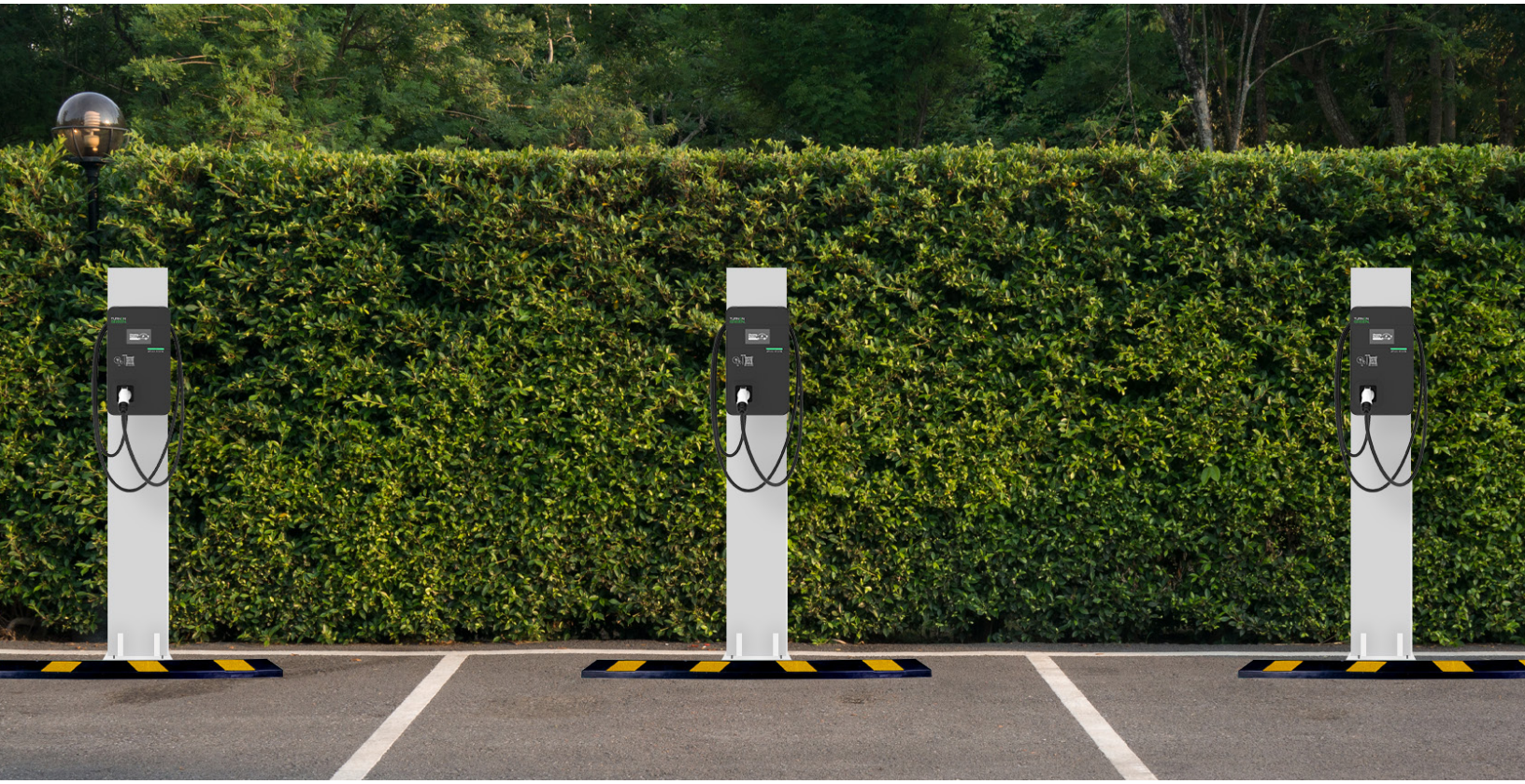

TurnOnGreen
Site Host Tips

TURNON GREEN

Table of Contents

Quick Guide

TurnOnGreen's EV charging platform is designed to be easy to use, so your EV drivers can get the services they need and you can focus on your core business.

A note on support

If an EV driver using your chargers has a problem, they can contact TurnOnGreen's 24/7 support service at 1(800) 636-0986 or by clicking the get help link in the TurnOnGreen app or web app.

Our 1(800) number is designed to immediately help EV drivers with urgent issues. If you need support as a site host, please email support@turnongreen.com.

EV Drivers

Whether the drivers you serve are residents, tenants, employees, or the general public, we've got an easy way for them to charge. Below is a summary of the four main ways EV drivers can interact with ChargeLab's system. For more details on the EV driver experience, see our Quick Start Guide at www.chrg.li/quick-start-guide.

Web app

Every charger deployed at your site should have a sticker with a QR code attached to it. Any driver can scan the QR code using their smartphone's camera to immediately access the TurnOnGreen charging experience.

iOS/Android App

EV drivers can also download the TurnOnGreen app from the Apple App Store or Google Play Store. Native app users can find your chargers using the map, search, or QR code scanning function.

RFID card

EV drivers can order a free RFID card from www.chargelab.co/rfid or the TurnOnGreen app. Not every EV charger has an RFID reader, so ensure that yours does before recommending this authentication method.

Auto-start

Chargers without any pay-per-use fee can be left open for any EV driver to charge without authentication. Paid chargers in private settings like condo buildings can also be linked to a specific EV driver and set to "auto-start".

Tips for Site Hosts

Hosting EV chargers at your building or site comes with many benefits: from reducing costs for residents, employees, or your own fleet, to increasing your property's discoverability and value. Not to mention enabling a cleaner, carbon-neutral future.

Below are TurnOnGreen's top tips for deploying and operating a successful EV charging site.

Site design

Businesses and multi-family buildings install EV chargers everywhere drivers park: in visitor parking lots and dedicated parking spaces; in aboveground lots and underground garages; in densely populated locations and wide open areas.

When deciding where to install EV chargers and how many chargers to install, keep in mind:

- EV chargers should only be installed by certified electricians or turnkey providers that work with certified subcontractors. In addition to electrical work, many EV charger installations include general construction work, such as pouring concrete for pedestals, coring through walls, installing signage, and painting. Consult professionals early and often while planning your EV charger deployment.
- The most cost-effective place to install EV chargers is close to an existing electrical room within your building. The further from the source of electricity, the more expensive it will be to install EV chargers.
- EV chargers are a significant electrical load, especially for older electrical infrastructure. Do not assume that your building can support many EV chargers without infrastructure upgrades or power management. Always have a certified electrician inspect your infrastructure before planning an EV charger installation. Ask about ChargeLab's power management software when relevant.
- Whatever number of EVs you expect to service now, expect many more in the future. EV adoption is growing rapidly. Over the long-run, it may be more cost-effective to install more EV chargers now, rather than incur the project overhead costs of a second or third major infrastructure upgrade. Alternatively, ask your installer about laying the infrastructure for future EV chargers (panels, conduit, etc.), but waiting until demand increases to install the additional charging units.
- Solutions that embrace open standards like OCPP will help future-proof your site. Open standards ensure compatibility as technology and service providers change. TurnOnGreen is a fully OCPP-compliant service provider.
- Be cautious of low-cost service providers. EV charger installations is still a new industry. The difference in safety and quality between service providers is significant.

In addition to the tips above, we suggest all site hosts pay special attention to three areas: connectivity, painting/signage, and accessibility. The following pages provide a more detailed breakdown of each of these site design considerations.

Connectivity

As thousands of EV charger deployments have happened accross the United States, TurnOnGreen can confidently report that the #1 cause of issues for EV charger deployments is connectivity.

In order to track charger usage, enable power management, and collect pay-per-use fees from EV drivers, your EV chargers must have a reliable connection to the internet. There are three common ways to connect EV chargers to the internet and in turn TurnOnGreen's cloud management software: Wi-Fi, Ethernet, and cellular data (currently 4G networks).

Sometimes site hosts overlook the importance of connectivity. This can lead to unexpected issues down the road: from EV drivers not charging to crucial data for utility programs not being reported. Here are our top tips for EV charger connectivity:

- Installing Wi-Fi mesh networks or testing 4G connectivity is not the speciality of most certified electricians. Communicate transparently with your installer about connectivity. If they are not an expert, ask them to recommend a local service provider that specializes in commercial building connectivity. There are many installers of lobby Wi-Fi, security cameras, and other smart building technologies that are well-equipped to help connect your EV chargers.
- Test connectivity before installing your EV chargers. See ChargeLab's Internet Connectivity Guidelines for more details on how you or your installer can test 4G and Wi-Fi networks. Everywhere you plan to install an EV charger, you should aim for:
    - **4G signal strength of -80 dBM or greater** if you are using 4G connectivity.
    - **Wi-Fi signal strength of -67 dBM or greater** if you are using Wi-Fi connectivity.
- Signal strength varies throughout a site and even from one parking space to the next. Check connectivity at the exact location every EV charger will be installed.
- Most EV chargers support multiple connectivity modes and can be installed with one as a primary and another as a backup. For example, a 4G primary connection with Wi-Fi as a backup. Or Wi-Fi primary connection with Ethernet as a backup. Running two types of connectivity to every EV charger adds costs, but can be worth the investment. Especially if your EV chargers are critical fleet or public infrastructure.
- Make an action plan for what happens if there are connectivity issues. TurnOnGreen's platform will automatically notify you when chargers go offline. Identify in advance who will address these issues: your own facilities management specialist, your electrician/installer, or your smart building connectivity expert.
- Many EV chargers can be configured to offer free charging even when they become disconnected from the network, or to allow offline charging for authorized RFID card users who will be billed when the charger comes back online. Make sure to speak to your installer or the TurnOnGreen Deployments Team about setting up these offline redundancies. Communicate with your users about ordering RFID cards if relevant.

Signage & painting

Installing signs and painting EV charging areas is common for both functional and promotional purposes.

At many sites, there are relatively few EV chargers compared to the total number of parking spaces. At sites like this, consider installing wayfinding signs throughout the parking lot that direct EV drivers towards your EV chargers.

Painting parking spaces and walls bright green can also help EV drivers more quickly locate your EV chargers. In the same way that blue has become a universal indication of accessible parking, green has become a universal sign of an EV charging spot.

Parking spaces in front of EV chargers are almost always restricted for electric vehicles that are actively charging. If you adopt this common policy, you should install signs that communicate this restriction and any penalties for drivers who violate the policy.

While signage and paint are best practices for workplace, public, and semi-public EV charging deployments, there are cases where you may want to avoid signage/paint. Dedicated parking spaces with EV chargers in multi-family buildings do not need to be painted. This may attract unwanted attention of other EV drivers who do not have permission to use that EV charger. Likewise, many fleet depots can do without decorating their EV charging spaces.

You can find examples of both wayfinding and parking space signage for EV chargers at

afdc.energy.gov/fuels/electricity_charging_station_signage.html, or by consulting your local parking guidelines authority.

Accessibility

TurnOnGreen strongly recommends designing your EV charging site in accordance with American Disabilities Act (ADA) guidelines or other regional accessibility standards.

The U.S. Access Board has published a detailed guide to accessible EV charging site design. This includes guidelines for placement of EV chargers, parking space size, and the height where charging connectors and screens rest above the ground. Read the guide here: www.access-board.gov/files/usab-evse-guide.pdf.

Canadian businesses generally use the ADA guidelines above when designing their sites, since no federal Canadian agency has published its own guide for accessible EV charging yet.

EV charging policies

Before installing EV chargers, you should think about what EV charging policies you will implement at your site. Will the EV chargers be open to the public or restricted to a certain user group? Are the chargers going to be monetized or free for EV drivers to use? Will the same policy apply to every charger at your site, or will you mix and match permissions and pricing?

Below we explore the most common EV charging policies based on use-case. Whatever policy you choose, ensure that the signage posted at your site and notices circulated to employees/residents mirror the policies you set in the TurnOnGreen site host dashboard.

Fleet

Private Depots

At private depots, you install chargers exclusively for your fleet to use. Pricing does not usually apply, since you own the vehicles, the chargers, and pay all the electricity bills. You can still track charger usage and estimate your costs through TurnOngreen's platform, but there is no need to bill yourself usage fees.

If your private fleet chargers are installed "behind the fence", you may want to remove all access control and allow drivers to start charging as soon as they plug—no RFID tap or app-based activation. Alternatively, you may still want to track which vehicles are charging and when by linking vehicles to a specific RFID card or EV driver account. All of this is possible from within the TurnOnGreen platform.

If your private fleet chargers are in a parking lot that can be easily accessed by others, consider adding access control to ensure only your drivers and vehicles can use the chargers. Setting these chargers to "private" will also hide them from TurnOnGreen's app and third-party maps, minimizing the unwanted traffic you attract.

Mixed Depots

Mixed-use depots combine fleet charging with another use case (such as workplace or multi-family), or allow multiple fleets to charge.

Access and pricing policies are very important at mixed depots. If you operate your own fleet, you may want to allow your vehicles to charge for free, but bill usage fees to third-party fleets, employees, or residents who share your charging infrastructure.

Using TurnOnGreen's platform, it's also possible to configure a certain set of chargers for shared use, while reserving another set exclusively for your fleet.

Public Charging

Public charging includes a diverse set of use cases: convenience stores, petrol stations, malls, storefronts, restaurants, community centers, schools, university campuses, and highway rest stops.

Discoverability is key for most public charging sites: you want your chargers to be found and used as often as possible. In addition to displaying public chargers on the TurnOnGreen app, TurnOnGreen also manages the submission of your public charging sites on third-party apps like PlugShare, ChargeHub, and Google Maps.

Think carefully about your pricing policy for your public chargers. Are you trying to attract more foot traffic to your store, restaurant, or community center? Consider offering low-cost or free charging. An EV driver will only use a few dollars of electricity at a Level 2 charger, while they may spend hundreds at your store or restaurant.

At the same time, paid public charging has become the overwhelming norm in recent years. Tesla's Supercharger network famously offered free charging when it launched in 2012. But Tesla stopped this policy in 2017. For the past 5 years, every Tesla Supercharger has billed a premium rate for the energy it dispenses.

The vast majority of public DC fast chargers bill usage fees, and increasingly the same applies to Level 2 chargers. DC fast chargers bill significantly higher usage fees. This is obvious in regions where charging is billed hourly, since a DC fast charger can dispense much more energy in an hour than a Level 2 charger. However even when billed by kWh, DC fast chargers tend to be more expensive for the convenience of filling up faster (and to recoup the much higher infrastructure costs).

Depending on your region, Level 2 chargers most often bill between $0.15 and $0.35 per kWh. DC fast chargers most often bill between $0.25 and $0.60 per kWh, with chargers that over offer charging speeds 150 kW billing the highest rates.

To see what comparable public charging sites in your area bill, we recommend searching PlugShare, ChargeHub, and Google Maps. All of these apps list the charging speeds and usage fees of public chargers.

TurnOnGreen"s platform allows you to easily set and change pricing policies. Don't be afraid to start with a certain pricing policy and adjust it over time as you seek to increase or decrease the demand for your chargers. Through the TurnOnGreen site host dashboard, you can set per kWh pricing, hourly pricing, and detailed time-of-use schedules that change prices based on the time of day. Just be cautious of changing pricing policies too frequently. Whenever possible, communicate new pricing policies on signage near your EV chargers.

Workplace

"Workplace charging" is TurnOnGreen's term for any charging that occurs in or around an office building. This includes private offices serving a single company, as well as high-rise buildings with semi-public underground parking lots.

Just like with mixed fleet depots, some workplace charging sites may serve multiple use cases. For example, chargers in a high-rise building may serve the employees that work in the building in addition to the general public who parks in your lot while attending events downtown.

If your workplace chargers are intended exclusively for employees of your company, TurnOnGreen's platform allows you to set these chargers to "private" and restrict access. Alternatively, if your office parking lot doubles

as a public parking lot, set your chargers to “public”. You can also mix and match access settings at any site, reserving certain chargers for a specific group while opening up the rest to the public.

Like with public chargers, you should also think about why you are installing workplace chargers. Is this 100% for employee satisfaction? Free workplace charging is a great perk for employees and may even encourage some employees to switch from a gas vehicle to an EV. Or are you looking to recoup your energy costs? Workplaces chargers can bill usage fees just like any public charger.

When setting fees for workplace chargers, look at your historic electricity bills to understand your cost. Based on this cost, you could break-even on your chargers (only bill employees what you pay), make a profit (possibly to recoup charger install cost), or even subsidize charging (only recoup part of your electricity cost with low usage fees).

Depending on how many of your employees drive EVs, your chargers may quickly become fully occupied. It is popular to post signs limiting charging to 4 hours or left, however in practice this is difficult to enforce. Instead, TurnOnGreen recommends either (a) installing more chargers, or (b) setting usage fees that continue after charging has completed to encourage drivers to move once their battery is full.

Multi-family

Multi-family charging may be the most important commercial EV charging use case. Since over 80% of all EV charging sessions occur at home, it’s crucial for apartments and condo buildings to offer EV charigng.

In recent years, many apartments and condos have found that offering EV charging is not optional. Whether you are mandated by local laws, or simply overwhelmed by requests from residents, most multi-family buildings will find themselves installing EV infrastructure sooner rather than later.

There are two main modes of multi-family charging: we call them “dedicated charging” and “community charging”. Both can exist within the same building.

Dedicated charging

With dedicated charging, each resident gets their own EV charger in their private parking space. This most simulates the single-family home charging experience: your own parking space, your own EV charger. Dedicated chargers make up the overwhelming majority of EV chargers in condo buildings. Since residents have already paid to own their own parking space, they are willing to pay to have a dedicated EV charger installed in it. While less common, dedicated chargers can also be popular in rental apartments.

With dedicated EV chargers, we recommend letting the end owner of the dedicated charger set access control settings. Dedicated chargers can act just like a public charger, where the driver must authenticate using an RFID card or app before charging. Alternatively, you can enable “auto-start” from the TurnOnGreen dashboard. This will start charging as soon as an EV plugs in, no authentication needed. With auto-start enabled, all usage fees will be automatically billed to the EV driver acocunt linked to the specific dedicated charger.

While owners of dedicated chargers can select their own access settings, the condo board or building management almost always sets usage fees, since EV chargers run of the building’s shared electric panel.

Community charging

Community chargers are installed in common parking spaces for multiple residents or visitors to share. Visitor parking spaces within multi-family buildings are a great place to install community chargers.

Since multiple different users can use community chargers, TurnOnGreen"s authentication and billing system is essential to ensure users are billed accurately. With ChargeLab's platform, you can even set separate fees for residents vs. visitors if you wish.

Community charging is most popular in rental apartments, especially buildings with no dedicated parking spaces. If you have visitor parking spaces in your condo building, we also recommend you install a few community chargers.

Even if you offer dedicated chargers at your building, community chargers bring a number of benefits:

- A back-up if a resident's dedicated charger breaks or needs maintenance.
- A place for residents who just purchased an EV to charge while they are waiting for their dedicated charger to be installed.
- A charging spot for residents who do not want to pay for a dedicated charger.
- A place for authorized visitors to charge their EVs.
- Can double as workplace changing for employees of the building (property managers, front desk, maintenance staff).

A note on kWh vs. hourly pricing

As of 2022, about half of states and provinces in North America allow billing by the kWh for EV charging services. In the remaining jurisdictions, you must bill EV drivers hourly for use of your EV chargers.

This stems from the fact that historically the sale of electricy by the kWh was restricted licensed utilities and energy retailers.

In the future, we expect all jurisdictions will allow site hosts to bill EV drivers by the kWh, even if you are not a utility or energy retailer. Some may even mandate kWh billing for transparency and fairness. Until laws have been updated, make sure to check your local rules and regulations before setting kWh pricing.

(this page is intentionally blank)