

Workplace Charging Challenge

Enabling employees to charge from work

Formed by the Electrification Coalition, Drive Electric Northern Colorado (DENC) is a community-wide initiative designed to achieve widespread deployment of plug-in electric vehicles (PEVs) in the Northern Colorado Region.

What is the Workplace Charging Challenge?

Northern Colorado continues to be a leader in innovation. The Workplace Charging Challenge calls on our employers to join the movement to help make our community a national leader in Plug-In Electric Vehicle (PEV) adoption strategies. Workplaces continue to be seen as the next frontier for expanded charging infrastructure, and by offering workplace charging, employers can provide a critical step to encourage the next generation of EV drivers. In 2015, we hope to recruit more than a dozen area businesses to join the challenge, giving thousands of employees the ability to charge an EV at work.

Why Should You Consider Joining Workplace Charging Challenge?

Commuting to and from work accounts for over a quarter of an average driver's daily vehicle travel. The range of existing electric vehicles is more than enough to handle typical daily driving needs, but there are always times when a little extra range goes a long way. The workplace can play a critical role in enabling drivers with longer commutes to leave work with ample energy for the return trip, as 97 percent of charging takes place at home and the workplace, according to a study by U.S. Department of Energy's Idaho National Laboratory. Employees that have charging available at work are 20 times more likely to purchase an EV than employees at a non-charge-enabled employer, providing the opportunity for you to help facilitate the widespread transition to EV.

The EV market is growing quickly in the United States. In fact, current sales are out-performing those of hybrids when they first entered the automobile market in the year 2000. In Colorado, we are seeing a significant uptake of EVs, and the state has one of the most generous tax credits for EVs in the country. Already, you may see EVs driving through the streets and into your parking lot with greater regularity.

Benefits of Installing Workplace Charging Stations

Employee Benefits: One of the most compelling benefits of an electric car is the ability to fuel it while you do other things—sleep, shop, and, in this case, work. Without having to stop at a public fueling station, an EV owner can satisfy 99 percent of their charging needs during the average workday. As employees become more aware of this possibility, they will perceive workplace charging services as an important benefit.

Employee attraction: Colorado is attracting highly skilled professionals from around the country in greater volume than ever before. By offering EV charging services, you can draw in professionals looking for cutting-edge employers. Studies have also found that employers that have charging available have seen an increase in employee retention, in addition to attracting top applicants.

Branding and Publicity: By participating in this workplace charging initiative, your company has another opportunity to raise awareness about its commitment to sustainability and innovation

Process for Incorporating Workplace Charging

The following are some of the simple recommended steps for joining the challenge:

1. Conduct meeting with Drive Electric Northern Colorado team to discuss workplace charging and recommendations.
2. If needed, set up a follow-up with additional decision makers.
3. Host a free "ride and drive" to help introduce employees to the latest EV models.
4. Many businesses will use a survey to assess employee interest, awareness, and perceptions of EVs and charging
5. DENC will help identify the best options for charging station equipment, the number of stations, and estimated costs.
6. Once a charging station vendor is selected, contract an electrician to install the station.
 - a. Charging stations installed indoors (e.g., parking garage) will require only a simple over-the-counter permit.
 - b. If installation will result in landscaping or parking modifications, a site plan must be submitted along with the permit application and may require a minor amendment.
7. Once the installation is complete, work with DENC to promote the program through additional ride-and-drive events, media interaction, and through websites and social media.





Types of Charging Equipment

Charging stations are typically categorized according to the rate at which they charge a vehicle's battery. There are three levels of charge most commonly used—Level 1, Level 2, and Direct Current (DC) Fast Charging.

Level 1: Level 1 charging can consist of a standalone or wall-mounted charging station or, more commonly, a simple household outlet. Studies have found that over 80% of EV owners could be served by Level 1 charging, which has minimal costs for installation, maintenance, and usage. Level 1 charging delivers 120 volts of alternating current (AC) to the vehicle's onboard charger, which converts the power to direct current (DC) to charge the battery. Every EV comes with its own charging cable capable of plugging into a standard outlet.

The costs associated with installing this equipment are little-to-none, and many outlets or charging ports can be installed cost-effectively. Level 1 charging is ideal for locations where vehicles are likely to be parked for extended periods of time (6+ hours). This level takes some time to fully charge a battery (approximately 2-5 miles of range per hour of charging time), but it can be perfectly suitable for workplaces or overnight charging.

Level 2: Like Level 1 charging, Level 2 charging delivers AC power, though at 240 volts. Level 2 charging will charge a car in approximately 2-4 hours for a vehicle that has depleted 40 miles of its range. Unlike Level 1 charging, Level 2 typically requires the installation of a charging station and a dedicated circuit of 20-80 amps, depending on requirements.

Level 2 charging stations can cost anywhere from \$500 to \$3,000 per unit, depending on networking capability and internet connectivity. In an hour, it will give a vehicle 10-20 miles of additional range, making it an option for quicker top-offs. It is also well suited for overnight charging.

DC Fast Charging: A DC Fast Charging station delivers 480 volts of electricity directly to the vehicle's battery. It will charge a fully depleted electric vehicle to 80 percent in as little as 20 minutes. This form of charging is ideal for public use, but could also be suitable for a hotel that may only have one charger but a need to circulate multiple vehicles.

Installation Costs

The cost to install a charging station varies depending on a number of factors, such as the number of stations installed, electrical upgrades needed, location of the charger, and any necessary trenching/construction. DENC and the city can work with you to help determine the costs. In many cases there might be grants or other savings available through multi-unit purchasing that can provide discounts of roughly 20% per two charging units.



Operating Costs

Depending on the distance of their commute, employees will likely require minimal charging, resulting in very little electricity usage. The average commute in Fort Collins and Loveland is roughly 5 miles.

Costs for operating Level 1 and Level 2 charging stations will be equal to running a hair dryer or clothes dryer, respectively.

Please contact the DENC team if you're interested in joining our program.

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Let's Charge Our Community!
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