



Photo by Dennis Schroeder, NREL 39251

GET YOUR BUILDING READY FOR ELECTRIC VEHICLES

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May 2019

By the year 2030, there may be as many as 19 million plug-in electric vehicles (EVs) on the road in the U.S., representing a market share of 10%.¹ When not at home, drivers spend the most time parked at workplaces and destinations such as stores and will increasingly require charging infrastructure at those locations. In addition, many drivers do not have access to charging where they live. EV drivers living in multi-unit dwellings, for example, and drivers with on-street parking will benefit from charging at workplaces and other destinations. **With effective EV charging implementation, commercial building owners and managers can add value to properties, increase the convenience and affordability of driving EVs for tenants and employees, and show leadership in adopting advanced, sustainable technologies.**

Recommendations for EV-Ready Commercial Buildings

- 1. Evaluate the need for EV charging.** Conduct a survey of building tenants to assess the current need for charging. Plan for the future – assume that demand will increase and that charging system expansion will be needed.
- 2. Determine power availability and the number of EV chargers needed.** Talk with your building engineer and the local electric utility to determine power availability for charging installations at the facility. Take steps to oversize either the conduit or the main electric supply cables to allow for future expansion, since the number of chargers needed will grow.
- 3. Work through additional project steps.** Contact EV charger providers; ask for energy efficient, ENERGY STAR certified models and discuss your project needs. Work with a certified electrical contractor to carry out the installation of EV charging at your facility according to local and National Electric Code requirements. If possible, sub-meter your EV chargers for easier kWh accounting within ENERGY STAR Portfolio Manager. Consider whether you want chargers that you can control and monitor remotely.
- 4. Market your EV charging commitment.** Advertise charging station availability to current tenants as well as to prospective new tenants as a key amenity of the building.

Learn from Others

- **MetLife** has installed EV charging stations at 14 of their corporate offices across the country.
- **Genetech** is increasing the number of EV charging stations for employees at their South San Francisco campus.

¹ Edison Electric Institute and the Institute for Electric Innovation, *Electric Vehicle Sales Forecast and the Charging Infrastructure Required Through 2030*, November 2018

ENERGY STAR® is the simple choice for energy efficiency. For more than 20 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Join the millions making a difference at energystar.gov.



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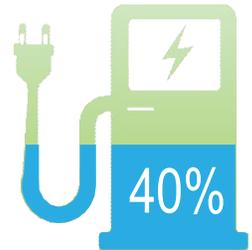
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Choose ENERGY STAR® Certified EV Chargers

ENERGY STAR certified EV chargers use 40 percent less energy than a standard EV charger.* In addition, some ENERGY STAR EV chargers offer connected functionality. These models may be capable of supporting participation in utility demand response programs through open communication protocols. Use the [ENERGY STAR Product Finder](#) to identify the energy efficient charger that meets your needs. Many utilities offer incentives, such as rebates, for commercial and workplace EV charging infrastructure. Search the Alternative Fuels Data Center's Laws and Incentives database for [financial incentives and programs](#) offered by utilities, governments, and other organizations.



**In standby modes when the charger is idle and not actively charging a vehicle. Idaho National Laboratory determined that an EV charger is in standby mode for about 85% of the time.*

EV Readiness for New Construction

More than fifty state and local governments in the United States have enacted building and zoning codes amendments to ensure EV readiness. For example, the [City of Los Angeles](#) requires all newly constructed high-rise non-residential buildings to include EV charging outlets in at least 5 percent of the total parking spaces. [Boulder County](#) requires EV charging outlets in all new commercial, industrial, and multi-family residential buildings, as well as with significant additions or alterations. It is important to determine if there are any current or upcoming requirements in your jurisdiction and get ahead of the curve by ensuring that facilities are EV ready today.

EV-Ready Commercial Buildings Resources

- Find more information on the **ENERGY STAR certified EV chargers** [webpage](#), including buying guidance. Listen to the ENERGY STAR [webinar](#) on EV charging stations at commercial buildings to hear more about the EV market and considerations for charger installations.
- See the **Alternative Fuels Data Center** website for information about [charging station types](#), [workplace charging](#), [public charging](#), and [financial incentives and programs](#).
- Refer to the **U.S. Green Building Council** [website](#) for information about the opportunity to earn LEED credits for EV charging stations installed in new buildings as part of the innovation category (green vehicles) under Building Design and Construction (BD+C) as well as Interior Design and Construction (ID+C).

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