



# **Attracting Electric Vehicle Customers and Extending Store Visits for Retailers**

*ChargePoint Network Electric Vehicle Charging Infrastructure*

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## Introduction

Electric cars are here. Auto manufacturers are responding to market demand and global interest in reducing dependence on oil imports, reducing greenhouse gases, and reducing fuel costs by introducing a range of capable, energy-efficient, low emissions, electric-powered vehicles. In 2010, major auto manufactures will make electric vehicle models available for sale to the public. Projections estimate that by 2012, twenty models will be available and that by 2015 there will be over three million plug-in electric vehicles in use worldwide.

This new wave of electric vehicles entering the world marketplace has created consumer demand for electric vehicle (EV) charging services where consumers eat, shop and play. Although customers will charge their vehicles overnight at home, the limited range of early electric vehicles makes having charging stations at shopping locations a very attractive option.

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

- Generate revenue.
- Draw more customers for longer periods of time.
- Build loyalty with the EV community and environmentally conscious customers.
- Advertise stewardship of greenhouse gas and gasoline reduction.
- Demonstrate leadership in energy independence by obtaining LEED points for LEED certification.

Eager to tap into the benefits of this new emerging market, retail owners and managers, are now looking closely at how EV charging solutions will help them offer EV charging services to their customers. What are the considerations?

## Challenges

### Customer satisfaction

Customers will rely on the EV charging stations for their transportation and will have high expectations for the level of service from the store that provides the service. Therefore, an EV charging solution should, with minimal on-going effort and cost, be highly reliable and easy to use.

### Charging station access control

As more electric vehicles enter the marketplace, the demand for charging stations will increase. To keep control over costs and to ensure that electricity is not being pilfered, an electric vehicle charging solution should allow retail business owners to control and manage access to their charging stations.

### Energy costs

Electric energy costs are a big part of a business' operational expenses. Over time, as the impact of electric vehicle charging on the business' bottom-line is better understood, some retail owners may want to have consumers pay for preferred EV parking. An EV charging solution should provide the option to bill customers for EV charging access if desired.

## Investment management

To help retail owners manage their investment, it is important for a charging solution to track and report usage, costs and revenues. To help retailers measure and advertise the success of corporate-sponsored green initiatives, it is important for a charging solution to track energy, greenhouse gas and fuel savings associated with EV charging.

## Driver safety

An electric vehicle charging solution should ensure customer safety and limit legal liability.

## Utility Smart Grid

With the time-variable nature of renewable energy sources and with anticipated increase in electrical demand, utility companies are implementing Smart Grid capabilities to ensure reliable energy delivery during peak load times within their service area. As Smart Grid capabilities evolve, utility companies may require charging systems to be Smart Grid enabled. They will also offer rate incentives for Smart Grid compatibility. To leverage future utility Smart Grid energy services, charging stations should support Advanced Metering Infrastructure (AMI), demand response programs, and time-of-use (TOU) pricing.

## Staying current

The electric vehicle world is undergoing rapid change and will soon undergo tremendous growth. Within five years there will be millions of electric vehicles with new capabilities. An electric vehicle charging solution should scale with this growth and be built to easily accommodate the evolving requirements of this emerging market.

## Solution

Coulomb Technologies' ChargePoint® Network provides the world's most advanced, easy to use electric vehicle charging solution for retail businesses. Electric vehicle charging is delivered via ChargePoint® Networked Charging Stations which cover the entire range of Level I, Level II, and Level III electric vehicle charging needs. The ChargePoint Network provides station owners a centralized view of the charging stations anywhere there is Internet connectivity. Web-based ChargePoint Network Software Application Services makes it easy to provision, manage and maintain ChargePoint Charging Stations for every business need.

## Satisfy customers

The ChargePoint Network takes care of drivers so you don't have to. Drivers can elect to receive Email or text notifications alerting them if their vehicle is completely charged or if their charging session is interrupted for any reason such as a GFCI fault or disconnected cable. Drivers can call also receive personal assistance 24 hours, 365 days a year by calling the toll-free number displayed on every charging station.

Ensure EV charging service is available when your customers need it the most. The ChargePoint Network automatic notification services will alert your service personnel of issues before they escalate to customer complaints. Service personnel can make informed decisions before they come on-site by accessing, managing and diagnosing all of your charging stations via the ChargePoint Network Service Manager from their office. Alternatively, you can elect to outsource and make use of the maintenance and monitoring services provided by a ChargePoint Network Authorized Distributor.

## Provide secure access for all customers

You decide who may access your charging stations. The ChargePoint Network Station Manager allows you to configure the stations with access policies for public or for private access. If you choose the private option, you can control precisely which EV drivers, may use your stations. For added flexibility, you can change your access policies based on time of day, and calendar. The charging stations will only energize for an authorized driver eliminating energy theft, and enhancing safety.

## Build revenue, attract new business

You can choose if your charging stations are accessed for free, or for a fee. If you choose the for-fee option, drivers can use multiple payment methods to access the charging stations including ChargePass™ Cards, major contactless credit cards, or other major credit cards (by calling the 24/7 toll-free number displayed on the charging station). Use the Flex Billing Manager to set prices on a per time basis (similar to a parking meter).

When a charging station is accessed, the ChargePoint Network Flex Billing™ Service processes ChargePass and credit cards immediately, and automatically transfers funds from the driver's account to your business account. Transaction data can be centrally monitored with the ChargePoint Network Flex Billing Manager and can be exported to other accounting systems to help you manage your return on investment.

Advertise and attract EV customers with the ChargePoint Network. Drivers can find charging stations located at their favorite store using a web browser anywhere there is Internet connectivity. Build brand awareness and customer loyalty with personalized advertising on each charging station and with branded ChargePass Cards. The ChargePass Cards can be used to offer free, or discounted rate charging services for select drivers, encouraging them to use your stations and visit your business again and again.

Advertise leadership in green building practices by enhancing your LEED rating by installing stations and by promoting electric vehicle use. Extend your corporate green initiatives beyond your stores by providing ChargePass smart cards for discounted customer use at any ChargePoint Networked Charging station.

## Easily manage return on investment

Use the ChargePoint Network Station Manager to track and to monitor information including electricity used, greenhouse gas and gasoline savings. You can export and combine the data with other accounting systems to manage expenses, measure return on investment and calculate equivalents for other energy savings.

## Protect customer safety and limit liability

A ChargePoint Networked Charging Station will only energize a charging session if it is in good working order, the customer is safely isolated from electricity, and the ChargePoint Network authorizes access. The charging stations can detect maintenance issues that can arise from vandalism, misuse and normal wear and tear. Maintenance staff can be automatically notified before maintenance issues escalate to safety or reliability problems.

## Save with utility programs and incentives

Leverage utility-pricing incentives by ensuring compatibility with an electric utility's AML. ChargePoint Networked Charging Stations are designed with the Smart Grid in mind. Utility-grade meters and the demonstrated ability to communicate bi-directionally with other Smart Grid systems via the ChargePoint Network enable demand response, TOU pricing, and other Smart Grid programs provided by the Utility.

## Start now, be prepared for the future

Unique in the industry, the services of the ChargePoint Network are available to supply the entire range of electric vehicle charging needs, with Level I, Level II, and Level III charging stations all managed by one integrated network. ChargePoint Networked Charging stations can be remotely upgraded to accommodate future advancement in electric vehicle charging needs. The ChargePoint Network can also scale to thousands of charging stations allowing a business to provide electric vehicle charging services today and meet growing demands of the future.

## Find Out More

Coulomb Technologies is the leader in electric vehicle charging station infrastructure with networked charging stations installed in municipalities and organizations worldwide providing the most advanced vehicle-charging infrastructure, with an open system network: the ChargePoint Network.

For more information, please visit [www.coulombtech.com](http://www.coulombtech.com) and follow Coulomb on Twitter at [twitter.com/coulombevi](https://twitter.com/coulombevi).

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