provided in this section highlight those actions which are specifically referenced in the PEV Scorecard. The checklists also contain actions not included in the PEV Readiness Scorecard, but which can also support a community's efforts to become EV Ready and can lead to better preparedness for those actions assessed by the PEV Scorecard.

It is important to note that Section II focuses specifically on the roles of three groups of stakeholders: 1) Governments; 2) Fleet Managers; and 3) Property Managers and Employers. There are other stakeholders that play important roles in moving a community to EV Readiness and many of their actions are captured within the PEV Scorecard.

Section II is organized by stakeholder group and includes a checklist and narrative section for each of the three stakeholder groups identified above.

## Government Checklist

Local and state governments throughout the United States, including those in the Southeast, have developed policies, actions, and incentives to promote widespread electric vehicle adoption within their communities. The following checklist illustrates actions a government entity may undertake in an effort to become EV Ready from a public-sector perspective in terms of internal and community-wide programs, policies, and incentives. The checklist also identifies whether the action is appropriate for local government, state government, or both. **It is important to note that not every action is appropriate for every community. Stakeholders may decide to “pick and choose” from the checklist. While every attempt was made to make the checklist exhaustive, there are likely other actions stakeholders can undertake to enable their community to become EV Ready.**

When assessing a community’s level of EV Readiness using the PEV Scorecard, government entities can play a role in each of the scorecard’s six topic areas:

1. Electric Vehicle Supply Equipment (EVSE) Permitting and Inspection
2. Laws, Incentives, and Financing
3. Education and Outreach
4. Utility Involvement
5. Plug-In Vehicle Market Conditions
6. Long-Term Vehicle and Infrastructure Planning

Government entities will play a primary role in the first two topic areas of Electric Vehicle Supply Equipment (EVSE) Permitting and Inspection and Laws, Incentives, and Financing. A governmental entity may be in the position to play a primary role in a community’s readiness in terms of Utility Involvement if the community’s utility is municipally-owned. Government entities can also support a community’s Education and Outreach efforts and would be important participants in assessing a community’s Plug-In Market Conditions and Long-Term Vehicle and Infrastructure Planning.

GOVERNMENT CHECKLIST		
Government Entity	Action	PEV Scorecard Category
Codes & Policies		
Local or State	Streamline permitting processes for EVSE installation for all scenarios	EVSE Permitting & Inspection
Local	Update zoning codes– Permit Level 1 and Level 2 EVSE in every district	
Local or State	Define conditions in which DC Fast Charge stations are zoned for use	

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GOVERNMENT CHECKLIST		
Government Entity	Action	PEV Scorecard Category
Local	Update regulations related to maximum parking time limits to establish alternative electric vehicle parking and charging time limits	
Local or State	Authorize on-street EVSE easement	
Local	Develop or update building regulations to require or provide an incentive to include cable raceways to support future EVSE installations in new construction	Laws, Incentives & Financing
Local	Create regulations to establish incentives for electric vehicle parking, including provisions and charging station spaces, penalties, and fines	Laws, Incentives & Financing
Local or State	Develop or update regulations defining EV parking and appropriate charging station signage	
Local or State	Develop, authorize, and implement a policy that establishes a per-use electric charging fees at government owned/controlled electric vehicle charging stations	
Local or State	Implement a Green Vehicle Fleet Policy that includes the consideration of EVs	Laws, Incentives & Financing
Incentives		
<b>Financial Incentives</b>		
State	Develop and implement a tax credit for the purchase of an EV	Laws, Incentives & Financing
Local	Develop and implement electric vehicle parking incentives	Laws, Incentives & Financing
Local	Adopt a utility rate incentive (encourage time-of-use rate structures)	Utility Involvement
State	Develop and implement a tax credit for the purchase of EVSE	Laws, Incentives & Financing
<b>Non-Financial Incentives</b>		
Local	Incentivize EVs through parking incentives	

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GOVERNMENT CHECKLIST		
Government Entity	Action	PEV Scorecard Category
State	Allow HOV and/or HOT lane access without a charge	Laws, Incentives & Financing
Vehicle and Infrastructure		
Local or State	Install EVSE for charging of government fleet EVs and workplace charging for employee vehicles.	Plug-In Vehicle Market Conditions
Local or State	Purchase EVs for your fleet	Plug-In Vehicle Market Conditions
Outreach		
Local or State	Develop and/or participate on a committee to leverage the resources of community stakeholders to help accomplish EV Readiness actions	Education and Outreach
Local or State	When available, utilize the resources available through academic institutions to create partnerships to support promotion of EVs	
Local or State	Participate in your Clean Cities Coalition and your community's EV Readiness Committee	Education and Outreach
Local or State	Educate fleet drivers to be able to answer questions of curious citizens	
Local or State	Share your success stories of adopting EV technology with other fleets	
Local or State	Place signage on PEV's indicating it has low or zero tail-pipe emissions	

The following section provides descriptions of each of the actions included in the checklist as well as examples of actions or activities to become EV Ready.

### Codes & Policies

Changes in codes and policies can remove barriers that previously deterred or prohibited deployment of EVs and/or installation of EVSE. Adoption of certain codes and policies can also encourage the use of EVs within a community. Some of the suggested actions below are relatively simple changes while others may require adoption by a jurisdiction's governing body.

### Streamline permitting processes for EVSE installation for all scenarios

Electric vehicle operation requires installation of accessible EVSE. In some jurisdictions, permits may be required for EVSE installation. However, permitting requirements vary across jurisdictions, and in some cases, permits are not required at all. One basic step jurisdictions can take if permits are required is to streamline the permitting process.

For jurisdictions with permitting requirements, it is critical that these governments ensure their code enforcement officials are educated on the standards outlined in the National Electric Code Article 625 and all other applicable state and municipal codes applicable to EVSE installation. Once these personnel are educated, permitting the use of EVSE is no more difficult than permitting the use of a Heating Ventilation and Air Conditioning Unit (HVAC). EVSE is another accessory piece of equipment for electrical inspection. Section III of the workbook includes considerations for the installation of on-street charging equipment (Section 3.1.1), off-street charging equipment (Section 3.1.2), and residential charging equipment (Section 3.1.3). Electrical inspectors that want further education on EVSE are encouraged to contact their local Clean Cities Coalition for educational resources or familiarization training. Contact information for Clean Cities Coalitions throughout the Tri-State region (Alabama, Georgia and South Carolina) is included below:

Alabama Clean Fuels Coalition	<a href="http://www.alabamacleanfuels.org/">http://www.alabamacleanfuels.org/</a>
Clean Cities Atlanta	<a href="http://www.cleancitiesatlanta.net/">http://www.cleancitiesatlanta.net/</a>
Palmetto State Clean Cities	<a href="http://www.palmettocleanfuels.org/">http://www.palmettocleanfuels.org/</a>

Depending on the state or municipal government code and procedures, it may be necessary to develop and adopt ordinances or procedures to expedite or streamline the EVSE permitting process.

#### Possible Policies:

- Develop simple permitting process that includes information necessary to ensure safe EVSE installations
- Develop, adopt, and implement a checklist for use by inspectors and related government departments in permitting and inspection to provide consistency and efficiency throughout the jurisdiction
- Provide readily accessible and user friendly information on websites defining EVSE installation requirements and processes while offering resources to prepare the applicant for the permitting process
- Prepare educational smart sheets, videos, and other handouts for private and government agencies charged with electrical permitting
- Implement a public, online version of the permitting application and process
- Create a specialized unit in inspection divisions to help reduce the time associated with EVSE inspections
- Adopt processes where registered, licensed, or screened electricians can self-certify that equipment has been installed according to codes (i.e., spot inspections), such as where installations do not require electrical system upgrades



- Establish 2-hour windows for site inspections

#### PEV Scorecard Examples and Resources:

- Raleigh, NC uses its “stand alone” permitting and inspection process for EVSE installation. The permit is completed as the applicant walks through the process with permitting personnel. Getting a permit takes about one hour, and inspections can be performed the day after installation. The entire assessment, permitting, installation, and inspection process for a simple, home-based EVSE project can be completed in as few as two days. For more information, visit: <http://www.afdc.energy.gov/case/1001>
- Online permits from Houston's Code Enforcement Group are issued automatically and instantaneously for standard EVSE, and an inspection can be performed on the same day as installation. The entire assessment, permitting, installation, and inspection process for a simple EVSE project can be completed in one day. For more information, visit: <http://www.afdc.energy.gov/case/1003>

#### Other Examples:

- Refine local strategies using lessons learned from other jurisdictions. See the Best Practice study: [www.plugginggeorgia.com/pdf/bppaper05.13.11.pdf](http://www.plugginggeorgia.com/pdf/bppaper05.13.11.pdf)

### Update zoning codes —Permit Level 1 and Level 2 EVSE in all zoning districts

EV owners require access to charging infrastructure, often for extended periods of time. For example, Level 1 EVSE requires between eight and twelve hours to fully charge an empty battery. Zoning codes should clearly define that the installation and use of an EVSE is a permitted use and define what type of, and where any, restrictions apply. The zoning regulations should be as broad as possible to allow jurisdiction-wide electric charging infrastructure.

Since Level 1 charging uses 120V, and does not require any special equipment, there should be no restrictions on locations for Level 1 charging. Level 2 charging requires 240V and installation is not significantly different from common HVAC or household appliances (i.e., electric dryer). Level 2 chargers are likely to be the most common type of EVSE installation for destination and workplace charging, as it provides significantly reduced charging times, is simple to install, and does not require the significant infrastructure upgrades that DC fast chargers require. As a result, there should be no zoning restrictions for Level 2 charging.

DC fast chargers will likely only be permitted in certain areas because this infrastructure requires 480V. DC fast chargers allow for rapid electric vehicle charging, and will more likely serve commercially related applications such as a convenience store or a charging network. Without access to a large network of DC fast charge stations, mass adoption of electric vehicles may be restrained in part due to range anxiety and the extended period of time needed to charge at Level 1 and Level 2 charging rates.

#### Possible Policies:

- Amend zone district regulations to allow for EVSE as a permitted use in as many districts as possible, clearly stating which types of EVSEs are allowed in each district and defining any limitations.
- Add a comprehensive electric vehicle charging infrastructure section or chapter to the zoning code that contains types of EVSEs permitted and location of permitted uses as well as design standards and available incentives.

#### PEV Scorecard Examples and Resources:

- 1) Local Government EV Charging Infrastructure Requirements, State of Washington - Jurisdictions must develop regulations to allow the use of EV infrastructure and battery charging stations in all areas except critical areas or areas zoned for residential or resource use. This regulation applies to jurisdictions that meet specific location criteria. The Washington Department of Commerce included a model ordinance, development regulations, and guidance for local governments for site assessment and installing EV infrastructure in "Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State." This requirement is contingent upon federal funding. Additionally, cities or municipalities may adopt incentive programs to encourage retrofitting of existing structures capable of charging EVs.  
Reference: Revised Code of Washington 35.63.126-35.63.127, 35A.63.107, 36.70.695, and 36.70A.695

#### Other Examples:

- A model zoning update ordinance defining EVSEs as permitted accessory uses and structures and defining the type and permitted location of EVSEs is included Section 3.2.5.
- The City of Woodinville, Washington passed ordinance 523 allowing construction of electric vehicle charging stations, rapid charging stations, and battery exchange stations within the city. Woodinville has developed regulations, zoning permissions, and signage for the expansion of its EVSE program. For more information, visit:  
<http://www.ci.woodinville.wa.us/cityhall/Ordinances.asp>

### Define conditions in which DC Fast Charge stations are zoned for use

DC Fast Charge stations should be permitted as free-standing structures in districts where installation is not contingent on other variables to allow for the development of city-, state-, and region-wide networks of DC Fast Charge stations. This will encourage the creation of such stations by private entrepreneurs, and would help to encourage adoption of EV's by reducing range anxiety. Public DC Fast charging is most likely to be associated with a commercial zone, i.e., convenience store or retail outlet, or as a stand-alone facility in a commercial or industrial zone.

#### Possible Policies:

- Amend zoning codes to allow DC Fast Chargers as permitted principal use and structures in certain districts, ideally in districts where retail and gas stations are allowed.
- Add a comprehensive electric vehicle charging infrastructure section or chapter to the local zoning code that contains types of charging stations allowed, the permitted locations, the required design standards, and any incentives.

#### Example

- A model zoning update ordinance defining DC Fast Charge stations as permitted principal uses and structures and defining the permitted location of each is included in Section 3.2.5.
- Washington State passed legislation in 2009 to encourage use of EVs and the required infrastructure. For information from Washington State Department of Commerce regarding *Planning for Electric Vehicle Infrastructure* visit:  
<http://www.commerce.wa.gov/DesktopModules/CTEDPublications/CTEDPublicationsView.aspx?tabID=0&ItemID=8958&Mid=944&wversion=Staging>.

### Update regulations related to maximum parking time limits to establish alternative electric vehicle parking and charging time limits

Because the majority of public charging stations will be either Level 1 or Level 2 charging stations, which can take anywhere between four and twelve hours to recharge an electric vehicle, vehicles using these publicly accessible charging stations may remain parked and charging in the same spot for an extended period of time. Some areas have maximum parking time limits, usually two hours. Such time limits may render a full recharge impossible, and inhibit the mass adoption of electric vehicles. If potential EV owners do not believe there is adequate infrastructure available to facilitate quick and easy charging of their EVs, this may deter them from purchasing an electric vehicle. As such, where these time limits exist, governments may need to adjust parking limitations for electric vehicles to allow effective recharging.

#### Possible Policies:

- Amend codes to create exceptions to, or extend hours of parking for electric vehicles that are parked and charging at electric vehicle parking stations in zones subject to short parking time limits
- Update regulations to create specific time limit standards for electric vehicle parking and charging, including (i) determining and communicating time limits to the public and (ii) setting and enforcing fines and penalties for parking violations.

## Authorize on-street Charging Station easement

On-street charging station infrastructure is an option some jurisdictions may consider. In some cases, this infrastructure may be located on public rights-of-way. This scenario may require legal steps in addition to permitting and inspections. In addition, the requirements for on-street installations may be more complicated; namely, trenching and placing underground conduits under already constructed sidewalks and near trafficked roadways.

### Possible Policies:

- Commence partnerships or make appropriate preparations with utility companies to install additional electrical conduit and junction boxes in trenches in street light conduits on blocks where charging stations are planned for future installation
- Prepare template agreements authorizing entry into public rights-of-way to install charging stations and electrical conduit

### Examples:

- Create encroachment agreements. A sample City of Atlanta Encroachment Agreement is included in the Section 3 (Section 3.2.6).
- In 2011, the City of Durham and Durham County, North Carolina implemented EVSE policy and regulation in their sustainability efforts. The county designated different departments as the lead agency responsible for implementing the EVSE policies. The city engineering department was given the role to “plan for future charging stations by installing conduit and properly sized electrical panels during construction/major renovations”. To view Durham’s EV and EVSE plan, visit:  
<http://durhamnc.gov/ich/cmo/sustainability/Documents/Durham%20EV%20and%20EVCS%2020Plan.pdf>

## Develop or update building regulations to require or provide an incentive to include cable raceways in new construction projects

The cost of installing charging station infrastructure is significantly less during the initial phase of building construction as compared to installing the same equipment post-construction due to the cost associated with demolition and retrenching or post-construction installation of new conduit. In addition, the time associated with permitting and inspection can be minimized if inspections occur concurrently with the inspections of other electrical components during the initial construction phase of a building.

### Possible Policy:

- Develop and adopt design regulations, standards, and guidelines that encourage or require the installation of electric cable raceways or conduit as a component of all new construction and expansion of parking facilities.

#### Examples:

- Familiarize local building owners, public parking managers, and property manager associations with the building practice of establishing cable raceways (from the building's main electrical service to parking areas) in new construction projects
- The City of Vancouver, Canada adopted Green Construction and Green New Construction Standards in 2008 that require the installation of a cable raceway from the building's electric panel to an enclosed outlet box in the home's garage or carport (reference: <http://vancouver.ca/ctyclerk/cclerk/20080626/documents/pe5.pdf>). Vancouver's Code for Cable Raceway installation for PEVs is as follows:
  - Each dwelling unit shall have a cable raceway leading from the electricity circuit panel to an enclosed outlet box in the garage or carport.
  - A raceway not smaller than size 21 shall be provided to accommodate future conductors of a separate branch circuit intended to supply a future receptacle for use with the electric vehicle charging system.

### Create regulations to include provisions establishing electric vehicle parking and charging station spaces, penalties, and fines

One strategy for increasing the adoption of PEV's is to provide dedicated parking for electric vehicles, as well as dedicated parking with charging stations. However, it is difficult to ensure that these spaces remain accessible to EV's without some type of regulation and penalties to prevent non-EVs from occupying these spaces. Since parking with EVSE may be the only opportunity for an EV to refuel, a community may want to limit the use of parking spaces with EV charging stations to vehicles that are actually charging. For example, a jurisdiction may wish to restrict electric vehicle charging stations to parking while charging only, i.e., while the vehicle is plugged-in to the charging station. Such policies are important, particularly in areas with limited parking. Otherwise, the incentive that helps to reduce range anxiety and encourages mass market adoption of EVs is negated if non-electric vehicles and non-charging electric vehicles park in designated EVSE-enabled parking spaces.

#### Possible Policy:

- Local governments can create regulations and define violations and penalties for electric vehicle only parking and charging stations.

#### Examples:

- A model ordinance updating traffic and road rules and regulations is included in Section 3.2.4.
- The State of Washington passed Senate Bill 5849 which imposes a \$124 fine for those who park in a designated charging spot while not charging their vehicle. This applies to non EV owners, as well as EV owners who improperly park. For more information visit:  
<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=5849>

### **Develop or update regulations defining EV parking and appropriate charging station signage**

Consistent signage for electric vehicle charging stations throughout the tri-state region will help raise awareness of available infrastructure by making it quickly recognizable throughout the region. Consumers in the market for electric vehicles will have more confidence in their ability to charge away from their homes if they see signage indicating the availability of charging stations on a day-to-day basis. Charging stations are already deployed in cities throughout Alabama, Georgia, and South Carolina. The most common charging station signage in the Southeast should be utilized for all future charging station deployments.

#### **Possible Policy:**

- Governments can develop or update regulations that clearly and thoroughly define design standards and criteria for electric vehicle and charging station signage.

#### **Example:**

- A signage guide and preferred signage options are provided in Section 3.1.12.

### **Develop, authorize, and implement a policy that establishes a per-use electric charging fee at government owned/controlled electric vehicle charging stations**

The municipality should establish a committee that can determine fair and appropriate fees to be implemented at government owned charging stations. A reasonable fee will help to recover initial capital equipment costs, installation costs, maintenance fees, and the cost of electricity for charging.

### **Implement a Green Vehicle Procurement Policy that includes consideration of EVs**

Governments have the opportunity to be leaders in the community by promoting the use of electric vehicles through the adoption of Green Vehicle Procurement policies. There are significant environmental, fiscal, and community relation benefits to utilizing electric vehicles in government fleets, which can be leveraged to promote wider adoption of similar policies in the community. As noted in the

Outreach Section below, governments can highlight their efforts by placing signage on EVs indicating the vehicle has zero tail-pipe emissions.

**Possible Policy:**

- Governments can implement procurement policies requiring a percentage of all new vehicle purchases for government fleets to be comprised of electric vehicles.

**Example:**

- The city of San Jose, CA has developed a comprehensive and effective green fleet policy that provides a purchasing strategy that helps fleet managers acquire the most appropriate vehicle or equipment, minimize fuel consumption, improve driver satisfaction and equipment life as well as reduce costs<sup>1</sup>.

## Incentives

While operational costs for electric vehicles are lower because of the lower cost of electricity as compared to gasoline, the initial purchase cost of EV's are a barrier to widespread adoption. Currently, there is a federal tax credit available to help lower the purchase price of these vehicles. However, additional incentives could help to accelerate the adoption of EVs. To facilitate wide and rapid electric vehicle deployment, local and state incentives can be implemented to encourage the purchase of electric vehicles. There are options for both financial and non-financial incentives as described in the actions below.

### Financial Incentives

#### Develop and implement tax credit for the purchase of EV

By implementing a tax credit for the purchase of an EV, consumers are able to buy an electric vehicle and realize potential savings on their tax liability. This tax credit can help reduce the cost of an electric vehicle to be comparable with similar ICE vehicles in the marketplace. Because of the large upfront cost, many consumers are hesitant to buy electric vehicles despite the financial savings on gasoline over time. A tax credit helps to address the cost differential.

**Possible Policy:**

- States can adopt legislation providing tax credits for qualified electric vehicle purchases.

**Examples:**

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<sup>1</sup> City of San Jose, CA, City Policy Manual: Green Fleet Policy, [http://sanjoseca.gov/esd/PDFs/GreenFleetPolicy\\_091707.pdf](http://sanjoseca.gov/esd/PDFs/GreenFleetPolicy_091707.pdf), accessed October 18, 2012

- Georgia provides a tax credit for the purchase or lease of a new zero-emission vehicle. The amount of the tax credit is 20% of the vehicle cost, up to \$5,000. For more information, visit: <http://www.afdc.energy.gov/laws/law/GA/5180>
- South Carolina offers an income tax credit for in-state purchase or lease of a new PHEV. The maximum allowed credit is \$2,000. For more information, visit: <http://www.afdc.energy.gov/laws/law/SC/10252>
- Maryland offers a tax credit of up to \$2,000 against the imposed excise tax for qualified PEV purchases. For more information, visit: <http://www.afdc.energy.gov/laws/law/MD/8381>

### Develop and implement tax credit for the purchase of EVSE

States may also implement tax credits to help offset the costs associated with the purchase of EV charging infrastructure. As with vehicle tax credits, EVSE tax credits incentivize the creation of public charging infrastructure, which helps to mitigate range anxiety, a barrier to purchasing EV's.

#### Possible Policy:

- States can adopt legislation providing for tax credits for qualified EVSE purchases.

#### Examples:

- Georgia allows eligible business enterprises to claim an income tax credit for qualified EVSE purchases. The amount of the credit is 10% of the cost of the EVSE, up to \$2,500. For more information, visit: <http://www.afdc.energy.gov/laws/law/GA/5182>
- The State of Illinois, through the Department of Commerce and Economic Opportunity, provides rebates for the construction of Level 2 charging stations. The rebates cover 50% of the total cost for equipment and installation, with a maximum possible rebate of \$49,000 or 50% of the total project cost of up to 15 Level 2 EVSE. For more information, visit: <http://www.afdc.energy.gov/laws/law/IL/10532>

### Develop and implement electric vehicle parking incentives

In jurisdictions where parking is expensive or limited, the availability of parking incentives for PEVs, including free, reduced cost, or preferential parking, may make the purchase of electric vehicles more attractive to consumers.

#### Possible Policy:

- Implement an all-electric vehicle incentive pilot program that offers free parking to all electric vehicles in designated city owned garages near major destination centers.
- Free parking for EVs at city run parking meters

#### PEV Scorecard Examples and Resources:



- Salt Lake City offers two free hours of parking for what they consider “Green Vehicles” (rating of 41+ miles per gallon or an EPA Air Pollution Score of 8+). This includes vehicles that run solely on electric power or multiple fuels, but the lowest EPA pollution score associated with the vehicle is used as acceptance to the program. Individuals may obtain a Green Vehicle parking permit from the city’s transportation office.  
For more information, visit: <http://www.slcgov.com/node/892>
- Qualified vehicles affixed with state-issued EV license plates are exempt from parking fees charged by any non-federal governmental authority in Hawaii  
For more information, visit: <http://legiscan.com/HI/text/SB2746/id/614006>

**Other Examples:**

The City of Cincinnati implemented the All-Electric Vehicle Incentive Pilot Program that offers free parking in identified city-owned garages, a city parking lot, and at all parking meters within the city limits.<sup>2</sup>

**Adopt a utility rate incentive (to encourage time-of-use rate structures)**

Some utilities have designed rates that not only reduce the cost of charging, but also encourage users to consume the excess energy generated at night by offering super off-peak rates.

**PEV Scorecard Examples and Resources:**

- Pacific Gas and Electric (PGE) currently offers special time-of-use rates for residential customers who charge at home. By the end of Spring 2013, PGE will implement a new electrical vehicle rate that will benefit customers more. PGE’s current available rates are:
  1. E-9B: applies to the electric vehicle only, with separate meter required, and rates for three time periods (off-peak, part-peak, and peak), two seasons (summer and winter), and three tiers based on electricity use.
  2. E-9A: applies to the home and the electric vehicle, with no separate meter, and with rates for three time periods (off-peak, part-peak, and peak), two seasons (summer and winter), and three tiers based on electricity use.

For more information on PGE and their program, visit:  
<http://www.pge.com/myhome/environment/whatyoucando/electricdrivevehicles/>

**Other Examples:**

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<sup>2</sup> City of Cincinnati Office of Environmental Quality, “Free Parking for All-Electric Vehicles.” Accessed October 18, 2012. <http://www.cincinnati-oh.gov/oeg/residential-programs/electric-vehicle-free-parking/>

- Southern California Edison provides two optional rate structures that incentivize electricity as fuel for consumers' vehicles<sup>3</sup>.
  1. **Home & Electric Vehicle Plan (TOU-D-TEV - PDF)** is designed for residential customers who combine lighting, heating, cooking and power, in a single family accommodation, with charging electric car(s) on the same meter. Under this schedule, you may receive substantial savings if you charge your electric car(s) during super off-peak hours.
  2. **Electric Vehicle Plan (TOU-EV-1 - PDF)** is designed for residential customers who charge their electric car(s) at their primary residence, on a separate meter provided by SCE. Under this schedule, you receive substantial savings if you charge your electric car(s) during off-peak hours

### **Non-Financial Incentives**

#### **Incentivize EVs through parking incentives**

Electric vehicle drivers will benefit from the availability of parking spaces equipped with charging stations. As electric vehicles become more common, it is expected that parking facility operators will likely dedicate more parking spaces for EV parking and charging stations. While the availability of such parking infrastructure is an important step to promote EV deployment, its benefits can be maximized if regulations and enforcement provisions are in place to ensure PEV only access. Additionally, by designating parking spaces as strictly for electric vehicles, consumers are given another incentive for purchasing an electric vehicle.

#### **Possible Policies:**

- Update regulations to state that electric vehicle parking spaces or charging stations are included in the count towards minimum parking requirements;
- Develop an incentive program where each parking space that is converted to or is constructed newly as an electric vehicle parking space and/or an electric vehicle charging station counts as a multiple of parking spaces (i.e., three X) toward meeting parking requirements.

#### **Example:**

- A model zoning update ordinance defining conversions of parking spaces to electric vehicle parking or charging stations as counting towards minimum parking requirements and proposing a parking incentive for electric vehicle only parking or charging station is included in Section 3.2.5. The City of Atlanta is currently in the process of submitting a similar proposed ordinance to update its zoning codes.
- Mayor Michael R. Bloomberg of New York has recently endorsed a proposition to amend building code and require up to 20% of all new public parking spaces be set up for electric

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<sup>3</sup> <http://www.sce.com/info/electric-car/residential/rate-plans.htm>

vehicle charging. This could potentially lead to “10,000 parking spaces for EVs over the next seven years”. Although details and logistics have not been completely worked through, the Bloomberg administration is confident with the idea to further encourage the use of EVs. For more information, visit: <http://wheels.blogs.nytimes.com/2013/02/14/bloomberg-endorses-preparing-parking-spaces-for-e-v-charging/>

### Allow HOV and/or HOT Access without charge

Some highways and roadways in congested urban areas restrict vehicles in a given lane to those with two or more passengers (HOV lanes) or those that pay a toll if they do not meet minimum passenger requirements (HOT lanes). The HOV lanes promote emission reduction by encouraging carpooling; both models are intended to reduce travel time.

#### Possible Policy:

- Allow EVs access to HOV or HOT lanes, regardless of the number of passengers.

#### PEV Scorecard Examples and Resources:

- Qualified PEVs, including all-electric vehicles and plug-in hybrid electric vehicles may use NC HOV lanes, regardless of the number of occupants  
Reference: [House Bill 222, 2011](#) and [NC General Statutes 20-4.01 and 20-146.2](#)

#### Examples:

- The State of Georgia offers a special license plate for alternative fuel vehicles, which allows access to designated HOV and HOT lanes.
- The Arizona Department of Transportation has allowed electric vehicles and specified other AFVs to use the HOV lanes, regardless of the number of passengers as long as qualified vehicles display AFV plates or stickers, which are available from the Arizona Department of Transportation, Motor Vehicle Division.
- Electric and other alternative fuel vehicles meeting California and federal emissions standards that have a California Department of Motor Vehicles clean air vehicle sticker may use HOV lanes even if they contain a single occupant.

## Vehicles & Infrastructure

Deployment of EVs and the availability of adequate infrastructure are key components of a successful EV Ready community. Local governments play a critical role in enhancing a community’s “EV Readiness.

Municipalities, as well as county and state governments, can purchase EVs and EVSE for their fleets. These entities can also make provisions for workplace charging for their employees.

### Install EVSE for charging government fleet EVs and for employee workplace charging

Governments purchasing EVs for fleet use will also need to install charging stations to provide charging for their fleet vehicles. These governments can provide additional support for EV Ready activities in their community by allowing their employees to have access to the charging stations to charge personal EVs while they are at work. There may also be circumstances where the charging stations could be made available to the general public.

#### Possible Policy:

- Governments purchasing EVs and installing charging stations are leading by example and may decide to allow employees to use the charging stations to charge personal electric vehicles. A government may also decide to enter into shared-parking agreements with community businesses to use the charging stations under certain conditions.

#### Example:

- The City of Austin is partnered with Austin Energy to deploy EVSE throughout the Austin region. See Plug-in EVerywhere for more details at <http://www.austinenergy.com/about%20us/environmental%20initiatives/Plug-In%20Partners/PIEstationhostmap.pdf>

### Purchase electric vehicles for your fleet

Electric vehicles are capable of meeting a variety of fleet applications. Government fleet managers should consider a number of factors when deciding to incorporate electric vehicles into their fleet. These factors include, but are not necessarily limited to:

- Required range of vehicle
- Geography of route
- Time between travel
- Lifetime costs
- Availability of charging infrastructure

**Light duty fleet** vehicles that are utilized consistently are options for high-mileage fleets because the more miles driven the faster the return on investment. An up-to-date list of commercially available light duty EVs are listed at <http://www.afdc.energy.gov/afdc/vehicles/search/light>

**Medium and heavy-duty vehicles**, such as delivery trucks, whose operators encounter frequent stop-and-go behavior, are also candidates for EV technology. Similar efficiencies can be found in a heavy-duty fleet of transit buses that operate circulator bus routes. Fleets whose primary purpose requires trucks to haul heavy equipment or packaging should consult

<http://www.afdc.energy.gov/afdc/vehicles/search/heavy> for available medium and heavy-duty EVs.

Government fleet managers may be able to find other applications for EVs. For example, Neighborhood Electric Vehicles (NEVs) may be appropriate for activities such as park maintenance or for checking parking meters. Because the market is always changing, other resources providing comprehensive listings of commercially available electric vehicles are listed below:

- Plug-in America: [www.pluginamerica.org/vehicles](http://www.pluginamerica.org/vehicles)
- Go Electric Drive: [www.goelectricdrive.com/index.php/virtual-showroom](http://www.goelectricdrive.com/index.php/virtual-showroom)

#### Examples:

- The City of Seattle, in conjunction with its Green Fleet Action Plan, has begun adding 35 Nissan Leaf electric vehicles to their fleet. Seven vehicles have been deployed to the city's Police Department Parking Enforcement Program while six others are being used for the city's centralized motor pool program. After running a cost and emission comparison test, the city decided to advance their fleet with cleaner technology. For more information, visit: [http://www.seattle.gov/fleets/docs/ClnGrnFltPlan\\_Sea\\_07Update.pdf](http://www.seattle.gov/fleets/docs/ClnGrnFltPlan_Sea_07Update.pdf)

## Outreach

Highlighting your successes and engaging with other stakeholders in your community who support EV Readiness activities are another way governments can support their community's efforts to become EV Ready.

### Develop and/or participate on a committee to leverage community stakeholders to help accomplish EV Readiness actions

A committee may already exist either within the government or within the community that is an appropriate venue to promote EV Readiness actions. If there is no such group in your area, local government may choose to take the lead on initiating the formation of an EV Readiness Task Force. Participation in a committee or task force allows citizens in the EV community to connect and act in the public interest to promote EV Readiness activities.

#### Possible Actions:

- Participate in local/regional stakeholder council that meets regularly to create a plug-in readiness

plan, and follow implementation

- Contribute to an education plan to promote EV Readiness activities
- Develop and launch an appropriate marketing plan to promote EVs while also highlighting energy use and security benefits; the marketing plan should be tailored to meet the needs and resources of the community
- Develop materials to educate the drivers of tomorrow by reaching students of all levels (elementary-college) with EV-related curricula

#### Example:

- See the Clean Cities sponsored websites Plug-in Georgia ([www.plugingeorgia.com/](http://www.plugingeorgia.com/)) and Plug-In Alabama (<http://plug-in-alabama.org/>).

### When available, utilize the resources available through academic institutions to create partnerships to support promotion of EVs

Faculty and students at local colleges and universities can be valuable resources to participate in research activities in support of EV Readiness activities or provide man-hours to local projects to meet certain academic requirements.

#### Possible Actions:

- Partner with local academic to create classes the investigate issues surrounding electric vehicle adoption issues in your community and leverage the resources and ideas of the students to address those barriers.

#### PEV Scorecard examples and resources:

- To achieve the goals of the Green Houston Emissions Reduction Plan, the City of Houston led the creation of the Houston Electric Vehicle Initiative. Partners in the effort include the Clinton Climate Initiative, the Houston Advanced Research Center, EVSE supplier ECotality, Rocky Mountain Institute, NRG Energy and its companies Reliant Energy (retail electricity) and eVgo (charging station services), the public utility CenterPoint Energy, Nissan, Texas A&M University, and the University of Texas at Austin. Houston also has received grants for plug-in vehicle activities from the U.S. Environmental Protection Agency Climate Showcase Communities Program and from the U.S. Department of Energy via the Texas State Energy Conservation Office.

Reference: <http://www.greenhoustontx.gov/reports/emissionreduction20080909.pdf>

#### Other Examples:

- The City of Atlanta partnered with the Emory University Business School to develop a case competition addressing the need to encourage the quick adoption of electric vehicles in the Atlanta region. Teams from across Georgia competed for a \$5,000 grand prize to see who could come up with the most viable method for encouraging the widespread adoption of electric

vehicles within the region. For more information, visit:

<https://community.bus.emory.edu/program/atlantacars/Pages/home.aspx>

## **Participate in Clean Cities Coalitions and your community's EV Readiness Committee**

Governments are also encouraged to engage with their local Clean Cities Coalition. The Clean Cities program is sponsored by the U.S. Department of Energy and supports public and private partnerships to advance the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. There are nearly 100 coalitions throughout the United States, including three coalitions serving the tri-state region of Alabama, Georgia, and South Carolina. The coalitions are a valuable resource and are available to help you find answers to any questions you may have regarding your community's EV Readiness.

Clean Cities Coalitions offer a number of opportunities to become involved in the promotion of EV Readiness actions. Jurisdictions are encouraged to become involved with their local coalition to gain insight into what other cities are doing to become EV Ready. Clean Cities Coalitions in the tri-state region include:

Alabama Clean Fuels Coalition	<a href="http://www.alabamacleanfuels.org/">http://www.alabamacleanfuels.org/</a>
Clean Cities Atlanta	<a href="http://www.cleancitiesatlanta.net/">http://www.cleancitiesatlanta.net/</a>
Palmetto State Clean Cities	<a href="http://www.palmettocleanfuels.org/">http://www.palmettocleanfuels.org/</a>

For a list of all Clean Cities Coalitions throughout the U.S., visit:

[http://www.afdc.energy.gov/cleancities/coalitions/coalition\\_contacts.php](http://www.afdc.energy.gov/cleancities/coalitions/coalition_contacts.php)

For a list of upcoming Clean Cities Coalition events please see:

<http://www1.eere.energy.gov/cleancities/events.html>

By participating in Clean Cities Coalition events, governments can gain insight into what other cities are doing to become EV Ready. Best practices can be identified, and local representatives can collaborate to determine ways to improve their EV Readiness.

Governments are also encouraged to participate in the community's EV Readiness Committee or Task Force. Many communities are providing a forum for EV stakeholders to engage to promote activities to ensure they are EV Ready. If such a committee exists in the community, governments will be a valuable participant based on fleet experience operating EVs.

### **Educate fleet drivers to be able to answer questions of curious citizens**

EV drivers have the potential to be the best ambassadors for EVs and thus promote EV Readiness activities. Informed drivers can answer questions posed by curious citizens who see the EVs operating within the community.

### **Share your success stories of adopting the EV technology with other fleets**

Peer to peer exchanges are often the best conduit of information. As governments adopt EVs into their fleets and gain valuable operational experience, they are in a position to share their experience with other governments considering EV purchases. There is value in learning about both the successes related to EV deployment as well as the challenges fleets have faced and the steps they took to overcome any barriers. Governments are encouraged to participate in tradeshow, conferences, neighborhoods meetings, and stakeholder meetings to share their experiences.

### **Place signage on your vehicles indicating it has zero tail-pipe emissions**

One major benefit to adding EVs to your fleet is the value of green marketing. Government fleets have the opportunity to promote the benefits of EVs by placing signage on the vehicle. Promoting the benefits of EVs not only gives your fleet recognition, but also raises awareness in the community.



## Fleet Manager Checklist

Fleets can play a key role in a community's efforts to become EV Ready by incorporating EVs into their business operations. Fleets can be EV Champions when placing signage on EVs highlighting the benefits of the technology. Fleets adopting EVs are also leaders by example and your practices will hopefully encourage other fleets to deploy EVs.

The following checklist illustrates actions fleet managers may undertake in an effort to become EV Ready. **It is important to note that not every action is appropriate for every organization. Stakeholders may decide to “pick and choose” from the checklist. While every attempt was made to make the checklist exhaustive, there are likely other actions stakeholders can undertake to enable their community to become EV Ready.**

When assessing a community's level of EV Readiness using the PEV Scorecard, fleet managers can play a role in three of the scorecard's six topic areas:

1. Education and Outreach
2. Plug-In Vehicle Market Conditions
3. Long-Term Vehicle and Infrastructure Planning

Fleet managers can support a community's Education and Outreach efforts and would be important participants in assessing a community's Plug-In Market Conditions and Long-Term Vehicle and Infrastructure Planning.

In addition to the checklist, fleet managers are encouraged to refer to the U.S. Department of Energy's *Plug-In Electric Vehicle Handbook for Fleet Managers*. A copy of the handbook is available at:

[http://www.afdc.energy.gov/pdfs/pev\\_handbook.pdf](http://www.afdc.energy.gov/pdfs/pev_handbook.pdf)

FLEET MANAGERS CHECKLIST	
Action	PEV Scorecard Category
Assess Requirements & Purchase EVs for your fleet	Plug-In Vehicle Market Conditions
Consider employee and public accessibility when siting charging stations to support your fleet vehicles	Plug-In Vehicle Market Conditions
Promote adoption of a Green Fleet Policy that includes electric vehicles	
Ensure organizational sustainability plan includes transportation-related strategies	

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FLEET MANAGERS CHECKLIST	
Action	PEV Scorecard Category
Support a champion from within your department to participate on a committee to leverage community stakeholders to accomplish EV Readiness actions	
Educate fleet drivers to be able to answer questions of curious citizens	
Share your success stories of adopting the EV technology with other fleets	
Place signage on your vehicle indicating it has zero tail-pipe emissions	
Participate in Clean Cities Coalition and your community's EV Readiness Committee	Education and Outreach

The following sections include discussions of each of the actions included in the checklist along with examples of actions or activities a Fleet Manager might undertake to complete the action in an effort to become EV Ready.

## Vehicles & Infrastructure

Deployment of EVs and the availability of adequate infrastructure are key components of a successful EV Ready community. Fleet managers can purchase EVs and EVSE for their fleets. Additionally, fleet managers can play a role in promoting workplace charging for their company's employees.

### Assess Requirements and Purchase EVs for your fleet

Electric vehicles are capable of meeting a variety of fleet applications. Fleet managers must consider a number of factors when deciding to incorporate electric vehicles into their fleet. These factors include, but are not necessarily limited to:

- Required range of vehicle
- Geography of route
- Time between travel
- Lifetime costs
- Availability of charging Infrastructure
- Benefit of public relations opportunity

A variety of vehicle options exist in the light, medium, and heavy-duty vehicle classes. **Light-duty fleet** vehicles that are utilized consistently are great options for high-mileage fleets because the more miles

driven the faster the return on investment. An up-to-date list of commercially available light duty PEVs are listed at <http://www.afdc.energy.gov/afdc/vehicles/search/light>.

**Medium and heavy-duty vehicles**, such as delivery trucks, whose operators encounter frequent stop-and-go behavior, are great candidates for PEV technology. Similar efficiencies can be found in a Heavy Duty fleet of transit buses that operate circulator bus routes. Fleets whose primary purpose requires trucks to haul heavy equipment or packaging should consult

<http://www.afdc.energy.gov/afdc/vehicles/search/heavy> for available medium and heavy-duty EVs.

Fleet managers may be able to find other applications for EVs. For example, Neighborhood Electric Vehicles (NEVs) may be appropriate for on-site security or campus activities. Because the market is always changing, other resources providing comprehensive listings of commercially available electric vehicles are listed below:

- Plug-in America: [www.pluginamerica.org/vehicles](http://www.pluginamerica.org/vehicles)
- Go Electric Drive: [www.goelectricdrive.com/index.php/virtual-showroom](http://www.goelectricdrive.com/index.php/virtual-showroom)

#### PEV Scorecard Examples and Resources:

- The U.S. Energy Information Administration's Annual Energy Outlook 2011 predicts that sales of PEVs will account for 0.65% of total new light-duty vehicle sales by 2015, and 1.26% of light-duty vehicles sales by 2020. The Annual Energy Outlook Transportation Demand Sector Data Tables report annual PEVs sales projections by region through 2035.  
Reference: <http://www.eia.gov/forecasts/aeo/er/index.cfm>  
<http://www.eia.gov/forecasts/aeo/data.cfm#transdemsec>
- In November 2010, GE announced that at least half of its 30,000 vehicle fleet will be PEVs, and will partner with its fleet customers to deploy a total of 25,000 PEVs by 2015. This initiative began in 2011 with the purchase of 300 EVs. GE will also have two PEV customer experience and learning centers to provide customers, employees, and researchers first-hand access to PEVs and developing technologies.  
Reference: [https://www.gefleet.com/fleet/articles/AF\\_GE\\_EV\\_2.11.pdf](https://www.gefleet.com/fleet/articles/AF_GE_EV_2.11.pdf)

### Consider public accessibility when siting charging stations to support your fleet vehicles

With electric vehicle charging infrastructure in place, fleet managers can play a vital role in promoting adoption of EVs by making their charging stations available not only to their fleet vehicles, but also to their organization's employees and the general public. While access to other vehicles may not always be feasible, it is a consideration that could support your community's EV Readiness activities by creating additional opportunities for charging. Fleet managers should take both employee access and general public access into consideration when choosing the location for the charging stations to support your fleet vehicles.

## Organizational Policy

Fleet managers have the opportunity to become champions of EV technology within their organizations. You may be able to support the purchase of EVs and influence your organization to adopt a green fleet policy. Transportation operations using EVs also contribute to your organization's sustainability efforts and you can be a champion for adoption of EVs in your community's efforts to become EV Ready.

### Promote adoption of a Green Fleet Procurement Policy

There are significant environmental, fiscal, and community relation benefits of utilizing electric vehicles in fleets. Organizations may choose to adopt procurement policies which require at a minimum that consideration be given to the purchase of clean fuel vehicles and may go so far as to require a certain percentage of vehicle purchases to be clean. Fleet managers can support adoption of green fleet procurement policies.

A number of nationally-recognizable companies are adopting clean vehicle technologies into their fleets, which includes EVs. Two Atlanta-based companies, UPS and Coca-Cola, are leading the way in their industries:

- **UPS:** In 2011, UPS announced that "...its fleet of alternative fuels and technology delivery vehicles has driven 200 million miles since 2000." As of 2011, the company had "...explored eight different alternative fuel technologies..." including all-electric vehicles.<sup>4</sup>
- **Coca-Cola:** In July 2011, Coca-Cola joined the National Clean Fleets Partnership. Member companies work with DOE to reduce petroleum and diesel use in their fleets. Coca-Cola is leading the way, operating more than 650 hybrid medium-duty trucks.<sup>5</sup>

### Ensure organizational sustainability plans include transportation-related strategies

Many organizations are beginning to report on their sustainability efforts and the reductions they are achieving. Fleet managers have the opportunity to contribute to these efforts by supporting inclusion of petroleum reduction metrics in your organization's sustainability plans. Successful transportation-

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<sup>4</sup> UPS Pressroom, "Expanding UPS Green Fleet Travels 200 Million Miles." Accessed October 18, 2012.

<http://pressroom.ups.com/Press+Releases/Archive/2011/Q1/Expanding+UPS+Green+Fleet+Travels+200+Million+Miles>

<sup>5</sup> Coca-Cola Company Press Center, "Coca-Cola Joins National Clean Fleets Partnership." Accessed October 18, 2012. <http://www.coca-colacompany.com/press-center/press-releases/coca-cola-joins-the-national-clean-fleets-partnership>

related strategies, such as deployment of EVs in your fleet, contribute to reduced fuel consumption resulting in lower operating costs and lower vehicle-related emissions.

### **Support a champion from within your department to participate on a committee to leverage community stakeholders to accomplish EV Readiness actions**

As a fleet manager, you will have valuable experience related to the operations of EVs in your fleet. You are encouraged to identify yourself as an EV champion (or perhaps someone from your staff) and support participation in your community's EV Readiness Committee. If your community does not have a committee or another venue through which to promote EV Readiness activities, you may consider championing the creation of a community-based EV Readiness committee. Participation in a committee or task force allows citizens in the EV community to connect and act in the public interest to promote EV Readiness activities.

## **Outreach**

### **Educate fleet drivers to be able to answer questions of curious citizens**

EV drivers have the potential to be the best ambassadors for EVs and thus promote EV Readiness activities. Informed drivers can answer questions posed by curious citizens who see EVs operating within their community.

### **Share your success stories of adopting the EV technology with other fleets**

Peer to peer exchanges are often the best conduit of information. As EVs are adopted into fleets, fleet managers will gain valuable operational experience and will be in a position to share their experience with other fleets considering EV purchases. There is value in learning about both the successes related to EV deployment as well as the challenges fleets have faced and the steps they took to overcome any barriers. Fleet managers are encouraged to participate in tradeshow, conferences, neighborhood meetings, and stakeholder meetings to share their experiences.

### **Place signage on your vehicles indicating it has zero tail-pipe emissions**

One major benefit to adding EVs to your fleet is the value of green marketing. Government fleets have the opportunity to promote the benefits of EVs by placing signage on the vehicle. Promoting the benefits of EVs not only gives your fleet recognition, but also raises awareness in the community.

#### **PEV Scorecard Examples and Resources:**

- Frito-Lay has incorporated Smith Newton electric trucks into its fleet in multiple cities. By the

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end of 2012, Frito-Lay North America expects to have over 280 units in service, which would make them one of the largest all-electric truck fleets in the United States.

Reference: <http://www.fritolay.com/about-us/press-release-20100908.html>



#### Examples:

- Staples has incorporated electric vehicle technology into their fleets. Below are several examples of vehicle signage used to promote the use of the EV technology on their fleet vehicles.



## Participate in Clean Cities Coalition and your community's EV Readiness Committee

Fleet managers are also encouraged to engage with their local Clean Cities Coalition. The Clean Cities program is sponsored by the U.S. Department of Energy and supports public and private partnerships to advance the nation's economic, environmental, and energy security by supporting local actions to

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reduce petroleum consumption in transportation. There are nearly 100 coalitions throughout the United States, including three coalitions serving the tri-state region of Alabama, Georgia, and South Carolina. The coalitions are a valuable resource and are available to help you find answers to any questions you may have regarding your community's EV Readiness.

Clean Cities Coalitions offer a number of opportunities to become involved in the promotion of EV Readiness actions. Jurisdictions are encouraged to become involved with their local coalition to gain insight into what other cities are doing to become EV Ready. Clean Cities Coalitions in the tri-state region include:

Alabama Clean Fuels Coalition	<a href="http://www.alabamacleanfuels.org/">http://www.alabamacleanfuels.org/</a>
Clean Cities Atlanta	<a href="http://www.cleancitiesatlanta.net/">http://www.cleancitiesatlanta.net/</a>
Palmetto State Clean Cities	<a href="http://www.palmettocleanfuels.org/">http://www.palmettocleanfuels.org/</a>

For a list of all Clean Cities Coalitions throughout the U.S., visit:

[http://www.afdc.energy.gov/cleancities/coalitions/coalition\\_contacts.php](http://www.afdc.energy.gov/cleancities/coalitions/coalition_contacts.php)

For a list of upcoming Clean Cities Coalition events please see:

<http://www1.eere.energy.gov/cleancities/events.html>

By participating in Clean Cities Coalition events, fleet managers can gain insight into what other cities are doing to become EV Ready. Best practices can be identified, and local representatives can collaborate to determine ways to improve their EV Readiness. You are also encouraged to share your success stories with your Clean Cities Coalition. The coalitions regularly publish success stories, with some stories highlighted by the National Clean Cities program, giving your organization national recognition.

You are also encouraged to participate in your community's EV Readiness Committee or Task Force. Many communities are providing a forum for EV stakeholders to engage to promote activities to ensure they are EV Ready. If such a committee exists in your community, you will be a valuable participant based on fleet experience operating EVs.

## Property Manager & Employer Checklist

Property managers and employers can support their community's EV Readiness activities largely through installation of charging stations for customers, employees, and tenants. In addition, adoption of EV-friendly parking policies is an essential incentive to promote adoption of EVs. This stakeholder group includes property and facility managers for any property where individuals may park a vehicle for an extended period of time, i.e., retail stores, shopping malls, theaters, hotels, etc. This group also includes employers with their own facilities or campuses.

The following checklist illustrates actions Property Managers and Employers may undertake in an effort to become EV Ready. **It is important to note that not every action is appropriate for every community. Stakeholders may decide to “pick and choose” from the checklist. While every attempt was made to make the checklist exhaustive, there are likely other actions stakeholders can undertake to enable their community to become EV Ready.**

When assessing a community's level of EV Readiness using the PEV Scorecard, property and facilities managers can play a role in three of the scorecard's six topic areas:

1. Education and Outreach
2. Plug-In Vehicle Market Conditions
3. Long-Term Vehicle and Infrastructure Planning

Property managers and Employers can support a community's Education and Outreach efforts and are important participants in assessing a community's Plug-In Market Conditions and Long-Term Vehicle and Infrastructure Planning.

PROPERTY MANAGERS CHECKLIST	
Action	PEV Scorecard Category
Infrastructure	
Install publically available EV charging stations	Plug-In Vehicle Market Conditions
Policies	
Adopt a Green Fleet procurement policy	
Provide reduced rate/free parking and/or dedicated parking for EVs	
Support a champion from within your organization to participate on a committee to leverage the resources of community stakeholders to accomplish EV Readiness actions	Education and Outreach



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<b>PROPERTY MANAGERS CHECKLIST</b>	
Action	PEV Scorecard Category
Create a sustainability reporting plan that includes petroleum reduction strategies	
<b>Outreach</b>	
Install signage around charging stations	
Be prepared to respond to inquiries about EVs from tenants/employees/customers	
Participate in Clean Cities Coalition and your community's EV Readiness Committee	Education and Outreach
Contact your local Clean Cities Coordinator to list your publically accessible charging station on the U.S. Department of Energy Alternative Fuels Data Center Station Locator ( <a href="http://www.afdc.energy.gov/locator/stations/">http://www.afdc.energy.gov/locator/stations/</a> )	Education and Outreach
Advertise your charging station through smart phone applications, social networking, and the Clean Cities sites Plug-In Georgia, Plug-in Alabama, and Plug-in Carolina.	Education and Outreach

The following sections include discussions of each of the actions included in the checklist along with examples of actions or activities a Property Manager, Facilities Manager, or Employer might undertake to complete the action in an effort to become EV Ready.

## Infrastructure

Deployment of adequate charging infrastructure is a key component of a successful EV Ready community. Property managers and employers who provide publicly accessible-charging stations help meet the need for both workplace charging as well as destination charging.

### **Install publically available EV Charging Stations**

Property managers and employers can install charging stations for use by tenants/employees and/or the general public. Providing access to charging stations for your employees or your tenants' employees helps fulfill the need of the second most prevalent place EVs charge, which is the workplace. Property managers and employers can also provide opportunities for destination charging by providing access to charging stations for patrons and customers.

Installation of charging stations can also offer benefits to the property manager/employer. If you are seeking LEED designation, installation of charging stations may earn points for providing alternative fuel options. For property managers, installation of charging stations can help make property more attractive to potential tenants who value environmentally beneficial amenities.

#### Examples:

- ECotality is managing [The EV Project](#) which is an effort to deploy charging infrastructure throughout selected cities in the United States. The EV Project has engaged more than 60 project partners, including Regency Centers, the property manager for Russell Ridge in Lawrenceville, GA.<sup>6</sup>
- There are a variety of other property managers and employers in the tri-state region supporting their communities' EV Readiness efforts through the installation of publicly-accessible charging stations. Case studies for each organization listed below are included in Section III.
  - Atlantic Station, Atlanta, GA (see Section 3.3.1)
  - Georgia Tech Hotel and Conference Center Parking Deck, Atlanta, GA (see Section 3.3.2)
  - Hilton Garden Inn, Atlanta, GA (see Section 3.3.3)
  - Kirk-Rudy, Woodstock, GA (see Section 3.3.4)
  - UPS, Atlanta, GA (see Section 3.3.5)
  - Clemson Area Transit, Clemson, SC (see Section 3.3.8)

## Policy

Property managers and employers have the opportunity to become champions of EV technology. By adopting organizational policies to support EV-related activities, you can help your community's efforts to become EV Ready.

### Adopt a Green Fleet Procurement Policy

There are significant environmental, fiscal, and community relation benefits of utilizing electric vehicles in fleets. As an employer, you may choose to adopt procurement policies which require, at a minimum, that consideration be given to the purchase of clean vehicles and may go so far as to require a certain percentage of vehicle purchases to be clean.

#### Examples:

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<sup>6</sup> The EV Project, "Charging Maps." Accessed October 18, 2012. <http://www.theevproject.com/charging-maps.php>

- A number of nationally-recognizable companies are adopting clean vehicle technologies into their fleets, which includes EVs. Two Atlanta-based companies, UPS and Coca-Cola, are leading the way in their industries.
- **UPS:** In 2011, UPS announced that “...its fleet of alternative fuels and technology delivery vehicles has driven 200 million miles since 2000.” As of 2011, the company had “...explored eight different alternative fuel technologies...” including all-electric vehicles.<sup>7</sup>
- **Coca-Cola:** In July 2011, Coca-Cola joined the National Clean Fleets Partnership. Member companies work with DOE to reduce petroleum and diesel use in their fleets. Coca-Cola is leading the way, operating more than 650 hybrid medium-duty trucks.<sup>8</sup>

### Provide reduced rate/free parking and/or dedicated parking for EVs

In communities where parking is expensive or limited, or in cases where employers lack adequate parking for employees, property managers/employers may consider providing reduced rate/free parking or dedicated parking to EV drivers. This type of policy has the potential to influence future purchases of EVs as drivers are able to realize additional benefits from EV ownership.

#### Example:

- The City of Cincinnati implemented the All-Electric Vehicle Incentive Pilot Program that offers free parking in identified city-owned garages, a city parking lot, and at all parking meters within the city limits.<sup>9</sup>

### Support a champion from within your organization to participate on a committee to leverage the resources of community stakeholders to accomplish EV Readiness actions

As a property manager or employer, you will have valuable experience related to your EV activities you can share with your peers. You are encouraged to identify yourself as an EV champion (or perhaps someone from your staff) and support participation in your community’s EV Readiness Committee. If your community does not have a committee or another venue through which to promote EV Ready

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<sup>7</sup> UPS Pressroom, “Expanding UPS Green Fleet Travels 200 Million Miles.” Accessed October 18, 2012. <http://pressroom.ups.com/Press+Releases/Archive/2011/Q1/Expanding+UPS+Green+Fleet+Travels+200+Million+Miles>

<sup>8</sup> Coca-Cola Company Press Center, “Coca-Cola Joins National Clean Fleets Partnership.” Accessed October 18, 2012. [http://www.thecoca-colacompany.com/dynamic/press\\_center/2011/07/national-clean-fleets-partnership.html](http://www.thecoca-colacompany.com/dynamic/press_center/2011/07/national-clean-fleets-partnership.html)

<sup>9</sup> City of Cincinnati Office of Environmental Quality, “Free Parking for All-Electric Vehicles.” Accessed October 18, 2012. <http://www.cincinnati-oh.gov/oeg/residential-programs/electric-vehicle-free-parking/>

activities, you may consider championing the creation. Participation in a committee or task force allows citizens in the EV community to connect and act in the public interest to promote EV Readiness activities. You can also support sharing your organization's EVs experience through professional association memberships.

### **Create a sustainability reporting plan that includes petroleum reduction strategies**

Many organizations are beginning to report on their sustainability efforts and the reductions they are achieving. Property managers and employers should ensure transportation-related metrics are included as part of your organization's sustainability plans. Successful transportation-related strategies, such as deployment of EVs in your fleet, contribute to reduced fuel consumption resulting in lower operating costs and lower vehicle-related emissions.

## **Outreach**

Highlighting your successes and engaging with other stakeholders in your community who support EV Readiness activities are other ways that property managers and employers can support their community's efforts to become EV Ready.

### **Install signage around charging stations**

Raising awareness of EV Readiness activities in the community is a valuable contribution. Property managers and employers who install charging stations should spotlight the infrastructure with effective signage. Effective signage can help promote EVSE technology and communicate essential information to potential EV owners. Sample EV signage can be found in the Signage Guide included in Section 3.1.12.

#### **Examples:**

- The Hilton Garden Inn Case Study includes a picture of the signage included in the EV-designated parking spaces equipped with charging stations (see Section 3.3.3).

### **Be prepared to respond to inquiries about EVs from tenants, employees, and customers**

Property managers and employers supporting EV Readiness activities can be community champions for EV Readiness. You and appropriate members of your staff should be prepared to respond to inquiries about your activities. You can help to educate tenants, employees, and customers who would like to learn more about EV-related technology and help those who are considering investing in the technology make more informed decisions.

## **Participate in Clean Cities Coalition and your community's EV Readiness Committee**

Property managers and employers are also encouraged to engage with their local Clean Cities Coalition. The Clean Cities program is sponsored by the U.S. Department of Energy and supports public and private partnerships to advance the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. There are nearly 100 coalitions throughout the United States, including three coalitions serving the tri-state region of Alabama, Georgia, and South Carolina. The coalitions are a valuable resource and are available to help you find answers to any questions you may have regarding your community's EV Readiness.

Clean Cities Coalitions offer a number of opportunities to become involved in the promotion of EV Readiness actions. Jurisdictions are encouraged to become involved with their local coalition to gain insight into what other cities are doing to become EV Ready. Clean Cities Coalitions in the tri-state region include:

Alabama Clean Fuels Coalition	<a href="http://www.alabamacleanfuels.org/">http://www.alabamacleanfuels.org/</a>
Clean Cities Atlanta	<a href="http://www.cleancitiesatlanta.net/">http://www.cleancitiesatlanta.net/</a>
Palmetto State Clean Cities	<a href="http://www.palmettocleanfuels.org/">http://www.palmettocleanfuels.org/</a>

For a list of all Clean Cities Coalitions throughout the U.S., visit:

[http://www.afdc.energy.gov/cleancities/coalitions/coalition\\_contacts.php](http://www.afdc.energy.gov/cleancities/coalitions/coalition_contacts.php)

For a list of upcoming Clean Cities Coalition events please see:

<http://www1.eere.energy.gov/cleancities/events.html>

By participating in Clean Cities Coalition events, property managers and employers can gain insight into what other cities are doing to become EV Ready. Best practices can be identified, and local representatives can collaborate to determine ways to improve their EV Readiness. You are also encouraged to share your success stories with your Clean Cities Coalition. The coalitions regularly publish success stories, with some stories highlighted by the National Clean Cities program, giving your organization national recognition.

You are also encouraged to participate in your community's EV Readiness Committee or Task Force. Many communities are providing a forum for EV stakeholders to engage to promote activities to ensure they are EV Ready. If such a committee exists in your community, you will be a valuable participant based on fleet experience operating EVs.