

EV Charging:

What Condo and Townhouse Communities Need to Know



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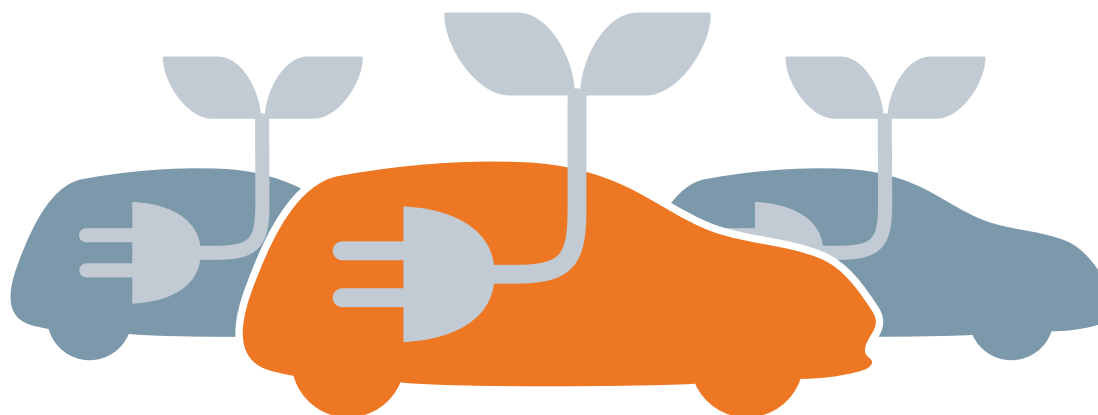
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The Rise of the EV Market

Electric Vehicle Adoption Is Revving Up

The move to electric vehicles (EVs) has gained momentum across North America, with almost 600,000 EVs on the roads today. In the last 4 years, EVs on the road have increased 7x, and the market is projected to grow another 39% compounded annually from 2017 through 2020.* As EV ownership increases, many drivers are going to be looking to charge their vehicles right at home, in the complexes where they live.

California leads the country for EVs on the road, however much of the growth will come from forward-thinking states that offer incentives, including tax credits, HOV lane access and rebates. And as EV sales grow, so does the need for charging infrastructure—which grew about 25% in the US in 2016.



From 2017 through 2020, the EV market will grow 39%

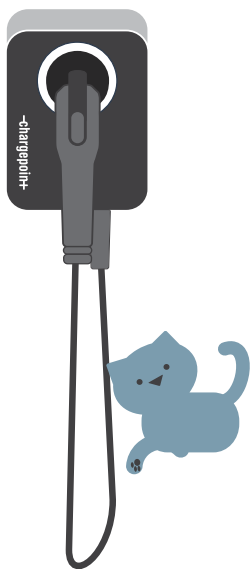
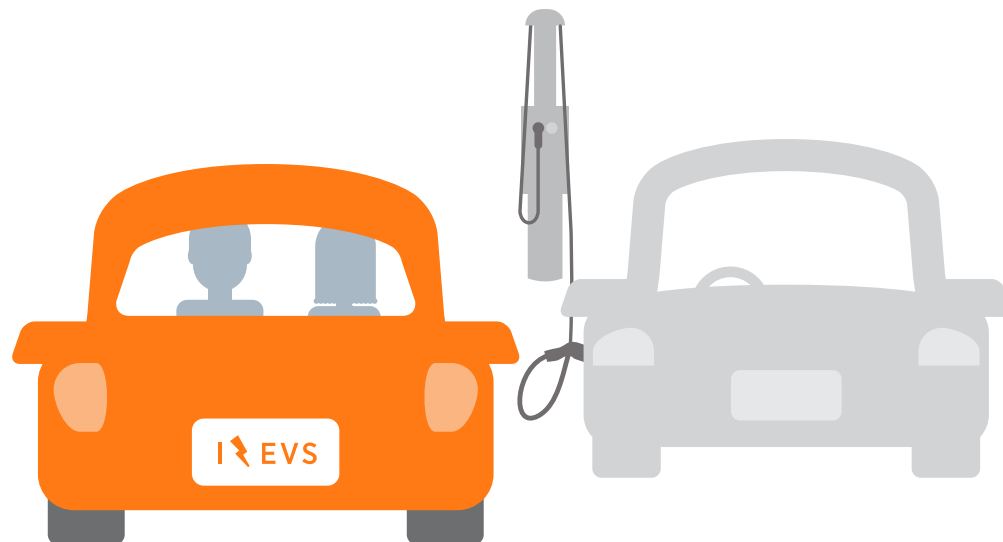
*Navigant Research

Other Sources: Compiled by ChargePoint with data provided by IHS Markit through Q3 2016. Growth figures represent growth over Q3 2015.

What You Need to Know About EV Drivers

Who's buying EVs? Everyone from the environmentally aware to the financially savvy to lovers of technology. EV drivers are also highly educated and earn twice the average national income—both highly desirable qualities in homeowners, homebuyers and renters.

EV drivers have many choices and will choose the condo or townhouse community that offers them the amenities they need—and they will be willing to pay more for it. Making your property EV-ready attracts these types of residents, accommodates current owner requests for EV charging and increases property values for the entire community.



Drivers Charge at Home

Today's EV drivers charge anywhere they can. Unlike gasoline-powered cars, which need to be "filled-up" at dedicated gas stations, EVs are "topped-off" wherever drivers park throughout the day. However, 80% of that charging happens at home. Similar to how people choose to charge their cell phones overnight at home, drivers prefer to charge their EVs overnight. Having charging stations on-site makes this possible and convenient. For that reason, it's important for HOA board members to consider charging stations for their residents.

Why EV Charging Makes Sense

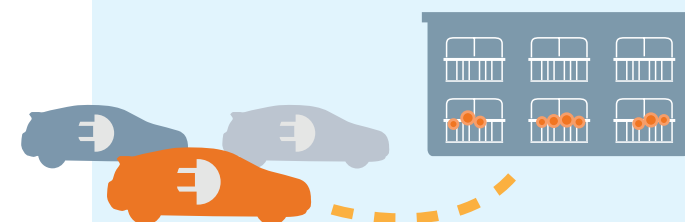
EV Charging Deliver Solid Returns

Whether EV charging is on your list of current priorities or on the horizon, it's likely coming faster than you think. Given that EV ownership will grow 39% by 2020, charging will quickly become a standard amenity for high-density housing properties. Some states already have requirements for charging spots, including California, which requires at least 3% of all new parking spaces to be "make-ready" equipped for EV charging in new multi-family communities.* Many localities are requiring even more: Los Angeles, New York City and Vancouver require 5% to 20% of parking spaces to have EV charging infrastructure.

EV charging stations are an investment, but one that offers a solid return for homeowners and renters alike. Eventually, home charging will become a necessity for hundreds of thousands of drivers who will consider it a required amenity at their residence of choice. Even now, home-charging capabilities had such an impact that 27% of drivers said they would move elsewhere if charging wasn't available.**

The Economics of EV Charging for Multi-Family Properties

Today, there are many ways to recoup the costs of a multi-family property EV charging station deployment, including tax credits, rebates and potential increases in home sales prices and/or rent. Multi-family properties can develop different EV charging pricing models depending on the property's goals. Common objectives include generating incremental revenues, or encouraging drivers to leave their parking space as soon as they're finished charging. Pricing policies can then be structured in a way to encourage sharing of a community station by residents, and HOAs can pursue the option to provide a larger number of personal chargers without the need for electric upgrades through energy management.



EV Charging Benefits for Condominium and Townhome Communities

- ✓ Support owners' and renters' requests for EV charging
- ✓ Add a desirable property upgrade without burdening other community members
- ✓ Make your property attractive to future homebuyers and renters
- ✓ Comply with emerging HOA laws and building standards
- ✓ Differentiate your community from your competitors'

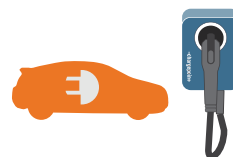
*California and other Green Building Code Data sources: <http://vancouver.ca/home-property-development/electric-vehicle-charging-requirements.aspx> <http://insideeys.com/new-york-city-passes-landmark-charger-bill-20-of-future-parking-spots-required-to-be-charger-ready-potential-for-10000-ev-spots-in-7-years/> <https://www.ladbs.org/docs/default-source/publications/ordinances/l-a-green-building-code-ordinance-181480.pdf?sfvrsn=12>

**ChargePoint Apartment and Condo EV Charging Survey, October 13, 2016

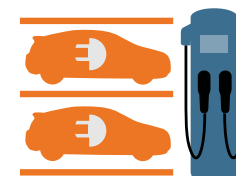
EV Charging Installation 101

Understand EV Charging Options

While EV charging stations offer clear benefits for property owners/residents, property managers and HOA boards, there is still the matter of having to sort through the parking, infrastructure, electrical and billing requirements. In the simplest terms let's address this together.



Personal Charging



Community Charging

Where do I install EV charging stations?	Appropriate for parking situations where residents have assigned parking spots, as it allows residents to charge right where they park.	Ideal for properties with shared, mixed-use or valet parking environments, as it offers EV drivers a place to charge in a common parking area.
Who can use them?	Stations can be easily managed and assigned to residents quickly. Residents gain peace of mind, knowing their chargers are always available.	Charging station access can be restricted to residents only, or extended to guests and the public. To increase utilization and accommodate your community, set a fair EV charging policy.
How should I structure pricing?	A complete billing solution lets residents pay for their own charging, plus have access controls that ensure others cannot use their chargers while they are away Drivers can sign up for affordable month-to-month service that includes station maintenance and 24/7 support	HOAs can set access controls and pricing policies to promote sharing among residents and optimize station utilization Pricing policies and charge fees can be set based on time, session or electricity usage (kWh)

What to Look for in an EV Charging Solution Provider

At a minimum, communities should seek a provider with EV charging hardware solutions that are certified for safety, designed for indoor and outdoor use and includes 24/7 driver support to reduce the burden and cost of property management. Cloud software that lets you set your own pricing policies and optimize common area electricity is also important, as is your provider's ability to demonstrate a strong understanding of how EV drivers behave—to help you anticipate your renters' and homeowners' needs. Finally, you would ideally want a charging provider who works with partners that offer infrastructure expertise and installation support.

The Smart Networked Charging Station

Trying to maintain a budget, fulfill residents' requests for EV charging and cope with the realities of your existing electrical infrastructure can leave you overwhelmed. Your solution: smart networked charging stations. Real-time network communications enable these smart stations to address your challenges while recouping the costs at the same time. A networked solution allows your HOA to:

- ✓ Set your own pricing policies.
- ✓ Get reimbursed for electricity usage.
- ✓ Control who uses your stations.
- ✓ Avoid costly electrical upgrades with power management.



EV Charging Solution Best Practices

Smart Steps for Your EV Charging Solution

EV ownership is only going to increase moving forward, so now is the time to plan for the future and get EV ready. The following best practices can help you ensure that you make smart decisions about charging station installation:

- ✓ Plan for at least 5% to 10% of residents at a multi-family property to purchase plug-in electric vehicles over the next 3 to 5 years. For new construction in high EV density locations, plan for 10% to 20% of residents to drive EVs.
- ✓ Anticipate a further increase in future EV driver residents by making additional parking spaces EV “make-ready” with conduit and electrical wiring connected to the community’s common power source.
- ✓ Make a fair EV charging policy that can scale beyond the first EV driver so that you can accommodate future EV driver requests.
- ✓ Most properties will not have enough electrical panel capacity for simultaneous charging of electric vehicles in all EV parking spaces. Charging stations with energy management can extend the existing capacity and eliminate or significantly delay costly upgrades.
- ✓ Check out what grants, rebates and tax credits are available for purchasing and installing stations in your region.
- ✓ Choose a networked EV charging solution that future-proofs your investment with automated software updates.

Source: Baum & Associates and InsideEVs.com data through November 2016.

Why ChargePoint

ChargePoint Is Committed to Serving Multi-Family Properties

ChargePoint operates the world's largest and most open electric vehicle (EV) charging network, bringing EV charging to more people and places than ever before. We design, build and support all of the technology that powers this network, from charging station hardware to energy management software to a mobile app. We're committed to understanding how EV drivers behave and how that behavior varies according to location, time of day, cost of charging and industry—and we use this data to better understand, anticipate and meet the needs of both drivers and EV station owners everywhere. Our work transforms transportation and energy use by helping more people choose to drive electric.

Learn more about how ChargePoint can help you increase property values in your community and meet the growing demand for EV charging.

For More Information

- Call +1.408.705.1992
- Contact us at chargepoint.com/multifamily-contact-us
- Visit chargepoint.com/businesses/apartments-and-condos



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