

## Would you like to gain a competitive advantage by offering Electric Vehicle charging?



### Electric Vehicles are here

Plug-in Electric Vehicles are powered by an on-board battery. Auto manufacturers are responding to market demand and the recent interest in reducing fuel costs, greenhouse gas emissions, and dependence on foreign oil. Plug-in Electric Vehicles are in production or planned within the next few years from Nissan, Ford, Chevrolet, Mitsubishi, BMW, and Tesla, among others. In 2011, major auto manufacturers will make electric vehicle models available for sale to the public. Projections estimate that by 2015 there will be over three million plug-in electric vehicles in use.

### Electric Vehicle Charging: Good for Business

This new wave of electric vehicles entering the marketplace is creating consumer demand for electric vehicle charging services where consumers eat, shop and play. Although EV owners will charge their vehicles overnight at home, the limited range of these vehicles makes having charging stations at retail locations a very attractive option.

Why is this great news for retailers? Providing electric vehicle charging services creates opportunity for business owners to:

- Bring in high value traffic, since the likely buyers of EVs have above average incomes
- Draw more customers for longer periods of time
- Build loyalty within the EV community and environmentally conscious customers
- Get positive publicity by supporting green initiatives

### Businesses offer WiFi to bring in customers, why not electrons?

Charging for electric cars may become a popular marketing tool for restaurants, parking facilities, stores and other companies looking to draw customers, according to early electric car buyers who are mapping out places to charge.

What makes the idea intriguing is the math. Compared to gas, electricity remains a bargain. A kilowatt hour of power costs around 11 cents on average in the U.S. An EV plugged into a standard 120-volt charger for an hour will draw approximately 15 cents of power, and provide 4 to 5 miles of emissions-free driving. Charging generates great PR and loyal customers. At an electronics retail store, customers who want to top off their batteries might spend a few extra moments gazing longingly at that 50-in LCD TV.

"Costco spent less than a \$1 of electricity on me; I spent \$545 in their store. Why wouldn't Costco want chargers at all their stores?" wrote one EV driver about a location that offers free charging.

### Making the Connection to an EV

**Level 1:** All EVs can be charged from standard **120 Volt AC** outlet using common 3-prong electrical plug. This makes charging EVs very easy, although 120 V does not charge the vehicle very quickly.

**Level 2** uses a **240 Volt AC** connection through dedicated Electric Vehicle Supply Equipment (EVSE), commonly called a "charging station." These EVSE units cost \$500-\$3000 + installation but can charge the vehicles much faster. Most EV owners will install EVSE in their garage, and these will also be the most common units used for public charging.

**Level 3** charging units will use high voltage connections and will be able to charge EVs fully in 15-30 minutes. These units will be installed in public locations and will have payment systems incorporated into the units.

You can find more information about EV charging at [http://en.wikipedia.org/wiki/Charging\\_station](http://en.wikipedia.org/wiki/Charging_station) .

If you would like to offer EV charging at your location, the Minnesota Electric Auto Association can help you by publishing the location and promoting your business in our Minnesota EV charging map at [www.mneaa.com](http://www.mneaa.com) .