EverCharge

Overcoming 3 Major Workplace Electrification Challenges with EverCharge Technology

Background

Approximately 80% of EV charging takes place where people have the longest dwell times: at home and at work, making access to workplace charging a critical component of the transition to clean, electric transportation. Yet workplaces often face three key challenges when considering adding EV charging infrastructure to their corporate location:

- **Limited Power:** After power has been allocated for the buildings, the majority of the energy has been accounted for – leaving little room to install charging stations.
- **High Infrastructure Costs:** To bring in additional power, companies are often confronted with a significant price tag.
- **Difficult to Scale:** In addition to high upfront costs to upgrade electrical infrastructure, that number will likely only continue to increase as more power and more stations are needed over time.

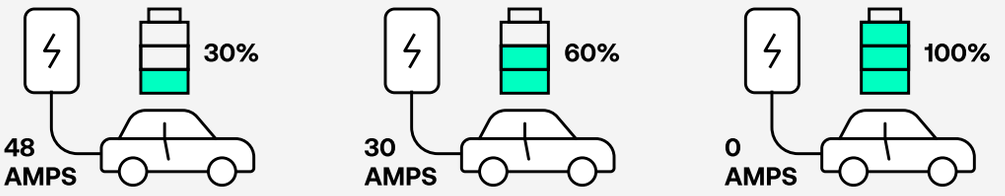
The EverCharge Solution

EverCharge brings dynamic, scalable, and cost-optimized load management to EV charging via its proprietary SmartPower technology.

1. DYNAMIC LOAD MANAGEMENT

SmartPower technology is integrated directly into EverCharge's charging stations and operates on a wireless mesh network, enabling seamless, instantaneous communication between each station.

SMARTPOWER ALLOCATES POWER IN REAL TIME BASED ON WHAT EACH VEHICLE NEEDS



When a vehicle finishes charging or decreases its charging rate, the system instantly re-allocates power to other stations. This is a significant advantage over circuit sharing, which is a simple, static power allocation between a set number of charging stations on one circuit. SmartPower is unique in its ability to pull power across multiple circuits in real time as needed, enabling far more charging sessions than circuit sharing can.

And EverCharge's dynamic load management doesn't stop with efficiently allocating power across the charging infrastructure. SmartPower has the ability to tap into the workplace's total available electrical capacity and draw power from unused equipment as needed. For example, SmartPower may temporarily re-allocate unused elevator electricity to better accommodate vehicle charging throughout the workday.

By ensuring the optimal charge is provided to each vehicle – within the limits of the site's power capacity – electrical capacity requirements are reduced, which dramatically increases the number of stations that can be supported. This enables more employees to charge their cars at the same time, making them more productive and satisfied as they don't need to leave work early to find alternative charging locations. This helps to maximize employee productivity and satisfaction. Employees can rest assured there will be a charging station for them when they arrive, and they do not have to waste company time moving their vehicles throughout the day to allow others to charge.

2. COST-OPTIMIZED INFRASTRUCTURE

By more efficiently managing power, SmartPower directly lowers the total cost and complexity of EV charging installation and ongoing management. SmartPower's cost-savings are two-pronged:

Avoid expensive infrastructure upgrades:

- SmartPower works to maximize the site's existing electrical capacity, rather than needing to bring in additional power and foot the cost for an extensive infrastructure overhaul.
- By operating on a localized wireless mesh network, networking and deployment costs are significantly reduced. Data connectivity is managed per work location rather than per device, lowering data fees while eliminating the need to install cellular repeaters. The mesh network also removes the need for costly control systems, access kiosks, ethernet cables, and other third-party networking systems.

Eliminate unnecessary costs around energy overcapacity fees:

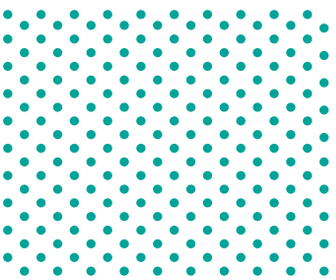
- For traditional charging systems, power consumption may exceed the workplace's limit during charging sessions. In doing so, the network operator will charge a far higher utility rate. EverCharge helps prevent this. As soon as the site nears peak consumption, SmartPower will automatically reduce the power allocated to the charging sessions while continuing to sustain a charge. By avoiding these charges, EverCharge saves organizations a significant monthly bill.

3. SCALABLE TO MEET FUTURE NEEDS

It is critical to consider not just your employees' current charging needs, but to plan for the future from the beginning.

Scaling with SmartPower's dynamic load management technology is simple and efficient, both from an infrastructure and cost standpoint. With SmartPower, you can avoid adding complexity to your electrical infrastructure as the number of charging stations you can support per work site are maximized – both now and for the future. And keeping your infrastructure simple also means scaling without significant, expensive electrical upgrades.

NUMBER OF STATIONS SUPPORTED ON 1200 AMPS OF POWER

30 **TRADITIONAL STATIONS** 	200+ **EVERCHARGE STATIONS** 

SmartPower Means Smart Charging

	TRADITIONAL EV CHARGING	SMARTPOWER EV CHARGING
POWER ALLOCATION	Static, preset	Dynamic, demand based
POWER SOURCE	Dedicated to EV charging infrastructure, allocating power between a set number of charging stations on one circuit	Allocated to EV charging infrastructure, with ability to allocate power from multiple circuits as well as unused equipment anywhere in the building
CONNECTIVITY	Relies on a single access point in cellular network, which increases failure rate	Self sustaining, not reliant on a single access point, which significantly increases reliability
ONGOING MANAGEMENT	Exposed to unnecessary costs and energy overcapacity fees	Lowers risk of unnecessary costs and energy overcapacity fees
SCALABILITY	Difficult; requires complex and costly infrastructure upgrades	Quick and easy scaling built into technology without expensive infrastructure upgrades
EMPLOYEE PRODUCTIVITY	Fewer charging stations for total cost of deployment means that more employees need to leave work early to find alternate charging	More charging stations for total cost of deployment means that fewer employees need to leave work early to find alternate charging
200A OF AVAILABLE POWER	5 **STATIONS**	20+ **STATIONS**
1200A OF AVAILABLE POWER	30 **STATIONS**	200+ **STATIONS**