



electric vehicles.
there's a lot to love.

workplace charging

an employer's guide



Taking responsibility

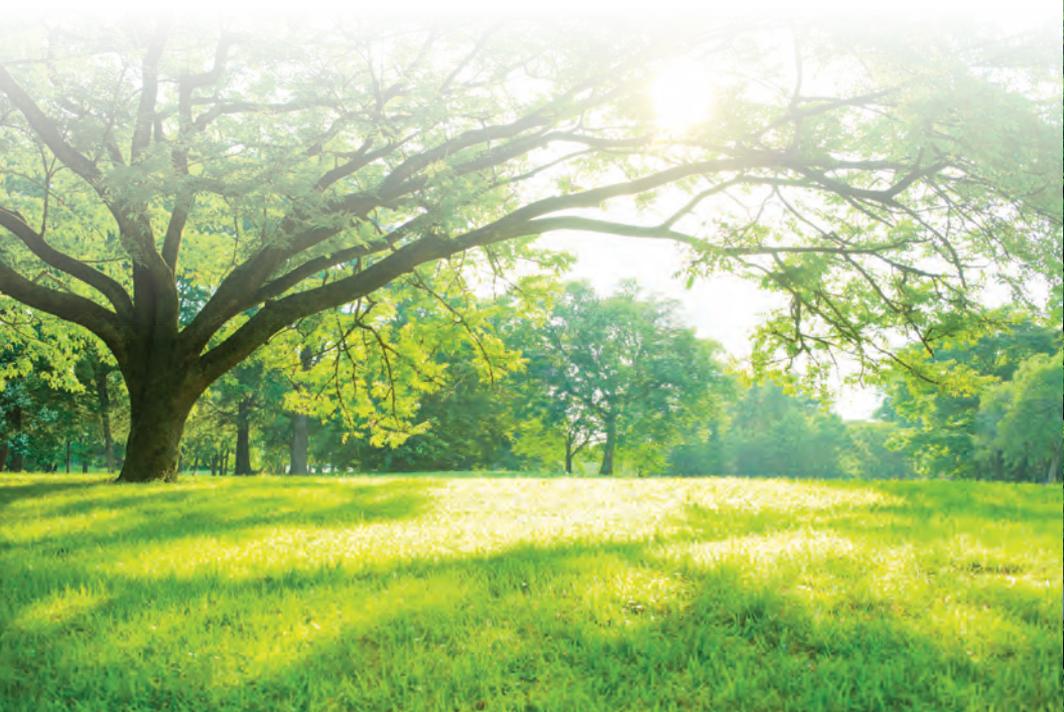
At your business, the efficient use of energy brings benefits such as lower bills, improved comfort levels for your customers and employees, and a reduced impact on the environment.

Acting together, our individual choices add up—for the benefit of our community, our environment and our energy future. That's the power of working together.

As your community energy company, we are committed to sharing our experience and energy expertise.

You can always count on us for:

- Answers to your energy questions.
- Energy efficiency information and advice.
- Help in evaluating energy-saving options.
- Assistance in finding energy-efficient products.





Getting started

Considering electric vehicle charging equipment at your company? Workplace charging offers many benefits including employee attraction and retention and support for sustainable initiatives.

This guide takes you through evaluation, implementation and maintenance of a successful workplace charging program. To get started, ask for feedback and develop a plan.

Get management on board

- Form a working group that includes representatives from human resources, legal, facilities and your company sustainability team.
- Educate management about the benefits of workplace charging and your plans to evaluate employee interest, equipment options and potential costs.

Survey employees

- Learn who drives electric vehicles (EVs) and if other employees plan to purchase them. Ask about their daily commute distance and willingness to pay for charging. Use the results to design the



program and select charging equipment that's best suited for your business. You may also learn how non-EV drivers feel about offering EV charging at work.

- Contact MGE for an employee survey.

Evaluate your building, parking and electrical requirements

- Discuss your plans to install charging equipment with the building's property manager or your facilities manager.
- Contact your MGE account manager for a sample electronic survey. Remember to:
 - Choose a location close to the electrical supply, if possible, to minimize conduit and trenching costs.
 - Consider that additional electrical equipment may be required. This could include a new electrical panel and circuit breakers.

What does it cost to charge?

Contact Madison Gas and Electric. We can provide estimated costs for operating charging equipment.

- Electricity costs for charging are small in terms of typical business expenses. The examples below are based on popular EV vehicle models (cost of energy approximately \$0.101/kWh) charging at a Level 2 station.

What cars do your employees drive?

Chevy Volt – 18.4 kWh battery charging at 3.6 kW



- Runs on gasoline and electricity; assumes the car commutes 15 miles to work and will be fully charged in 1.5 hours, with a total energy consumption of 5 kWh each way.
- Annual energy consumption approximately 1,300 kWh per year.
- Annual vehicle charging costs about \$131 per year.

Nissan Leaf – 40 kWh battery charging at 6.6 kW



- Runs on electricity only; assumes the car commutes 15 miles to work and will be fully charged in .5 hours, with a total energy consumption of 4 kWh each way.
- Annual energy consumption approximately 1,040 kWh per year.
- Annual vehicle charging costs about \$105 per year.

Chevy Bolt – 60 kWh battery charging at 6.6 kW



- Runs on electricity only; assumes the car commutes 15 miles to work and will be fully charged in .5 hours, with a total energy consumption of 3.6 kWh each way.
- Annual energy consumption approximately 936 kWh per year.
- Annual vehicle charging costs about \$95 per year.

Other electric rate considerations

EV charging may affect demand charges. Talk to your MGE account manager about your electric rate and options for managing demand charges.

Renewable energy from wind and solar sources can be purchased through MGE’s **Green Power Tomorrow (GPT)** program to power EV charging equipment.

Create a budget

- Include, at a minimum:
 - » Charging equipment
 - » Installation
 - » Energy
 - » Signage
 - » Maintenance
- Plan for the future. Interest in EVs may grow if workplace charging is available. Consider making additional parking spaces EV ready for Level 2 charging by installing 240-volt, 40-amp circuits.

Select charging equipment

• Equipment selection criteria include equipment cost, number of employee vehicles, fees for “smart” charging stations, location of electrical equipment, maintenance, and type of parking facility. Depending on location, you may choose a wall-mounted station or a pedestal for surface parking.



- Level 1 (120-Volt circuit) charging is relatively easy and inexpensive to install and maintain. It's practical for employees that park for long periods of time.
- Level 2 Charging stations (240-volt circuit) provide faster charging. They can serve multiple employees throughout the day as long as vehicles are moved after charging. Some units are available with multiple connectors. Level 2 stations can be equipped with access control.
- Smart Level 2 stations allow station owners to collect usage data and charging fees and to notify drivers when their vehicle is charged. Station operators may pay licensing, network and session fees.
 - There are several Level 2 manufacturers and service providers. Visit www.pluginamerica.org/accessories or www.goelectricdrive.com.

| | Level 1 | Level 2 |
|--------------|--------------------------------|----------------------------------|
| Power Supply | 120 V @ 12-20 amps | 240 V @ 30-80 amps |
| Demand | 1-1.5 kW | 3-19 kW |
| EV Range | 2-5 miles/per hour of charging | 10-20 miles/per hour of charging |

Chart A

Sources: Department of Energy, Southern California Edison, Plug-In America.



Equipment installation checklist

- Get bids from certified electrical contractors for installation and maintenance.
- Make sure the contractor secures all the necessary permits.
- Check compliance with the American with Disabilities Act.
- Install and test equipment.
- Install signage.
- Develop a maintenance plan.

Installation budget

- Materials
- Equipment rental (trencher)
- Concrete demolition and repair
- Labor
- Charging station equipment
- Signage
- Architect fees (professional fees)

Employee policies and procedures checklist

- Determine if employees will pay a fee to charge. Fees address fairness concerns from employees who don't charge.

- Payment options:
 - Hourly fee
 - Session fee
 - Monthly or annual subscriptions



- Discuss potential tax implications of offering charging as an employee benefit.
- Determine who can use the charging station:
 - Employee only
 - Public and/or customer use
 - Fleet use
- Ensure equitable use of charging stations. Consider these issues:
 - Manage station use among multiple employees.
 - Require employees to schedule charging and move vehicle when finished.
 - Use smart phone apps to notify employees when charging is complete.
 - Set a maximum charging time per vehicle.
 - Establish hours of operation for charging stations.
 - Consider a charging ban during peak energy times.
 - Determine if charging outside business hours is allowed.
 - Install signs to communicate parking and charging rules.
 - Consider a registration/liability form to address vehicle or station damage issues and maintenance.
 - Educate all employees. MGE can help.



Additional Resources

For more information on workplace charging, use this resource.

Alternative Fuels Data Center, U.S. Department of Energy
Guidebook www.afdc.energy.gov

https://afdc.energy.gov/files/u/publication/pev_workplace_charging_hosts.pdf

Listening. Learning.

MGE takes responsibility to provide information and education to serve our customers and stakeholders. We educate customers today to help inform their decision making. We educate tomorrow's stakeholders so they can help plan our energy future.





Let MGE guide you through your ev initiatives to benefit your company and employees. Working together we can make a difference.

Call MGE and ask for a business account manager or visit our website for information about energy and more. We provide the technical, financial and educational services you need to stay competitive.

mge.com/LovEV

608-252-7222

1-800-245-1125

