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EV Charging for Municipalities

How Cities and Counties Benefit

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Contents

Why Do Municipalities Need EV Charging? 3

The Benefits of EV Charging for Municipalities 4

How PowerFlex Delivers Large-Scale Charging Solutions 5

- County of Los Angeles 6
- DC Department of Public Works (District of Columbia) 6
- City of Pasadena, California 7

Getting Started: A Practical Path for Cities and Counties 8

By 2030, the United States is projected to need roughly 1.2 million public EV chargers to serve more than 26 million electric vehicles on the road. For municipalities, this shift represents both an operational imperative and a strategic opportunity.

This e-book explores why cities and counties should prioritize installing EV chargers for public use and for municipal fleets, how EV infrastructure strengthens economic vitality and public health, and how PowerFlex has helped municipalities deliver dependable, large-scale charging through proven hardware and intelligent software.

Why Do Municipalities Need EV Charging?

EV adoption is accelerating across the country as automakers expand electric lineups, battery costs decline, and fuel savings reduce the total cost of ownership. What began as a niche market has quickly become mainstream, and with it, driver expectations have changed. Residents, visitors, and commuters now look for reliable charging where they live, work, and spend time — at civic centers and libraries, in downtown commercial corridors and entertainment districts, and near transit hubs and parks. For a growing portion of the population, especially renters and multifamily households, public charging is not a convenience; it is essential access to clean mobility.

Municipal operations are also transforming. Many cities and counties are operating under mandates or policy commitments to electrify their fleets. This demands careful planning around duty cycles, shift schedules, and power availability so that vehicles are ready when needed without triggering costly utility upgrades. Unmanaged charging can create sudden spikes in demand and expose municipalities to higher operating costs. In contrast, intelligent load-managed charging ensures affordability and scalable growth.

At the same time, EV infrastructure is becoming a core public asset. When municipalities offer equitable access to charging, by thoughtfully siting ports in underserved neighborhoods and near affordable housing, they broaden the benefits of clean transportation, support the shift away from internal combustion vehicles, and align with climate action plans. The result is a resilient foundation for future mobility built on practical steps that communities can take today.

The Benefits of EV Charging for Municipalities

Installing EV chargers creates tangible economic, environmental, and operational benefits for cities and counties. On the economic front, EV drivers often plan trips around charging availability, and they tend to spend time and money nearby while their vehicles charge. Locating chargers in business districts and cultural destinations increases dwell time and foot traffic, which props up local merchants and activates commercial corridors. Municipalities can amplify this impact with clear signage, parking integration, and wayfinding that makes charging easy to locate and use.

Public health improves when drivers shift from gasoline to electric vehicles. Transportation is a leading source of urban air pollutants such as nitrogen oxides and particulate matter. By making charging more convenient and dependable, municipalities accelerate EV adoption and reduce tailpipe emissions. Cleaner air benefits vulnerable populations, advances climate commitments, and can lower public health burdens over time.

For municipal fleets, EV charging is a lever to reduce total cost of ownership and modernize operations. Software that schedules charging during lower-cost hours and dynamically allocates power across vehicles can dramatically cut demand charges and help avoid expensive panel or service upgrades. Instead of overbuilding infrastructure, cities and counties can use intelligent

load management to add more charging ports on existing capacity, ensuring that priority vehicles reach required states of charge before shift start.

EV infrastructure also signals that a municipality is future-focused and committed to innovation, improving its regional reputation and attracting more businesses and residents. Charging networks also generate rich operational data — from utilization and turnover to dwell time and energy costs — that inform policy, rate design, and expansion planning.

Finally, charging introduces a new municipal revenue stream. Thoughtful pricing models, whether energy-based or time-based, allow cities to balance access and turnover while generating funds to maintain and expand the network. When integrated with existing systems such as metered parking, charging can complement established revenue sources and provide budgetary predictability.

How PowerFlex Delivers Large-Scale Charging Solutions

Municipal EV deployments work best when they are cohesive from start to finish. PowerFlex serves as a trusted partner for cities and counties, managing the full project lifecycle from site assessment and system design to installation, commissioning, and ongoing asset management. PowerFlex's intelligent EV charging solutions allow municipalities to scale confidently, control costs, and maintain high uptime across diverse facilities.

Two software capabilities are central to this approach. PowerFlex X™ provides a unified platform that monitors, controls, and optimizes EV charging operations. Staff can manage multi-site networks without adding headcount and gain visibility into utilization patterns, energy costs, and performance.

Chargers on the PowerFlex X network leverage Adaptive Load Management® (ALM), which dynamically distributes available power across active charging

sessions. By flattening charging demand and prioritizing vehicles based on anticipated dwell time, ALM increases the number of chargers that can operate on existing electrical capacity and helps avoid expensive upgrades. Together, PowerFlex X and ALM turn EV charging from a static asset into a responsive, cost-optimized system aligned with municipal goals.

The following customer stories illustrate how this comes to life at scale.

County of Los Angeles

The County of Los Angeles is advancing one of the most ambitious public-sector electrification programs in the country. In partnership with PowerFlex, the County has deployed a large network of Level 2 charging stations across multiple sites to serve both employees and fleet vehicles while preparing for rapid growth in demand. The scope spans more than **1,000 Level 2 ports and 10 DC Fast Chargers strategically located at more than 70 locations.**

Using PowerFlex X, County staff can monitor charger health and utilization, diagnose issues, and generate automated reports for sustainability tracking. The result is a scalable blueprint for electrifying more of the County's fleet and expanding public access as EV adoption grows, all while maintaining cost control and high uptime.

DC Department of Public Works (District of Columbia)

The District of Columbia's Department of Public Works (DC DPW) needed a reliable charging system for mission-critical municipal operations. Working with PowerFlex, DC DPW implemented **300 Level 2 chargers to support more than 6,000 electric fleet vehicles across over a dozen job sites.**

Leveraging PowerFlex X with ALM, the Department is able to efficiently expand its charging capacity, reduce operational costs, and move closer to its long-term sustainability goals.

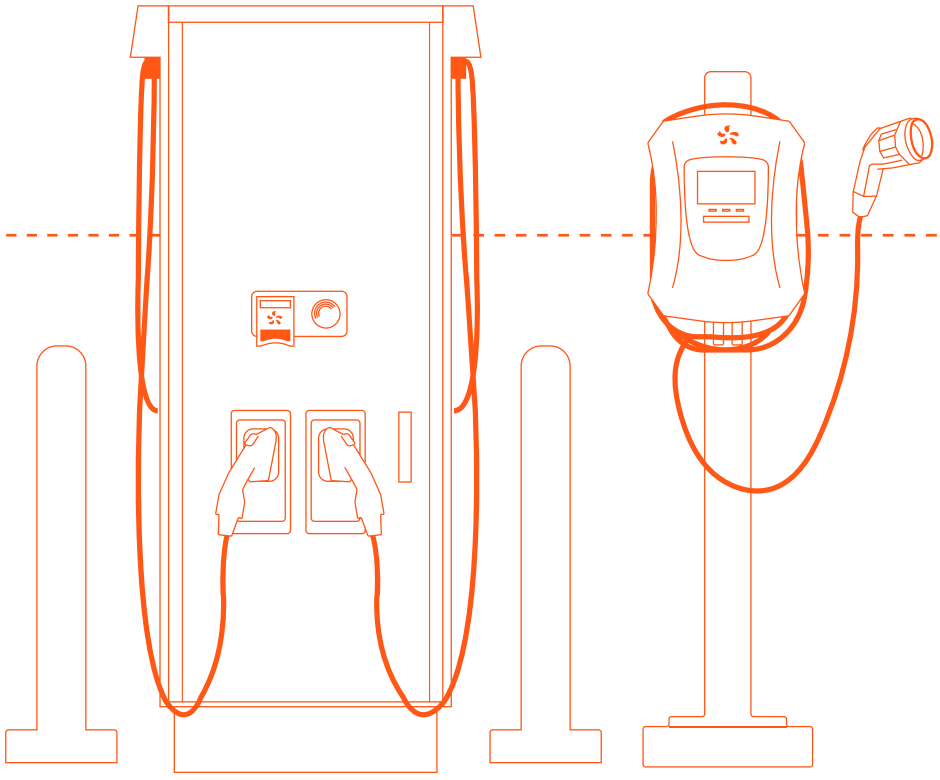
DC DPW's partnership with PowerFlex includes a project at the Department's 2750 South Capitol Street facility, where Level 2 chargers support electric vehicles in the graffiti removal division, contributing to the city's beautification efforts.

City of Pasadena

With a goal to slash carbon emissions in half by 2035, Pasadena needed to expand its charging infrastructure to support public and fleet vehicle electrification. To that end, PowerFlex deployed **more than 200 Level 2 chargers plus 3 DC Fast Chargers.**

Ports were installed across multiple city locations, including the Pasadena Convention Center, Public Library, and parking garages. These chargers serve both public drivers and the city's electric fleet, all managed by the PowerFlex X energy optimization platform with ALM.

The chargers are highly utilized, driving **70,000 charging sessions** and delivering 730,000 kilowatt-hours (kWh) annually. This translates to 1.3 million electric miles provided to drivers, **avoiding 550 tons of greenhouse gas emissions** each year.



Getting Started: A Practical Path for Cities and Counties

The most successful municipal EV charging installations begin with clear goals and defined use cases. Here are some best practices for making your program a success:

- Consider where public charging will drive the greatest community benefit (such as business districts, cultural destinations, transit hubs, and neighborhoods with limited home-charging access) while also planning depot charging to accommodate fleet needs and operational priorities.
- A basic electrical assessment at candidate sites helps identify existing capacity, panel constraints, and conduit paths. In many cases, Adaptive Load Management® makes it possible to install more ports without needing costly upgrades.
- Building a funding stack early by combining state and utility incentive programs with local capital improves project economics and return-on-investment outlook.
- Phased deployments allow municipalities to show quick wins with charging stations in priority areas while using operating data from PowerFlex X to refine pricing, access policies, and expansion plans.
- Consistent communications, signage, and listing chargers on popular maps help residents and visitors find stations easily, while regular reporting on utilization, emissions reductions, and economic impact sustains community and stakeholder support.

To learn how large-scale, adaptively load-managed EV charging can work for your municipality, **contact a PowerFlex expert today.**

About PowerFlex

PowerFlex is a clean technology solutions company making the transformation to carbon-free electrification and transportation possible. Our adaptive energy optimization platform PowerFlex X™ monitors, controls, and co-optimizes onsite assets like EV chargers, solar, energy storage, and microgrids — reducing overall energy costs through patented algorithms that maximize distributed energy resources.

PowerFlex is the second-largest installer of commercial solar in the United States, with over 500 megawatts (MW) of total solar capacity plus 50+ megawatt-hours (MWh) of battery energy storage. Combined, our solar and energy storage projects offset 460,000 metric tons of CO_2 each year. We also manage more than 50,000 EV chargers nationwide, making us the second-largest EV charging provider in the U.S. in terms of Level 2 port management.

PowerFlex is backed by EDF power solutions and Manulife Investments.

Visit powerflex.com for more information, and connect with us on LinkedIn and YouTube.

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