State Agency Transportation Electrification Guides

Electrification Coalition

October 2023

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Introduction

EV adoption in the U.S. grew significantly in 2022, representing 5.8% of new light-duty car sales, a 65% increase from 2021. Private investment has surged in the automotive manufacturing sector for electric vehicles (EVs), with an anticipated $210 billion for manufacturing and battery facilities in the U.S. alone. The **Bipartisan Infrastructure Law (BIL)** also dedicated $6.1 billion to additional battery manufacturing, minerals processing, and recycling facilities. The foundational elements of an electrified transportation sector are in place, and states need to be aware of the broader dynamics of this accelerating market.

In 2021, the BIL established the **National EV Infrastructure (NEVI)** program to build a network of EV charging stations along designated alternative-fueled corridors (AFCs), enabling consumers to get from place to place easily and eliminating range anxiety. This new program allocated funding to all 50 states via a formula similar to how highway transportation revenue for all states is distributed. Per the program guidance, each state was required to submit a plan for utilizing the funding and include efforts to engage a wide range of public and community-based stakeholders. For many states, this represented the first time they planned for an electric transportation future.* In addition, for many states, this represented a unique opportunity for state departments of transportation (DOTs) to work with state energy offices and state public utility commissions to ensure an effective, efficient, and equitable state EV plan was developed and submitted to the federal Joint Office on Energy and Transportation.

While state DOTs are responsible for implementing NEVI funding, and state energy offices and state public utility commissions are the obvious additional stakeholders needed at the EV planning table, the reality is that many state agencies will have a role to play in a successful transition to transportation electrification and it will require an all-hands-on-deck effort across state agencies.

The Electrification Coalition (EC) has developed these guides to detail immediate actions that state agencies can take to accelerate the transition to EVs. These guides reflect interviews with various state agency staff and highlight agencies that have championed transportation electrification priorities. The EC recognizes that additional state agencies will be involved in this transition, and we look forward to continuing to work with state agencies and departments to identify their role in the shift toward EVs.

***While VW Settlement funding was available to all 50 states, only 15 percent of Appendix C was available to put towards EV charging infrastructure. While many states chose to do so, not all did. Furthermore, this effort was performed under state air offices and not as broadly in collaboration with stakeholders.**

Transportation Electrification and State Air Protection Agencies

Electrification Coalition

As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a continued role in the successful transition to electric transportation. This factsheet guide details immediate actions that state air protection agencies or similarly focused organizations can take to prepare for the shift to EVs, bringing value to their state and constituents.

State air protection agencies support efforts to maintain clean air and minimize any impacts on public health. Depending on the state, this agency may be housed under the Department of Environmental Protection, Environmental Quality, or Natural Resources, or it may be a stand-alone agency. Given the opportunity for improved air quality and reduced emissions from this transition, the state air protection agency must be a resource in its communities for electrification information.

Minimum Actions to Take Now

- Partner with additional state agencies to create a state-wide plan to reduce air pollution by electrifying all modes of transportation.
- Partner with community-based organizations, cities, and local governments to educate on the benefits of EVs and reducing air pollution.
- Prioritize deploying EV solutions in State Implementation Plans (SIPs) for criteria pollutants in non-attainment areas under National Ambient Air Quality Standards (NAAQS).*
- Encourage school districts to adopt electric school buses and leverage funding from EPA's **Clean School Bus program** to assist with bus purchases and EV charging station deployment.

Recommendations for Accelerated Adoption

- Adopt EV policies and regulations that ensure a minimum number of light-, medium-, and heavy-duty EV purchases in the state.**

*** See California's State SIP Strategy for 2022 and strategies to deploy zero emission vehicles.**
**** Some examples include the Advanced Clean Cars Program 2.0 version, the Advanced Clean Truck Rule, and the Advanced Clean Fleet program.**

Case Study: Clark County Department of Environment and Sustainability

The **Clark County Department of Environment and Sustainability** (DES) is the air pollution control agency, regional Endangered Species Act compliance program, and sustainability office for Clark County, Nevada. The department is responsible for ensuring that the air in the most populous county in Nevada meets regulatory standards—a vital component of public health. Some key actions the agency has taken to prepare for the EV transition include:

- **Incorporating key players in regulation decisions:** Following its commissioner's announcement of a possible EV charging ordinance for new developments in the county, Clark County DES created the Transportation Electrification Working Group (TEWG), which brought together advocacy groups, utilities, commercial and residential developers, and EV professionals to share information and discuss what actions each organization will need to take to prepare for the implementation of this ordinance. Within this working group, the agency drafted additions to the ordinance that worked for all key players and presented them to their Board of County Commissioners, who adopted them into their current development code and will begin implementing them in January 2024.
- **Partnering with a utility:** As the county's sole utility began preparing for the electrification future and the potential ordinance for Clark County, the DES partnered with the utility to identify funding for implementing its infrastructure plan for state fleets. This opened new funding doors and allowed Clark County to apply for two community charging programs.
- **Getting creative with current resources:** To determine which state sites needed charging first, the agency conducted a sustainability audit and emissions inventory and collected data on the top agency buildings with the most vehicles coming and going daily. This allowed DES to plan shareable charging services for fleets near one another or coming and going at different times.
- **Overcoming challenges:** DES is working to avoid including too many different vehicle makes in its fleet. Limiting the different types of vehicles it purchases can streamline training, improving safety and preventing future maintenance issues.
- **Next steps:** Internally, the Clark County DES is continuing work to meet the County's goal of 100% EV fleet by 2050, continuing collaboration in its TEWG, and hoping to inspire other organizations to work with their communities to develop model ordinances to incorporate EV readiness in future developments.

About the Electrification Coalition

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Transportation Electrification and State Economic Development Agencies

Electrification Coalition

As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a continued role in the successful transition to electric transportation. This guide details immediate actions that state economic development agencies or similarly focused organizations can take to prepare for the shift to EVs, bringing value to their state and constituents.

State offices of economic development (known by different names across the states) provide strategies for attracting business, growing the workforce, and providing business assistance programs. These activities are designed to lead to overall economic growth, innovation, and entrepreneurship in a given state but each state may have different priorities. To support transportation electrification, economic development agencies can play an instrumental role by engaging in the following activities:

Minimum Actions to Take Now

- Encourage businesses to apply for federal EV funding programs and provide business assistance programs to assist with funding applications where possible.*
- Prepare for the EV transition by understanding market trends, EV data and pace of adoption, and global patterns that will influence the EV market.
- Highlight EV investments in the state and EV job opportunities.

Recommendations for Accelerated Adoption

- Match federal funding available for EV and EV charging station adoption with state-based funding programs.
- Attract manufacturing (auto OEMs, supply chain, batteries, battery recycling facilities) with state-specific tax credits and incentives.
- Partner with the state department of education on EV-related workforce training programs to ensure a trained workforce ready to meet increasing EV demands.
- Coordinate with counties and cities on a roadmap for economic growth opportunities.** Coordinate closely with OEMs and battery manufacturers on the roadmap as well.

***See the compendium of federal funding available to businesses.**
**** A great example of a roadmap is the California Zero-Emission Vehicle Market Development Strategy.**

Case Study: Nevada's Governor's Office of Economic Development

The **Nevada Governor's Office of Economic Development** (GOED) is laying the groundwork for widespread EV adoption across the state. By locking in access to minerals, enabling a robust manufacturing base, and investing in education programs to ensure the longevity of the EV market, GOED has set Nevada up for success. Below are four important steps in this process:

- **Focus on continued access to materials:** As a state rich in minerals, Nevada's GOED worked with OEMs based in the state and local governments through the **Nevada Battery Coalition** to ensure reliable access to the materials that go into EV batteries. This coalition is working to prepare the market to incorporate all aspects of lithium battery production, from the initial manufacturing to the recycling of used batteries. With a focus on environmentally friendly manufacturing and testing, the coalition also works on principles to ensure lithium batteries are safe and perform well in order to enable widespread EV adoption.
- **Reconfigure the current workforce:** GOED has focused on reshaping the current workforce into an EV workforce. The department collaborated with Western Nevada College and **Redwood Materials** to develop and pilot a training program on battery disassembly. GOED is supporting the **skilled training program** financially. In addition, GOED has worked closely with the **Governor's Office of Workforce Innovation** (GOWINN) and Western Nevada College to create a **manufacturing technician program** specifically for EVs.
- **Enable critical businesses to succeed:** GOED also worked closely with companies in the state to ensure they will succeed. One example is Redwood Materials, a business essential to the Nevada Battery Coalition. Since Redwood Materials can fully recycle the materials from a used EV, including the battery, Nevada set itself up to be one of the only states that can keep precious battery minerals in a "lithium loop" from extraction to recycling.
- **Next steps:** GOED is working to establish a larger "lithium loop" in the state, ensuring reliable and robust access to the minerals needed in EVs. GOED is building partnerships with OEMs and supply chain businesses to bring more battery production to Nevada.

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Transportation Electrification and State Education Agencies

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State education agencies are responsible for enforcing education laws and regulations and for continuing to reform and improve school programs from elementary through secondary school programs and adult education. Public schools currently serve as the nation's largest network of public infrastructure. Depending on the state, many state departments of education may also create or assist with workforce development programs through the **Workforce Innovation and Opportunity Act State Plans**. For these reasons, state departments of education must begin preparing for electrification at the national scale, utilizing these actions below:

Minimum Actions to Take Now

- Encourage or require EV charging infrastructure at public schools (K-12 and college level) for teachers, students, parents, and visitors.*
- Encourage school districts to apply for funding to electrify school bus fleets through the EPA's Clean School Bus program.
- Create a task force of EV experts to assist public schools and colleges with electrifying their vehicles and installing charging stations at facilities.
- Enable **EV Infrastructure Training Program (EVITP)** certification through partnerships with community colleges or create state-based equivalent training programs. Set aside funding to the state from Federal Highway Administration formula-funded programs (i.e., those that permit workforce development as an eligible activity) to assist with creating a **robust training and certification program**.

***One example is AB 1082 in California (2017) that authorizes utilities to create programs that install EV charging infrastructure at public schools.**

Recommendations for Accelerated Adoption

- Coordinate with local, county, and state emergency management personnel to equip schools with bidirectional charging equipment. In emergencies, schools identified as shelters can use **electric school buses as mobile power units to power buildings**.
- Incorporate EV programs and education into a curriculum for students that builds awareness of job opportunities; provide funding for schools to host EV workshops.*

* Some examples include: theswitchlab.com, evworld.support, and legacyev.com/collections/education-curriculum.

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Transportation Electrification and State Emergency Management Agencies

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Emergency management agencies provide planning, training, and resources for the state and local communities to ensure preparedness for natural disasters, domestic hazards, and other emergencies. Additionally, these state departments may be required to respond to isolated emergencies or help clean up and restore following disasters. To prepare for these disasters and ensure transportation electrification is supported during these events, emergency management agencies should do the following:

Minimum Actions to Take Now

- Ensure EV charging stations are installed along emergency evacuation routes and develop a plan for increasing redundancy of EVSE on evacuation routes to match adoption rates.
- Establish plans and policies for EV charging stations in flood plains—particularly for post-flood reconnection and safety measures.*
- Catalog electric school buses (ESBs) as a resource in state emergency management resource libraries; utilize the EC's **V2X Implementation Guide and Mutual Aid Agreement** for assistance.
- Coordinate with state fire entities on policies, procedures, and training for first responders on EV fires during emergencies.**
- Electrify department fleet vehicles, including cars and pick-up trucks.

***Louisiana Department of Transportation prioritizes solar generation and battery storage at chargers adjacent to flood plains for charging during storm surges and other emergencies.**
**** Valley Hospital First Responders in Phoenix, AZ underwent EV emergency response training.**

Recommendations for Accelerated Adoption

- Partner with local emergency management offices and school districts and sign **mutual aid agreements** to use ESBs as mobile power units in times of emergency and disaster response. Conduct drills/scenarios to utilize ESBs in this manner.
- Leverage hazard mitigation plan funding or the Building Resilient Infrastructure and Communities grant program to install bidirectional EV charging stations at shelters, police stations, hospitals, and other priority building locations.
- Work with utilities, public utility commissions, and state energy offices to establish bidirectional charging rates, plans, policies, and procedures for EVs—both for consumers and fleets—to aid in grid resilience and leverage EVs as backup power supply.

Case Study: Florida Division of Emergency Management

The **Florida Division of Emergency Management** (FDEM) plans for and responds to emergencies and disasters. The Division has prepared for the transition to EVs through thorough planning and elevated stakeholder engagement. Specific areas of action include the following:

- **Prepare charging:** FDEM successfully contracted with vendors and coordinated with state agency partners to provide additional charging stations to a community, region, or key evacuation route in the event of a disaster. This pre-disaster coordination and collaboration with key stakeholders ensures that residents have access to ample charging when they need it most, resulting in a safe and efficient evacuation process.
- **Educate Floridians:** The Division utilizes its communication platforms to provide consumer education to EV drivers on **steps to prepare for an emergency** and information on **how to handle power outages**.
- **Understand challenges:** While FDEM does not own all emergency vehicles, they rely on outside contractors for vehicles and support. As fleets transition to electric, they must be aware that some of these emergency vehicles they are contracting with could be electric; therefore, the FDEM must identify needs and plan for reliable access to charging for these emergency vehicles.
- **Next steps:** The Division is currently determining how to provide EV charging to Floridians who choose not to evacuate during an extreme weather event.

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Transportation Electrification and State Environmental Protection Agencies

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State environmental protection agencies are responsible for enforcing environmental laws regarding clean air and water, among other matters. This includes inspections of all public facilities, emergency response to environmental disasters, and communication and outreach to the public on environmental regulations. The following actions align with the goals of state environmental protection agencies and will help states facilitate a smooth transition to EVs.

Minimum Actions to Take Now

- Partner with state energy and transportation offices on consumer education campaigns to spread awareness about the benefits of driving electric to achieve state clean air goals.
- Create a task force with internal and external stakeholders to work towards battery recycling solutions, including collection processes.
- Ensure compliance with **EPA Mineral Mining and Processing Effluent Guidelines and Standards** and adopt state-based principles and regulations as minerals processing facilities are built in the state.
- Publish guidelines for consumers and businesses on how to treat and handle lithium-ion batteries if damaged.* Work with emergency responders, cities, and counties on establishing practices for dealing with damaged EV batteries.

Recommendations for Accelerated Adoption

- Encourage and partner with state colleges and universities to advance battery chemistry research and recycling practices.**

***Florida DEP created the following guidelines for consumers following Hurricane Ian.**
**** Learn more about Oregon State University's partnership with the U.S. DOE.**

- Prioritize deploying EV solutions in State Implementation Plans (SIPs) for criteria pollutants in non-attainment areas under National Ambient Air Quality Standards (NAAQS).*

Case Study: Pennsylvania Department of Environmental Protection

The **Pennsylvania Department of Environmental Protection** (DEP) works to "protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment." DEP has taken an active stance on educating consumers, dealers, and utilities on the various actions needed to seamlessly transition to an electric transportation future, including the following:

- **Preparing early:** DEP established an EV roadmap with recommendations on how to increase EV deployment and prepare for the transition to EVs and continues to update the roadmap with input from a broad group of stakeholders. The Department hosts quarterly calls with these stakeholders to share the latest EV news and funding opportunities.
- **Partnering with utilities:** DEP worked with and continues to partner with local utilities to optimize EV drivers' electric rates and create programs that encourage charging at off-peak times. The Department recently created an EV rate design study.
- **Performing outreach to dealerships:** DEP works closely with the Pennsylvania Automotive Association to facilitate information sharing with dealerships. DEP has found this partnership with dealers very effective; dealers can ask questions, share common consumer feedback, and receive support on regulatory compliance with emission standards. DEP also works closely with the Pennsylvania-based Clean Cities Coalitions to provide support and align on EV priorities.
- **Next steps:** Since the Office of Energy is housed within the DEP in Pennsylvania, electric grid reliability is an area that falls to the DEP to manage. The DEP works closely with the Public Utilities Commission, utilities, and other stakeholders on electric grid resiliency and reliability efforts to ensure a seamless transition to EVs.

*** See California's State SIP Strategy for 2022 and strategies to deploy zero-emission vehicles.**

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Transportation Electrification and State Fire Agencies

Electrification Coalition

As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a continued role in the successful transition to electric transportation. This guide details immediate actions that state fire agencies or similarly focused organizations can take to prepare for the shift to EVs, bringing value to their state and constituents.

Fire entities prevent fires through education and enforcement of regulations. These agencies may be housed under different departments, but regardless of organizational structure, they can serve a pivotal role in the EV transition by addressing concerns about EV-related emergencies.

Minimum Actions to Take Now

- Establish annual training for first responders to respond to EV fires.*
- Collaborate with housing authorities on fire codes specific to EVs (e.g., installation of sprinklers in garages).
- Partner with state environmental protection agencies on proper disposal of batteries after fires.
- Create **educational materials** on what to do in the case of EV fires and proper charging for fire prevention. Local fire departments should distribute these materials within communities.

Recommendations for Accelerated Adoption

- Collaborate on **best practice fire response plans** at the county, regional, and state levels.
- Incorporate EVs equipped with bidirectional technology into the state fire fleet for use as mobile power units in emergency response situations (e.g., at base locations for wildfire response units). See the EC's **V2X Implementation Guide** for more information.
- Electrify fire department fleet vehicles, including engines and pick-up trucks.

***GM offers first responder training for EVs.**

Case Study: Phoenix Fire Department

The **Phoenix Fire Department** in Phoenix, AZ is a leader in understanding, managing, and preventing EV battery fires. Although the number of fires is undoubtedly lower for EVs than ICE vehicles, Assistant Fire Chief Tim Kreis is working to ensure every member of his response team and the community is prepared for what to do in the event of an EV fire. The Department has taken many steps to prepare for the transition to EVs through extensive planning, training, and community engagement. Actions taken cover the following topics:

- **Training first responders:** The Phoenix Fire Department has successfully provided training for its first responders on EV battery fires, including an in-depth understanding of thermal runaway for all responders.
- **Educating the public:** To help distribute this information to the public, the Phoenix Fire Department has prepared educational materials for citizens on what to do in case of an EV fire, how to charge your EV safely, and what warning signs are for thermal runaway.
- **Partnering with towing companies:** The Phoenix Fire Department has developed unique partnerships with specific towing companies equipped to remove an EV from an accident scene after a fire and bring it to a designated lot for further monitoring by the fire department.
- **Installing sprinkler systems:** One of the most important safety measures to take, the fire chief noted, is installing sprinkler systems in parking garages. Doing so in older garages is particularly crucial, as they are less likely to already have these systems installed. Sprinklers can significantly reduce the damage to other vehicles and the building itself in the rare case of a vehicle fire.
- **Next steps:** As the Phoenix Fire Department regularly updates its EV fire response plan, it makes sure to share information regionally. The department aims to create best practices and standards for EV fire response that can be replicated nationwide. Assistant Chief Tim Kreis has shared that the Phoenix Fire Department and its regional partners have all worked together on revisions to shared EV response plans and firefighter training efforts.

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Transportation Electrification and State General Services Agencies

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State general services agencies provide leadership and support in operating and managing facilities, supplies, and essential services to the state for the benefit of residents. Their involvement with other agencies allows them to serve as a hub for EV resources for all agencies.

Minimum Actions to Take Now

- Install EV charging stations at state-owned properties for state employees and public use.
- Adopt an EV-first purchasing agreement for the state that ensures that all new vehicle purchases for state usage will be electric.* Or, adopt a total-cost-of-ownership approach to replacing and purchasing new fleet vehicles.**
- Streamline the EV charging station procurement processes for cities and local governments by sharing state-approved vendor lists, cooperative purchasing opportunities, or assisting with a group buy for EV charging stations.
- Update fuel card (e.g., WEX) policies and programs to include EV charging.

Recommendations for Accelerated Adoption

- Educate state employees on driving electric with ride-and-drive events.
- Develop and adopt best practices for **workplace charging programs** and share best practices with cities and local governments.

***Example: State of Massachusetts EV First Acquisition Policy, effective 7/1/22.**
**** The state of Virginia passed legislation that would require the use of a total-cost-of-ownership (TCO) calculator for any new vehicle purchase. The use of a TCO calculator takes into account the savings from EVs with fuel and maintenance versus the upfront purchase price alone.**

Case Study: Maryland Department of General Services

The **State of Maryland Department of General Services** (DGS) addressed the need for centralizing the fleet electrification process for all state agencies. This undertaking of DGS's Office of Energy and Sustainability resulted in streamlined success for other state agencies in Maryland. Their actions include:

- **Creating a centralized program:** Three years ago, the Maryland Department of General Services (DGS) Office of Energy and Sustainability was tasked with installing the charging infrastructure required to transition the State's light-duty passenger vehicle fleet of nearly 4,000 vehicles to EVs by 2031. This initiated the formation of a centralized program, the Electric Vehicle Infrastructure Program (EVIP), to accomplish these goals. The initial EVIP team consisted of a project manager and a program coordinator under the direction of the chief of sustainability. With the passage of the **Climate Solutions Now Act of 2022**, DGS is now required by law to provide EV charging for all state agencies.
- **Conducting training and outreach:** From the start, Maryland DGS has taken action to ensure staff are prepared for the EV transition. DGS has used creative means to train staff, including hosting ride-and-drive events with different makes and models of vehicles in the fleet, educating fleet managers and other staff through lunch-and-learn events, providing online training seminars and printable reference tools, and more. DGS focused on a balanced approach, including setting realistic expectations with staff on EV range, charging times, and locations and discussing maximizing range. DGS staff acknowledge that some agency staff travel to locations across the state in their vehicles and must have the tools to plan accordingly.
- **Working with partners:** The two biggest partners for DGS currently are local utilities and the Department of Budget and Management (DBM). DBM and DGS work together to plan which gas vehicles should be replaced with EVs. DGS ensures adequate charging infrastructure at these facilities and decides how to spend funds to ensure the greatest access to EV charging stations across multiple agencies. DGS also partners with the local utilities to install publicly accessible utility-owned and maintained charging infrastructure on state property. The utilities collect revenue from these stations from the state fleet and the public as part of the **Maryland Public Service Commission Pilot Program** under PC44.
- **Being flexible to accommodate challenges:** Some of the biggest challenges that DGS has faced include delays in electrical components for charging stations and vehicle delivery times. In response, the agency has evaluated proposed substitutions and been flexible on fleet charging location rules.
- **Maintaining efforts:** DGS will continue to facilitate two working groups centered around discussing advancements in the EV space: the EV Ambassadors Group and EV Strategy Group. The EV Strategy Group includes representatives from across agencies to meet monthly to discuss program developments, review new policies, update on EV infrastructure construction projects, and share resources. The EV Ambassadors Group consists of EV owners and enthusiasts across state agencies who voluntarily joined the group to share their knowledge, current information, and news about EVs. Group members also help plan EV outreach and events to promote EVs, such as during **National Drive Electric Week** and **Drive Electric Earth Day**.
- **Next steps:** The EVIP team has now increased in size to include two additional full-time employees (a program analyst and another project manager), additional data and procurement support, and an expanded budget to accelerate the development of EV infrastructure projects. The Maryland DGS has taken on the lead state role for a cooperative EV infrastructure purchasing agreement through the National Association of State Procurement Officials (NASPO). Once the contract is issued, it will be available for other agencies, states, and local governments to adopt to streamline the procurement process.

Transportation Electrification and State Housing Agencies

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As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a continued role in the successful transition to electric transportation. This guide details immediate actions that state housing agencies or similarly focused organizations can take to prepare for the shift to EVs, bringing value to their state and constituents.

State housing authorities work to ensure safe, affordable housing options that meet community needs. They are responsible for distributing federal formula funding, developing programs to meet the needs of homeowners, improving public facilities, and providing direct housing assistance to the public. State housing authorities also have the unique opportunity to set a precedent for how residents access EV charging. Some of the opportunities for housing authorities to support EVs include:

Minimum Actions to Take Now

- Champion building-ready codes that require EV infrastructure and facilitate future charging.*
- Prioritize installing public EV charging stations near low-income housing developments for use by residents. Leverage federal funding opportunities such as **EPA's Environment and Climate Justice Block Grant program** and the **EPA's Greenhouse Gas Reduction Fund** that prioritize placing EV chargers in disadvantaged communities.
- Partner with state and local transit authorities to provide residents with additional electric public transit options.

Recommendations for Accelerated Adoption

- Partner with **car-sharing entities** that function within public housing neighborhoods to ensure access to EVs and EV charging stations.
- Partner with other state agencies leading community education campaigns showcasing the benefits of EVs.
- Partner with the state planning office to develop a roadmap for providing additional EV charging options to residents (e.g., through solar-powered mobile charging units).**

*** See more at the EV Charging 4 All Initiative.**
**** One example is found here.**

Case Study: New York City Housing Authority

The **New York City Housing Authority** (NYCHA) provides affordable housing, including 177,569 apartments across New York City. In addition to providing moderate- and low-income residents with a place to live, NYCHA connects residents with career and educational opportunities. Although they are a city entity rather than a state entity, NYCHA can serve as an example to state housing authorities, given that it is the largest housing authority in North America. Activities that it has pursued to support EV access include:

- **Creating a roadmap:** NYCHA created a decarbonization roadmap that details how it will decarbonize every property. While this effort is mainly focused on heat pumps to heat and cool apartments, it paves the way for EVs and EV charging to be included in properties.
- **Thinking innovatively:** NYCHA has provided its residents with mobile solar-powered EV charging units. This innovative method circumvents critical infrastructure problems that often come with old buildings and provides residents with EV charging quickly and on an as-needed basis.
- **Partnering with residents:** NYCHA reports that its greatest partners are its residents. In addition to using the EV charging stations themselves, NYCHA residents have helped spread the word to their neighbors on the benefits of EVs and the ease of charging, paving the way for future EV charging installations.
- **Addressing challenges:** As the largest public housing entity in North America, NYCHA often sees competing budgetary priorities that must precede EV charging station installations; therefore, NYCHA is planning to leverage federal funding opportunities to install more EV charging stations.
- **Next steps:** Noting that NYCHA residents most often use EV charging for micro-mobility or car-sharing purposes, NYCHA is looking to partner with additional transportation providers to decarbonize the transportation methods that residents use most.

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Transportation Electrification and State Parking Agencies

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State and city parking authorities manage and develop on- and off-street parking assets, conduct traffic control, and ensure vehicle compliance both daily and during large-scale events. Parking authorities are in a great position to advocate for the advancement of EV charging availability.

Minimum Actions to Take Now

- Partner with state planning offices and departments of general services to install EV charging stations at parking facilities. Leverage federal funding opportunities for states and cities for EV charging stations.
- Create a roadmap to scale access to EV charging stations; partner with state departments of general services and state planning offices on the roadmap, incorporating **EV-ready building codes** for new parking structures.
- Create policies and laws with local authorities that **prevent internal combustion engine vehicles from blocking EV charging stations**. Partner with law enforcement officials to enforce these policies and laws.

Recommendations for Accelerated Adoption

- Ensure state and local transportation planners adopt the most recent version of the Manual on Uniform Traffic Control Devices (MUTCD), which includes EV signage specifications and parking color specifications, among other standards for EVs.
- Identify **best practices and policies for right-of-way EV charging** and share them with local parking authorities.
- Identify **best practices and policies** for streetlight charging and share them with local parking authorities.

Transportation Electrification and State Planning Agencies

Electrification Coalition

As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a critical role in the successful transition to electric transportation. This guide details high-level actions that state planning agencies or similarly focused organizations must take to prepare for the shift to EVs.

State planning agencies provide resources and support to various entities regarding land use development. Depending on the state, the planning office can be a stand-alone or housed within another entity. The state planning office is also responsible for managing the state's budget and where and how funding is prioritized and dispersed.

Minimum Actions to Take Now

- Oversee and coordinate statewide transportation electrification efforts; partner with additional agencies to create a statewide roadmap if not established under other agencies.
- Create **policies and establish best practices** for enabling timely EV charging station installation with zoning and permitting.
- Ensure state and local transportation planners adopt the most recent version of the Manual on Uniform Traffic Control Devices (MUTCD), which includes EV signage and parking color specifications, among other standards for EVs (if not already adopted by the parking authority).*

Recommendations for Accelerated Adoption

- Partner with the department of motor vehicles, state energy departments, state transportation departments, and utilities to create tools and forecasts that show the pace of EV adoption; share with local governments, cities, and public utility commissions to prepare and enable adequate build-out of public EV charging stations.

*** The 11th edition of the MUTCD is due out in 2023. Check here for the latest updates.**

Case Study: Utah Governor's Office of Planning and Budget

Responsible for serving one of the fastest-growing states in the nation, the **Utah Governor's Office of Planning and Budget** understands the need to prepare the whole state for the transition to EVs, with a special focus on rural communities. To ensure this whole-of-state approach, the Office is taking the following actions:

- **Convene a transportation electrification committee:** Thanks to a directive in **SB 125**, Utah created an official electrification steering committee. One of the committee's main goals is to coordinate and prioritize statewide electrification efforts. Having a committee, which can be tasked with reaching out to utilities, state agencies, universities, and private companies, allows the planning office and the state to move the needle forward on their widespread electrification goals.
- **Incentivize private investment:** Following state investment in EV charging infrastructure approved by the legislature, the planning office hopes to incentivize private partners to invest in its Charging and Fueling Infrastructure Grant Program projects. The state will build on past successful partnerships with Rocky Mountain Power, which was approved to invest $50 million in DC fast-charging infrastructure in 2020.
- **Address future-proofing needs:** One of the biggest challenges the office is addressing is future-proofing. Because the state has been installing EV charging stations for years, Utah is starting to see the direct effects of not having previously future-proofed. EV charging stations installed at eight sites two years ago are at less than half the power output of what NEVI stations will be. Thus, it is important to have a future-proof plan when installing EV charging stations at this stage in the market.
- **Next steps:** The Governor's Office of Planning and Budget's next step is to work with utilities to ensure grid readiness for large metropolitan areas in Utah. Because over 80% of Utah's population is in the Salt Lake City metropolitan area, it is necessary to ensure adequate capacity on distribution lines and access to EV charging stations throughout the rest of Utah—especially the more rural and remote areas.

About the Electrification Coalition

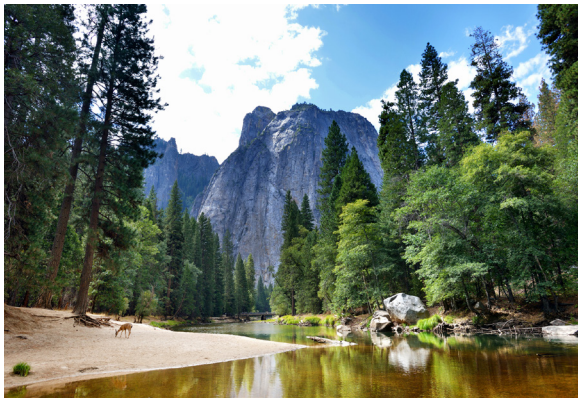
The Electrification Coalition is a nonpartisan, nonprofit organization that advances policies and actions to facilitate widespread deployment and adoption of electric vehicles in order to reduce the economic, public health and national security risks caused by America's dependence on oil. For more information, visit **electrificationcoalition.org**.

Transportation Electrification and State Tourism/Public Lands Agencies

Electrification Coalition

As more Americans switch to electric vehicles (EVs) and hundreds of billions of dollars are distributed through the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), state agencies will play a continued role in the successful transition to electric transportation. This guide details immediate actions that state tourism and public land agencies or similarly focused organizations can take to prepare for the shift to EVs, bringing value to their state and constituents.

State tourism agencies develop and enhance a region's visitor facilities and stimulate tourism growth to produce economic benefits for the state, often working with state public lands officials. They also preserve and promote the safe use of state public lands by staffing, cleaning, maintaining, and providing programming in parks. For this reason, they can implement some of the strategies below to ensure visitors have access to EV charging in parks and public lands.



Minimum Actions to Take Now

- Install charging stations at popular tourist destinations such as state parks, forests, and beaches to encourage EV drivers to visit sites and reduce carbon emissions and air pollution in high-traffic areas.*
- Provide high-quality educational materials at rest stops and tourist destinations to ensure drivers know of charging availability within the state.
- Electrify fleet vehicles that service tourist sites and public lands to reduce emissions and protect sites.**

Recommendations for Accelerated Adoption

- Consider additional locations for installing EV charging stations, such as high-traffic tourist destinations, to ensure access to EV charging stations is on pace with growing consumer demand.
- Coordinate with rental car agencies to electrify fleets and install chargers at tourist destinations so visitors can drive electric.

***See more on the opportunities and challenges for electrifying parks, beaches and forests here.**
****Download a compendium of resources to help with electrifying fleet vehicles.**

Case Study: State of Washington Tourism

The State of Washington, like many states, understands how different industries and interests bring a variety of tourists to their state. Thus, they contract with nonprofit organizations like **State of Washington Tourism** (SWT) for destination development-investing resources like EV charging in major destinations to ease travel for EV owners and improve EV rental experiences. With a focus on bringing tourism stakeholders together for tourism and transportation infrastructure projects, some key movements in their destination development include:

- **Electrifying key scenic highways:** The **Cascade Scenic Byway** was the nation's first scenic byway to provide EV charging stations for drivers, which allowed tourists to drive EVs and reduced tailpipe pollution along the route, protecting the natural landscape. More recently, SWT worked on developing the **White Pass Scenic Byway**, bridging the charging gap between the eastern and western parts of the state.
- **Partnering with local governments and businesses:** To build momentum for the statewide EV adoption goals, SWT works with all tourism stakeholders to maximize benefit to everyone involved. This complements their approach to community-based tourism, which considers both environmental and community impact to ensure projects protect the environment and drive sustainable business into communities. Thus, local governments and communities are SWT's most strategic partners.
- **Addressing challenges:** The SWT was granted a much smaller budget than anticipated for their EV projects, requiring them to re-prioritize, look for external funding partners, get creative with funding, and install charging where it was most needed.
- **Next steps:** SWT will continue to work with communities around the state to install EV charging stations for tourists.

To learn more about **how tourism and public lands agencies can champion EV charging**, watch the EC's **webinar** featuring Andrew Grossmann from the Colorado Office of Tourism.

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Conclusion

A transition of this magnitude comes with many challenges, but it also brings unprecedented opportunities to develop a sensible economy and public policy landscape that puts people first. By following the recommendations in these guides, state agencies can take a proactive approach to the transition, leading to better outcomes for those they serve. State agencies can champion a successful electrification transition by thinking ahead, creating sensible public policy, forming mutually beneficial partnerships, educating all stakeholders, and keeping pace with infrastructure deployment.

While not a comprehensive list of the actions necessary to ensure a smooth transition, these guides contain recommendations informed by the work of state agencies at the cutting edge of electrification planning. We are thrilled to see the incredible work already underway and look forward to watching, learning from, and working with state agencies as more focus is given to EV planning. We will continue to analyze the EV landscape and update our recommendations to assist state agencies as political, economic, social, and material conditions shift over the coming years.

Acknowledgments

These guides take inspiration from the California Governor's Office of Business and Economic Development's California Zero-Emission Vehicle Market Development Strategy report. In addition to CA GOBIZ, the EC would like to thank and recognize the following individuals for their contributions to the case studies below:

- Lyle McMillan, Utah Department of Transportation (UDOT)
- Tonia Buell, Washington State Department of Transportation (WSDOT)
- Ian Guidicelli, Florida Division of Emergency Management (FL DMS)
- Andrew Grossmann, Colorado Tourism Office (CTO), at the Colorado Office of Economic Development and International Trade
- Vlada Kenniff, New York City Housing Authority
- Tim Kreis, City of Phoenix Fire Department
- Geoffrey Bristow, Louie Krak, David Althoff, Pennsylvania Department of Environmental Protection (PA DEP)
- Daniel Gatti, Massachusetts Executive Office of Energy and Environmental Affairs
- Matthew Ozuna, State of Washington Tourism
- Marci Henson, Clark County Department of Environment and Sustainability
- Korin Sharp and Emily Soontornsaratool, Maryland Department of General Services
- Annette Pitts, Experience Olympia & Beyond