

ACHIEVE FOCUS:

SOLUTIONS FOR
EXPANDING EV CHARGING



AUTHORS & ACKNOWLEDGEMENTS

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INTRODUCTION

Rapidly electrifying our transportation system is crucial to reducing emissions, improving air quality and public health, and increasing energy security.

The electric vehicle (EV) landscape has dramatically shifted. With EV adoption on the rise, the growing EV market offers utilities an opportunity to take a leadership role. This guide builds on the AchiEVe Policy Toolkit to provide a focused update on utilities' opportunities to drive EV adoption. The AchiEVe Policy Toolkit was developed by the Sierra Club, Plug In America, Forth, and the Electrification Coalition to identify policy pathways and actions to advance EV adoption across the market and key actors.

This 2024 Focus Guide identifies specific initiatives regulators and utilities can take to facilitate transportation electrification in their jurisdictions.

ACRONYMS

CPUC: California Public Utilities Commission

CMAQ: Congestion Mitigation and Air Quality Funds

DCFC: DC Fast Chargers

EV: Electric Vehicle

kWh: Kilowatt-hour

MFH: Multi-Family Housing

NEVI: National Electric Vehicle Infrastructure Formula Program

OBF: On-Bill Financing

VW: Volkswagen

REGULATORS/UTILITIES

RIGHT-OF-WAY CHARGING AND STREETLIGHT AND POWER POLE CHARGING ACCESS

With the increasing adoption of EVs, particularly in urban areas, cities need to plan for widespread, accessible charging infrastructure. Deployment of high-powered chargers within cities is crucial for reliable EV charging for drivers without access to dedicated parking, including those living in multi-family housing (MFH) or residences that only have street parking and drivers of ride-hailing services and other high-mileage applications.

Policies that authorize the installation of charging infrastructure in public right-of-ways, such as at curbsides, are essential as they will enable the deployment of charging infrastructure throughout the cityscape and lower some of the barriers for individuals, property owners, and businesses to invest in providing infrastructure to the communities that need them. Charging infrastructure deployed in the public right-of-way is also highly visible and can serve as a market signal to prospective buyers that sufficient infrastructure exists to enable them to transition to an EV.

- 1. Seattle, WA:** The Electric Vehicle Charging in the Public Right of Way pilot program identified key outcomes and the importance of aligning site guidance with the city's climate and transportation goals.
- 2. New Orleans, LA:** Established a right-of-way ordinance to permit chargers for a fee.

- 3. Portland, OR:** The city has been working on public right-of-way charging since 2011 and recently updated the city code with a clear and streamlined permitting process.

- 4. New York City, NY:** Starting in 2021, NYC installed 100 Level 2 charging ports for the public to use at curbside locations across the five boroughs.

Demand charge mitigation

Utilities can also help mitigate one of the primary near-term barriers to deploying DC fast chargers (DCFC) and some Level 2 chargers: demand charges. Demand charges are fees that utilities assess for commercial and industrial customers based on their peak electricity demand during a specified period. At low utilization levels, demand charges can swamp volumetric charges for DCFC, eroding the business case for installing these critical stations. DCFC stations, which often have high instantaneous peak demand, are particularly susceptible to incurring significant costs in demand charges.

There are several different mechanisms utilities can employ to address demand charges, including, but not limited to:

- Creating special rates for DCFC charging or otherwise creating demand charge “holidays” for DCFC to reduce or eliminate demand charges until the numbers of EVs on the road increase so that the demand charge can be distributed across numerous charging events
- Setting a limit on the total per-kWh monthly energy costs for DCFC stations with low utilization

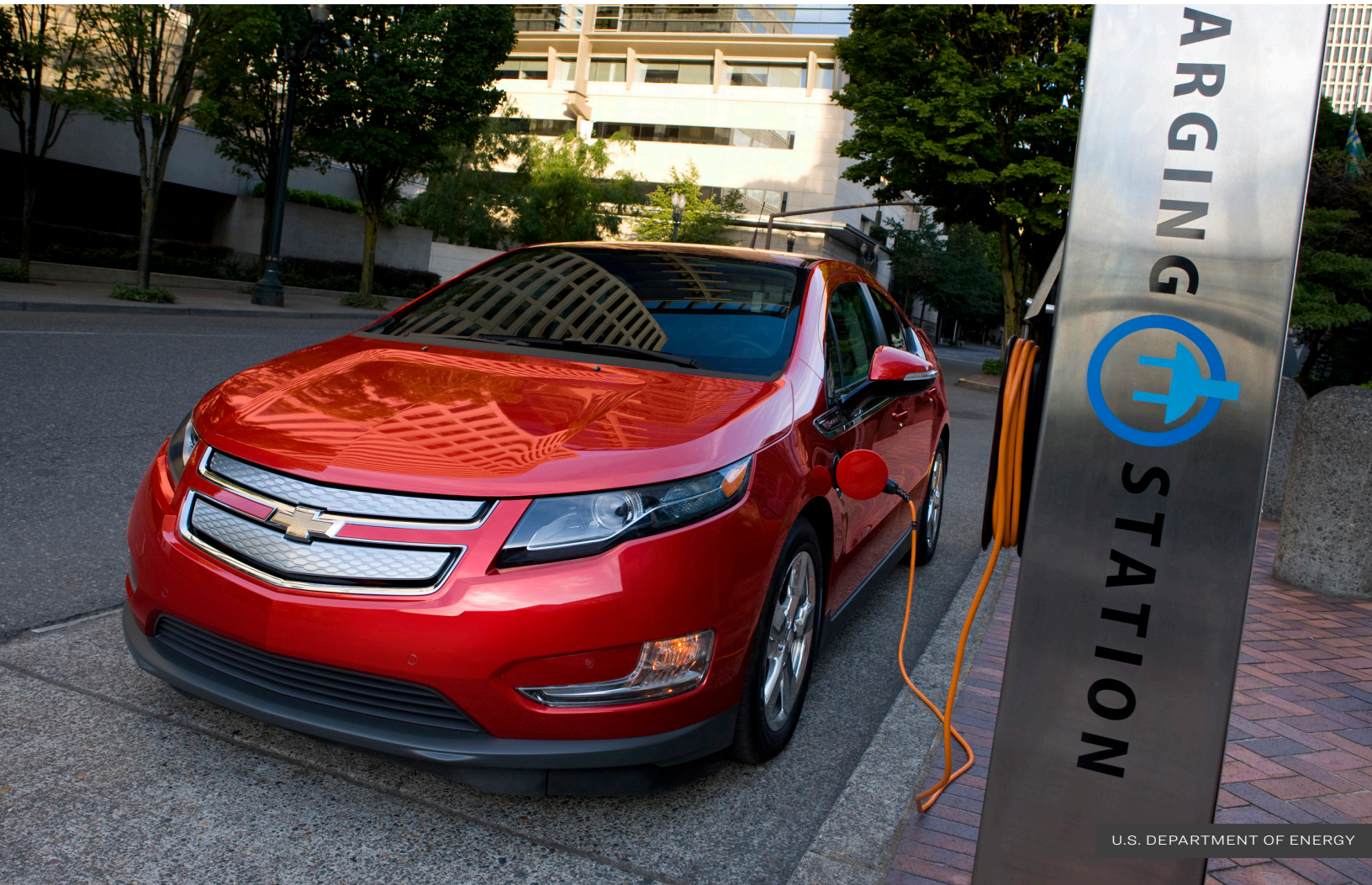
- Installing onsite battery storage at DCFC stations to help accommodate peak demand
- Managing EV charging across DCFC stations during peak demand periods to limit peak energy consumption

Examples of how utilities have proposed to address the demand-charge disincentive in the near term:

- 1. Dominion Energy:** Created a commercial rate designed explicitly for low-demand and/or low-utilization customers that doesn't include demand charges.
- 2. Southern California Edison:** Offered a five-year demand-charge holiday (effectively eliminating demand charges for this five

year period) while charger utilization grew; demand charges phased back in over the following five years.

- 3. New York Utilities:** The Public Service Commission approved an off-bill demand-charge discount that declines over time. This discount is intended to offset demand charges while charger utilization rates are low.
- 4. Pacific Gas & Electric:** Subscription fee based on throughput of chargers plus strong time-of-use rates; no demand charge (subscription fee acts like a modest demand charge).



U.S. DEPARTMENT OF ENERGY

EV-UTILITY INVESTMENTS

Utilities have an essential role to play in accelerating the deployment of EV charging infrastructure, which leads to expanded adoption of EVs. Through 2024, utilities across the country have directed more than \$5 billion for EV charging and related programs, with one-third of that dedicated to equitable investments in communities overburdened by pollution or underserved by clean transportation options.

Advocacy and community and stakeholder engagement in the EV infrastructure buildout planning stages can help ensure that charging infrastructure build-out can benefit EV owners, utility companies, and the general public.

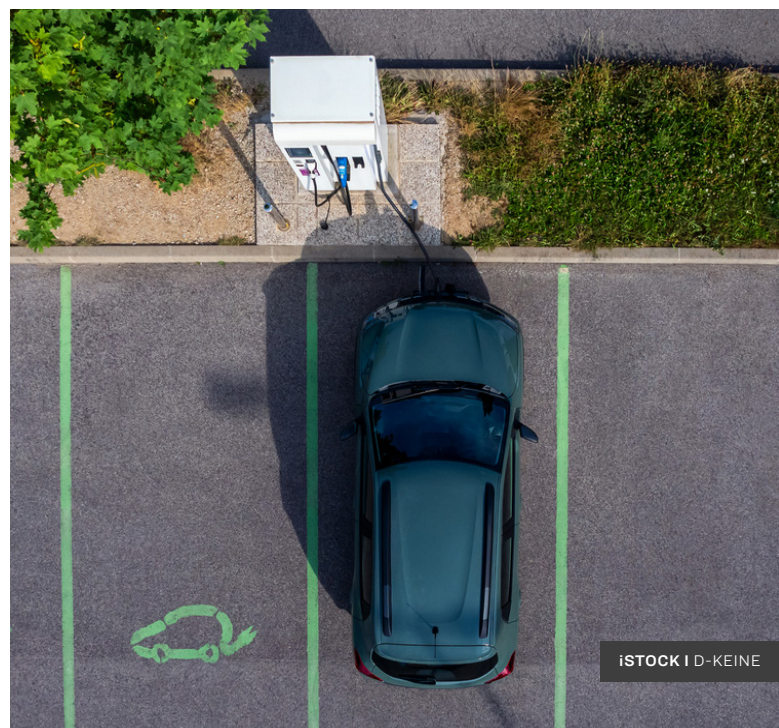
Electric utilities—and their regulators—have a unique opportunity and responsibility to take an active and supportive role in planning for an electric future, given the electricity grid, and economic, and societal benefits of widespread transportation electrification. In particular, electric utilities are well-positioned to address infrastructure and market-education challenges.

Addressing key barriers to EV adoption and realizing the benefits of EVs will require careful guidance from utility regulators and support from state public officials. The key roles for utility regulators are to:

- Support the “EV conversation” among key stakeholders;
- Integrate transportation electrification into resource planning processes;
- Identify, and, where appropriate, resolve key issues that will define utility and market roles;

- Review and approve reasonable, no-regrets utility EV charging investment programs that are in the public interest, and distribution grid upgrades to service EV charging are completely and energized in a timely manner.

In the EV context, the public interest should refer to programs that will integrate new electricity load to the benefit of all utility customers, be designed to increasingly rely on renewable sources of power, deploy infrastructure in locations where it will be used and useful, equitably serve all customers, and define utility and market roles to support the growth of an innovative and competitive market for EV service providers. Utility programs and portfolios are subject to cost-benefit testing as part of regulation. Specific tests that capture benefits to society can go a long way in expanding utility opportunities to build out EV infrastructure or promote EVs through vehicle and charger incentives.



Authorizing legislation

Legislation can reinforce state utility commission authority and the role of utilities in transportation electrification. It can also encourage state utility regulators to invite and approve EV programs by utilities. New legislation can also help upgrade the electric distribution system and reduce the time it takes to connect to the grid.

- **California**

Senate Bill 410, the Powering Up Californians Act, will energize EV charging stations faster. The bill requires that utilities upgrade the grid in time and make the necessary investments to achieve California's goals and regulations. It sets a deadline for the California Public Utilities Commission (CPUC) to establish and meet target energization timelines. SB 410 requires utilities to hire and train the necessary workforce.

- **Maryland**

House Bill 834, the Electric Vehicle Charging Reliability Act will expand Maryland's EV Pilot Program by allowing utilities to install EV charging stations in multi-family dwellings in underserved communities. The bill requires utilities operating an EV charging network in Maryland to ensure that their charging stations have an uptime average of 97 percent, consistent with the National Electric Vehicle Formula Infrastructure (NEVI) standard.

VW settlement funds for EV charging networks

The Volkswagen (VW) settlement has provided tens of millions of dollars for states to build new charging networks and expand existing ones.

Increasing EV adoption will require investments in public EV charging stations. Experts have identified key areas where adding charging stations will accelerate EV adoption, such as apartments and condominiums, workplaces, and highway corridors. Certain states have

outlined plans to install charging stations in a variety of neighborhoods, including underserved communities and areas that endure the greatest harm from air pollution.

- **Minnesota**

The state will spend \$14 million during the final phase of VW settlement investments from 2024 to 2027. These funds will be used to increase the number of EV charging stations throughout Greater Minnesota in the coming years by increasing the state's EV charging network by more than 2,500 miles.



ELIZA EARLE

CHARGING INFRASTRUCTURE FUNDING AND FINANCING

Rolling out public EV charging infrastructure is key for maximizing EV adoption among all drivers, regardless of where they live, work, and go. It can enable users to expand their range, feel more confident in the purchase of all-electric vehicles, and to support EV access for vehicle owners who do not have a dedicated parking spot (either at home or work). Innovative financing methods and funding sources can play an elevated role in developing charging infrastructure to support the growth of EVs.

Funding

The Infrastructure Investment and Jobs Act provides a total of \$7.5 billion to build a nationwide network of charging stations to help accelerate the adoption of electric vehicles. The funding is broken down into a few categories:

National Electric Vehicle Infrastructure Formula

Program: \$5 billion in formula funding for states with a goal to build out a national charging network. As of October 2023, states have designated over 81,000 miles of NEVI-eligible EV charging corridors. Each [state plan](#) is posted online to provide transparency on planned activities. October 2023, states have designated over 81,000 miles of NEVI-eligible EV charging corridors. Each [state plan](#) is posted online to provide transparency on planned activities.

Charging and Fueling Infrastructure Discretionary

Grant Program: \$2.5 billion for communities and corridors is being awarded through a competitive grant program to ensure that charger deployment serves harder-to-reach communities, improves local air quality, and is implemented in rural areas and disadvantaged communities.

Alternative Fuel Infrastructure Tax Credit: EV charging equipment is eligible for a tax credit of 30 percent, up to \$1000 for home charging and up to \$100,000 for commercial installations. They are [geographically limited](#) to non-urban and low-income census tracts.

Congestion Mitigation and Air Quality (CMAQ)

Funds: Establishment of EV chargers and related infrastructure is eligible for funding under CMAQ if the facility is publicly owned or leased.

Financing

Loan Programs Office: One of the biggest barriers to early deployment of EV charging infrastructure is a lack of investor confidence in new technologies with unproven business models. Loan guarantees, like those offered by the Department of Energy's Loan Programs Office, can help reassure lenders to participate in projects and development of EV charging infrastructure. The [California Capital Access Program](#) has similar loan guarantees and encourages borrowers by offering up to a 15 percent rebate of the loan amount.

On-Bill Financing (OBF): OBF is designed to fund clean energy upgrades to homes or businesses, such as the purchase of EV chargers and the cost of installation. OBF helps customers lower their energy burden, save money, and reduce carbon emissions. It allows a utility to take on the upfront costs of these upgrades and is repaid on the consumer's utility bill. Housing developers can also engage with their electric utility to spread the cost of charging infrastructure across multiple tenants. First Southwest Bank and La Plata Electric Association in Colorado recently added EV chargers to their list of [eligible projects](#) for OBF.

CONCLUSION

Convenient, safe, and affordable access to EV charging is essential to enabling communities to transition to EVs. EV adoption benefits the individual consumer, their community, and businesses. Utilities and regulators have a special opportunity to drive the deployment of EV charging, especially for communities that face additional barriers to accessing EV charging. The strategies outlined in this AchiEVe Focus Guide offer a path forward for decision-makers seeking to provide community benefits and increase the deployment of EV charging at home and in communities.





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