

Commercial electric vehicle (EV) charging. Open vs. closed EV Charging Networks.

Commercial property owners, developers and managers love smart electric vehicle (EV) charging stations for both their forward-looking appeal to customers, tenants and valued guests and also the powerful network features they offer. But when selecting a vendor, properties face a choice as confusing as it is critical: should the network be open or closed? Here's what you need to know before you buy.

The question of open versus closed networks isn't an open and shut case.

Do you want to appeal to the full market of more than 580,000 EV drivers in the U.S., or to just a fraction of it? The answer has unexpectedly serious implications for the success of the property's investment and its ultimate financial ROI. Only open networks place no artificial or proprietary restrictions on the use of their EV charging stations. As a result, open networks make the stations accessible and usable to all EV drivers through *the driver's* preferred programs and apps (or no program at all, simply paying direct) to find stations, initiate a charging session and pay any associated fees.

"An open network offers EV drivers the most choice when it comes to charging their vehicles," says Mark Pastrone, Vice President of Business Development at SemaConnect. "A closed network, by contrast, locks drivers into a single proprietary program."

That closed approach can cripple driver flexibility and, from the property's point of view, limit accessibility to just a fraction of EV drivers in the U.S. (those locked into the closed network provider).

Understanding the economics of EV charging.

So if open networks offer more options for drivers, why don't all EV charging stations use them? Follow the money.

EV charging station vendors have three major options for monetizing their products and services:

- **Properties** pay both upfront costs for the stations and potentially recurring charges for maintenance, network access or other services.
- Drivers might pay a subscription fee to be able to use
 a specific network of stations. If the drivers don't pay,
 they can't use the station; hence, it's a closed
 network.
- Utilities and car companies might purchase driver data from the vendor.

All vendors charge properties for the stations and associated services – that's the same across the board – but a company that wants to monetize drivers as well will try to lock users into their program. Once the property installs charging stations that operate on a closed network, that property has effectively forced their tenants, employees, guests and other users to have an account with that one provider.

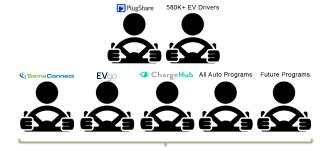
It's like visiting a store that accepts only its own credit card – not even cash! And then, once the user is locked in, the program can charge whatever fees or impose whatever restrictions it wants.

To make their charging stations a worthwhile investment, property managers and owners must consider driver experience.

EV Charging stations are intended as amenities, so commercial properties want drivers — who may be potential customers, or valued employees or visitors — to be happy with those stations. Offering a full menu of choices is a powerful way to please users. For example,

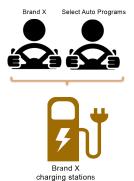


A "truly" Open Network provides electric vehicle (EV) drivers with the most choices when it comes to charging their vehicles.









Brand X is restricted!

PlugShare is the leading app for EV drivers to find and use EV charging stations nationwide. "If the driver has a meeting in downtown Washington, D.C.," says Pastrone, "she can just bring up her PlugShare app and see where all stations are, regardless of vendor, potentially including the real-time availability of the station."

Only open networks unlock the full power of third-party apps, while closed networks provide only a limited experience on PlugShare and similar apps. With closed networks, all users see is static information like station price but not availability, nor can they actually start and pay for charging sessions through their preferred app. They're forced to use the provider's proprietary network and apps. To appeal to the broadest user base, any EV charging stations must operate on an open network.

Open vs. closed networks affect property owners and managers, as well.

It's not *just* the drivers who are affected, however, and the question of open-versus-closed affects more than just property appeal to drivers. Property listings appear in a much better light in apps like PlugShare — e.g., including real-time availability info and sharing alerts — through open networks. On a closed network, it's the vendor, which limits the effectiveness of third-party apps in appealing to customers or guests who might otherwise

seek out your property.

Beware: it's open season how vendors define "open."

"Open network" is not a regulated term, like the way the US Department of Agriculture (USDA) defines and regulates the use of "organic" on food labels in grocery stores. Instead, EV charging station providers can define and use the term however they want. Some programs call themselves open but don't mean open to drivers. They might say they're "open" to credit cards, for example, but very few drivers may actually have they type of credit card or RFID card required for payment, even though it is listed as a recognized brand like MasterCard or Visa. Or, the provider might be "open" for hardware vendors to be on their network. "Those are false features," says Pastrone. "They're not meaningful for drivers or property owners."

Do you want to reap the full benefits of a great amenity?

If you want your customers or other users to get the most out of any EV charging stations you offer, if you want to drive more business or attract more tenants or workers who use electric vehicles, only an open network can open the floodgates.



SemaConnect is the leading provider of electric vehicle amenities to the North American commercial and residential property market. With SemaConnect as your EV partner, you don't have to worry about station management. As a proven leader in serving the Class A property market, SemaConnect manages all aspects of your EV amenities so you can make the most of your visitors' experience.

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