



evadoption[®]

The State of EV Charging in Apartment Communities

February 2023

Produced Exclusively for Amperage Capital, by EVAdoption, LLC

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Introduction

Electric vehicles (EVs) are poised to see significant growth in consumer adoption this decade — presenting opportunities for multifamily property owners to better attract and retain tenants and increase property values.

But as this report uncovers, the multifamily industry has been slow to install EV chargers and lags the rate of EV adoption in most markets. The reasons are manyfold, but perhaps the biggest is a mismatch between what the EV charging industry has been *selling* — and the *needs and preferences* of both apartment property owners and their EV-driving tenants.

At Amperage Capital, we know that selecting, installing, and managing EV charging hardware can seem daunting. As an infrastructure investor and operator, focused on addressing electric vehicle charging solutions in apartment communities, we launched this new report in partnership with EVAdoption, a leading electric vehicle analyst firm.

The report outlines the state of the EV and EV charging industry, highlights the key challenges for multifamily property owners to provide a superior and convenient EV charging amenity, and closes with recommended solutions to help mass adoption of electric vehicles take place.

KEY FINDINGS & HIGHLIGHTS IN THE REPORT INCLUDE:

- Based on EV ownership growth rates, the multifamily industry is not currently approaching EV charging in a sustainable way. This is evidenced by the lack of adoption by apartment dwellers and inability to search for EV charging as an amenity on apartment search websites.
- In most cases, those who live in apartments are at a disadvantage when it comes to charging, resulting in much lower EV purchases by this demographic versus those who live in single-family homes. Nearly half of apartment dwellers lack access to “home” charging versus only 5% of single-family homeowners.

We hope you find this report extremely helpful as you consider adding new EV chargers at your apartment property or are upgrading or expanding your existing deployment.

If you have questions that are not addressed in this guide or would like to speak with someone to help guide your EV charging journey, please don't hesitate to contact Amperage Capital at 704-604-5944.

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EVAdoption, LLC

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Amperage Capital

Glossary

Electric Vehicle (EV): The term “electric vehicle” includes both BEVs and PHEVs but NOT regular hybrids or fuel cell vehicles.

Battery Electric Vehicle (BEV): Electric vehicle stock being defined as fully battery electric. BEVs are powered solely by an electric motor that gets its energy source from a battery. Examples of BEVs include the Nissan LEAF, Chevrolet Bolt, all Tesla models, Jaguar I-PACE, and Fiat 500e.

Plug-in Hybrid Electric Vehicle (PHEV): PHEVs can operate in either electric mode like a BEV OR via an internal combustion engine. Example models include the Chevrolet Volt, Honda Clarity PHEV, BMW 530e, Chrysler Pacifica Hybrid, and Toyota Prius Prime. Note some models are available in multiple powertrain versions such as BEV, PHEV, ICE, fuel cell, and regular hybrid.

ICE: Internal combustion engine (gas, diesel).

DC Fast Charging: DC fast charging stations are about the size of a gas pump and typically deliver ~150 miles of range in 30 minutes. Actual charging times vary based on several factors including the power of the DC fast charger (they can range from about 50 kW to 350 kW), the maximum power acceptance of the EV, the battery state of charger, outside temperature, and more. Tesla’s Supercharger network is an example of DC fast charging.

Electric Vehicle (EV) Charger: These are the individual charging hardware equipment (pedestals or wall mounted) used to charge electric vehicles. EV “chargers” are also often referred to as “EVSEs,” “ports,” “plugs,” “outlets,” “connectors,” “sockets,” and “charging stations.” The latter can cause confusion, as the term “station” more correctly is used to convey the physical location of a single or multiple chargers. *For this report we are using “charger” to refer to the physical charging device (not location) and regardless of the number of plugs the station may have. Technically, however, the “charger” is actually on the electric vehicle, but “charger” has become the simpler, and more easily understood term for consumers.*

Level 1 Charging: These chargers or outlets use a normal 120-volt plug found on any standard household outlet. The slowest form of charging, this setup typically provides between 2 and 5 miles of added range per hour of charge.

Level 2 Charging: These EV chargers use a higher-output 240/220-volt power source, like the one that washers and dryers plug into. Charging times are much faster than with a Level 1 EV charger. A typical BEV can add 100 miles of range in 3-4 hours.

Electric Vehicles in Operation (VIO): Electric vehicles in operation is the total cumulative number of BEVs and PHEVs that have been sold, minus the number of EVs that go out of operation each year due to mechanical issues or crashes.

Electric Vehicle (EV) Sales Share: EVs sold (registered) as a percentage of a total of light passenger vehicle sales.

Light Passenger Vehicles: Light vehicle means a motor vehicle commonly referred to as an automobile, van, sport utility vehicle, or truck having a manufacturer's rated capacity of 1 ton or less.

Section 1

EV Market Overview & State of the Industry

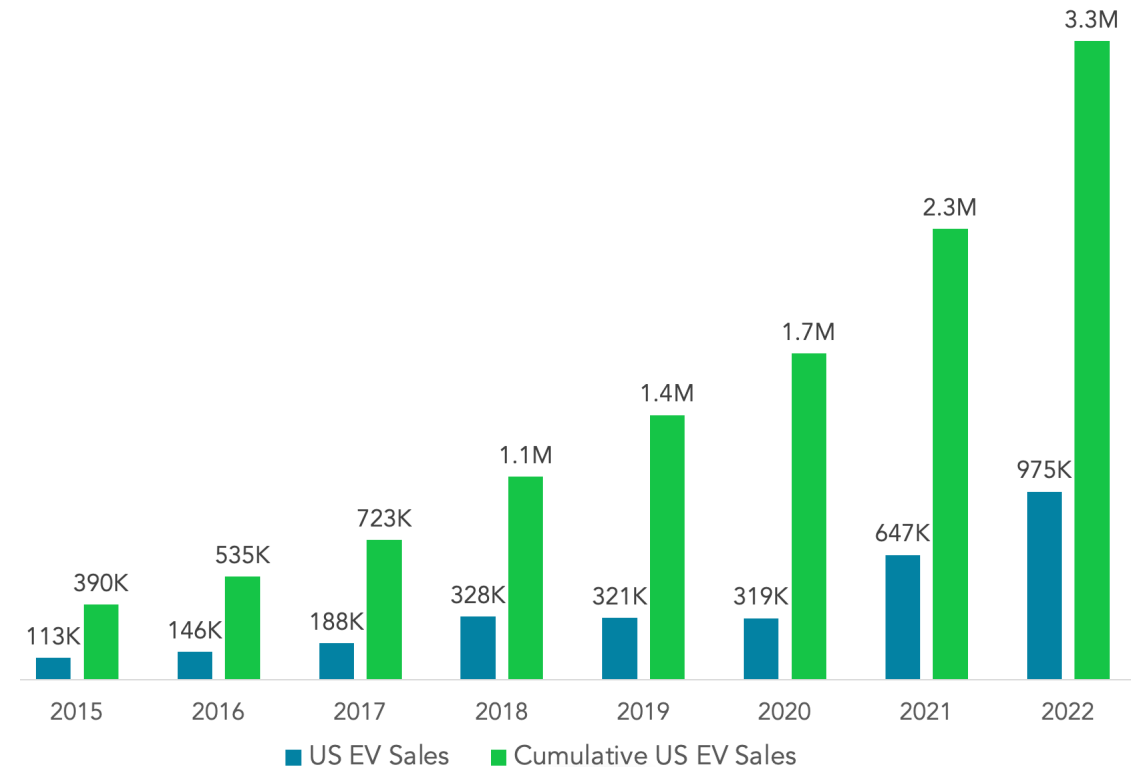
US EV Sales Tripled in the Last Three Years

As of 2022, US EV* sales reached 975K, growing 8.6X since 2015. Though sales were basically flat for the years 2017-2020, sales doubled in 2021, and **grew nearly 51% in 2022 over 2021**.

When looking at the cumulative number of EVs sold, the US reached 3.3 million in 2022, up from just 390K in 2015 and 1.7 million in 2020, an increase of 94% in just two years. As EV sales reach into the millions each year, the compounding effect becomes significant, with the number of EVs on the road doubling every 2-3 years.

Especially in high EV-adopting markets, multifamily owners could see the number of tenants driving EVs double each year.

*EVs include both BEVs and PHEVs



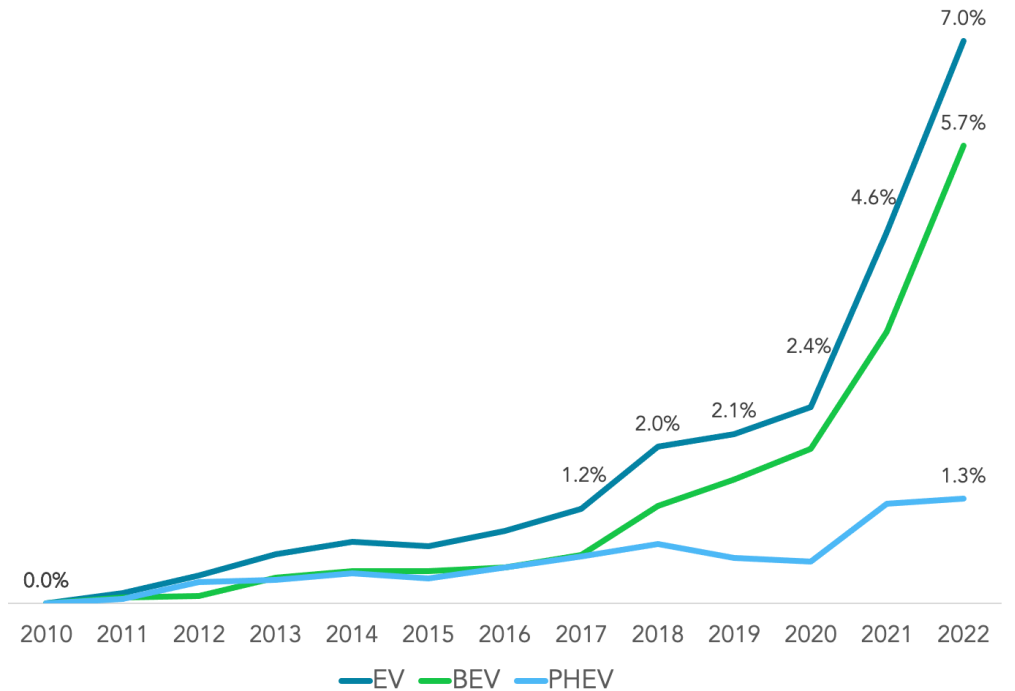
Data Source: Alliance for Automotive Innovation / S&P Mobility | Analysis/Chart: EVAdoption, LLC

EV Sales Share Reaches 7% in 2022

The US EV sales share* reached 7% in 2022, with BEV sales accounting for most of the market share at 5.7%. For the ten years from 2010 through 2020, the US EV sales share grew slowly and steadily and then jumped to 4.6% in 2021, after ranging from 2% to 2.4% the prior three years.

In late 2017, Tesla released the mainstream-priced Model 3 BEV, which quickly became the first high-volume selling EV in the US and led to the outgrowth of PHEV sales. The relative affordability of the Model 3 proved that there is huge demand for affordable BEVs in the US. The BEV sales share increased nearly 10-fold since the 0.60% sales share in 2017 to 5.7% 2022.

In the same period (2017-2022), however, the PHEV sales share only increased to 1.3% from 0.6%. In addition to the huge sales of the Tesla Model 3 and Model Y driving the spike in BEV sales and sales share, automakers only introduced a few new PHEVs, versus dozens of new BEV models.



Data Source: Alliance for Automotive Innovation / S&P Mobility | Final 2022
Share is Estimated Analysis/Chart: EVAdoption, LLC

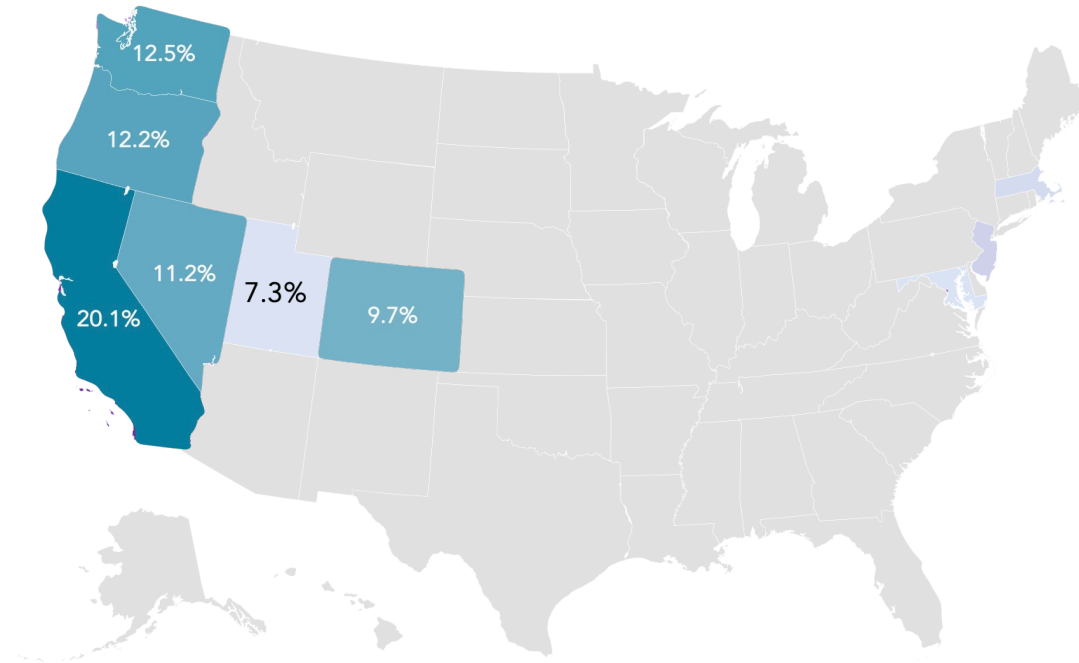
*EV Sales Share (EVs Sold as a Percentage of a Total of Light Passenger Vehicle Sales)

States With Highest Levels of EV* Adoption (Q3 2022)

EV sales are increasing rapidly in nearly every state, but if you have multifamily properties in these top EV adoption states, adding chargers to your multifamily should be a top priority.

TOP 12 STATES BY EV SALES SHARE** (Q3 2022)

1. California (20.1%)
2. District of Columbia (14.9%)
3. Washington (12.6%)
4. Oregon (12.2%)
5. Nevada (11.2%)
6. Colorado (9.7%)
7. Hawaii (9.1%)
8. New Jersey (8.6%)
9. Connecticut (7.9%)
10. Massachusetts (7.8%)
11. Utah (7.3%)
12. Maryland (7.2%)



TOP 12 STATES BY EV SALES (Q3 2022)

1. California (74.8K)
2. Florida (17K)
3. Texas (16K)
4. New York (10.3K)
5. New Jersey (9K)
6. Washington (7.7K)
7. Illinois (7.3K)
8. Georgia (5.6K)
9. Colorado (5.5K)
10. Pennsylvania (5.5K)
11. Arizona (5.5K)
12. Massachusetts (5.3K)

**EV Sales Share (EVs Sold as a Percentage of a Total of Light Passenger Vehicle Sales)

*EVs include both BEVs and PHEVs | Data Source: Alliance for Automotive Innovation / S&P Mobility | Analysis/Chart: EVAdoption, LLC

New BEV Sales Forecast To Reach Nearly 8 Million in 2030

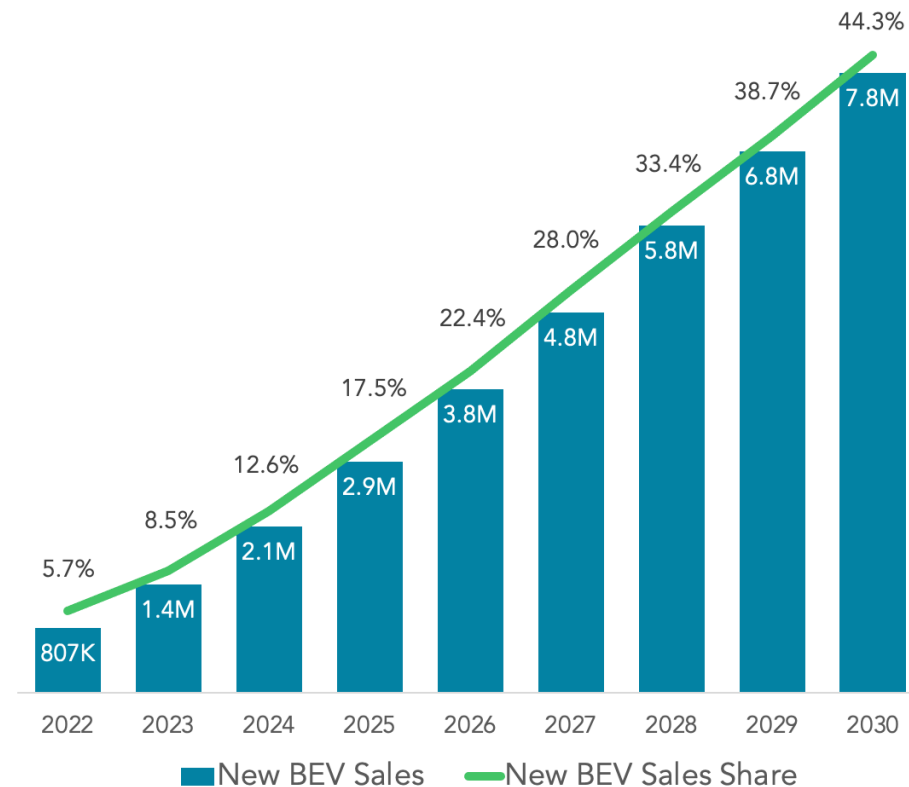
2030 BEV SALES SHARE TO REACH 44% IN 2030 VS. 5.7% IN 2022

New BEV sales in the US are forecasted to reach 7.8 million in 2030, an increase of 867% versus the 807K estimated for 2022.

The new BEV sales share is forecast to reach 44.3% by the end of 2030, up from an estimated 5.7% for 2022. The EVAdoption forecast also suggests that the federal administration's goal of reaching 40%-50% of new vehicle sales being electric in 2030, is in fact within reach.

This significant growth in BEV sales means that more than 32 million BEVs would be on the road in the US in 2030, up from roughly 3.1 million vehicles on the road in the US at the end of 2021.

The practical implication? A multifamily owner/manager that has perhaps 2-3 tenants driving EVs today, could easily see that grow to **30 or more tenants** in 2030.



Forecast & Chart: EVAdoption, LLC

Section 2

What's Driving EV Adoption in the US?

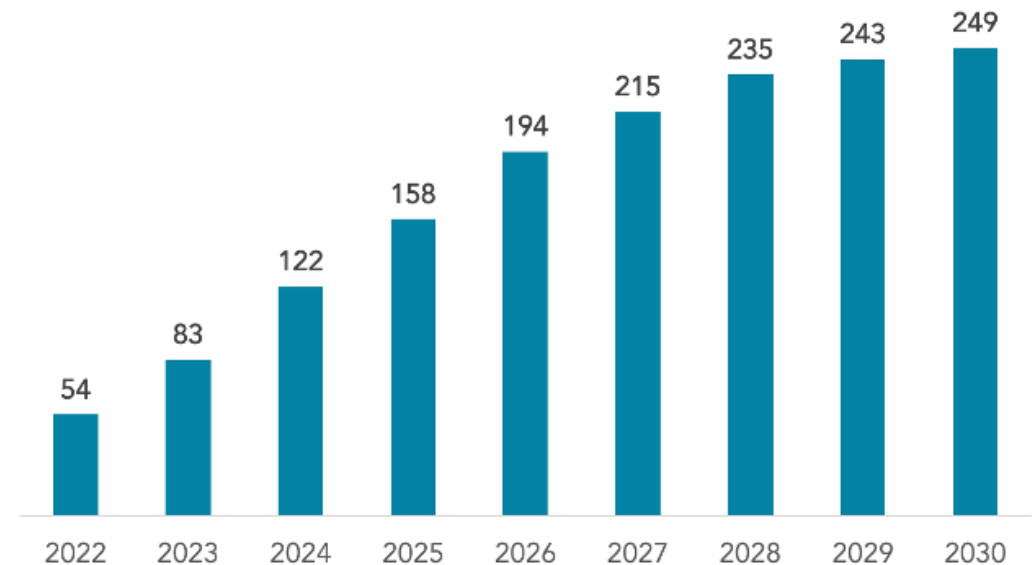
Supply of EV Models

MODEL AVAILABILITY: Over the next few years, dozens of new EVs are coming to market. In fact, EVAdoption forecasts that the number of full battery electric vehicle models available will rise to 122 in 2024, more than double the 54 available in 2022.

And by the end of 2030, the number of BEV models will grow to roughly 250, a doubling again from 2024. Key to this growing supply, however, is not just the number of new models, but the variety across popular segments such as pickups, large SUVs, and small crossovers.

The biggest challenge remains getting the cost of EVs closer to that of comparable gas-powered vehicles to eliminate cost differential as a hurdle to buyers. **By 2024, nearly 40 new EVs will be under \$40K.**

BEV MODELS TO INCREASE TO 249 IN 2030 FROM 54 IN 2022



Research, Forecast, & Chart: EVAdoption, LLC 2023

Rising Driver Interest

With EV sales nearly doubling in 2022, US consumers are clearly starting to embrace electric vehicles in a significant way. Attracted to their quick acceleration, high-tech features, lower refueling, and maintenance costs — EVs are no longer just of interest to people concerned about eliminating tailpipe emissions.

In fact, according to a 2022 Consumer Reports survey, 14 percent of American drivers say they would “definitely” buy or lease an electric-only vehicle if they were to buy a vehicle today. That’s up markedly from the 4 percent who said the same in 2020. An additional 22% of respondents said they would seriously consider buying or leasing a BEV.

36%

**of Americans plan to buy/lease a BEV
or are seriously considering doing so**

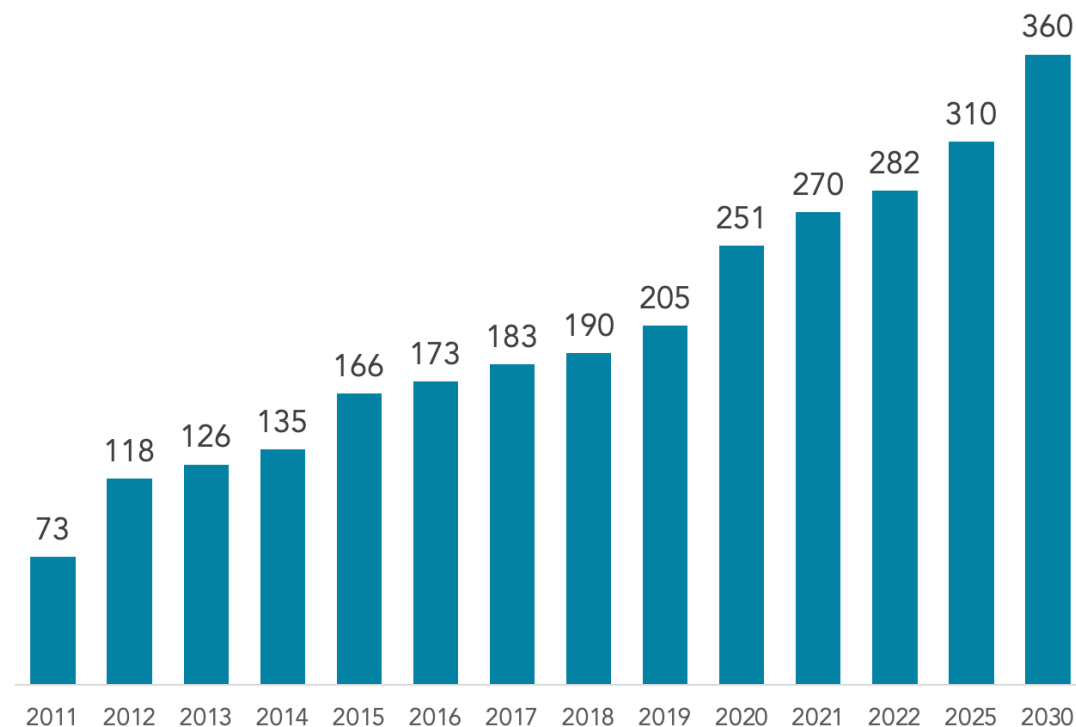
Source: CR nationally representative survey of 8,027 US adults conducted Jan 27 – Feb 18, 2022 | Includes * “definitely buy” (14%) and “seriously consider” (22%) responses

Increased EV Battery Range

New BEVs have seen significant increases in battery range since 2011. In 2022, the average range of BEVs was 282 miles, 3.9 times that of the Nissan LEAF's 73 miles of range in 2011.

The increase in average range has been driven by a combination of several BEV models with 300+ and even 400+ miles, along with many new BEVs having 250-300 miles or range.

As the volume of EV and battery production scales into the millions, combined with new batteries that have higher energy density at a lower cost, average range is expected to reach 360 miles by 2030. While 200-250 miles is generally plenty for most drivers and their daily/weekly driving habits, numerous surveys point to a majority of consumers wanting and expecting 300 or more miles of range. As dozens of new 300+ mile range EV models across all segments and price points become available this decade, "range anxiety" becomes a non-issue for buyers reticent to "go EV."



Research, Forecast, & Chart: EVAdoption, LLC 2023

Available Consumer Incentives

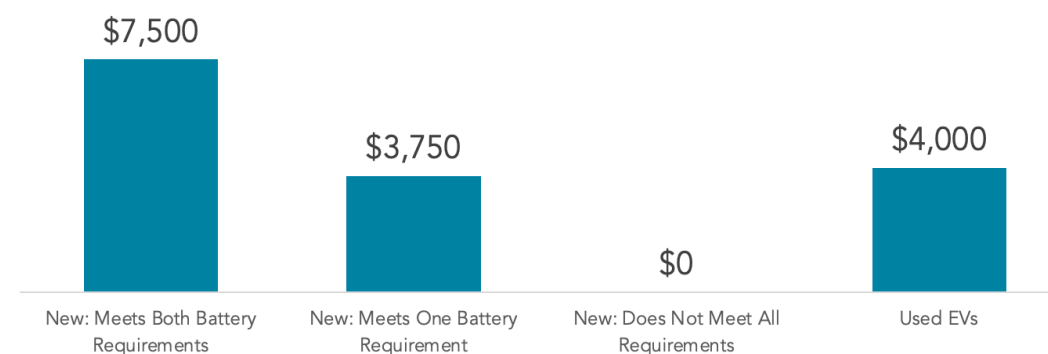
FEDERAL EV TAX CREDIT: With the passage in 2022 of the Clean Vehicle Credit (CVC), which was part of the Inflation Reduction Act, the previous 200K manufacturer sales cap was eliminated, restoring tax credit availability for EV models from Tesla, GM, Ford, and Toyota. **Additionally, a first ever tax credit for used vehicles of \$4K was included.**

Several new qualifying requirements were added, however, including for vehicles (assembly in North America, MSRP caps, battery minerals, and components) and buyers (Adjusted Household Income caps). In the near term, these requirements will eliminate some models and buyers from qualifying for the tax credits, while also making them available to some models again and to consumers who prefer used vehicles.

Part of the exciting news is that the highest-selling EV models in the US, such as the Tesla Model Y and Model 3, and Chevrolet Bolt will again qualify for the tax credit, which should lead to even higher sales volume. And in two-three years, many more EVs will qualify for the tax credit, bringing dozens of models into near cost parity with similar gas-powered vehicles, fueling further growth in EV sales.

STATE TAX CREDITS & REBATES: Many states and utilities also offer a variety of incentives, including rebates of up to \$5K, and several states do not charge sales tax on the purchase of EVs.

Depending upon where a buyer lives, they can potentially take advantage of as much as \$13K in federal, state, and utility incentives to reduce the cost of a new EV. These incentives for new and used EVs may also be more beneficial to renters, who often have lower household incomes than homeowners.

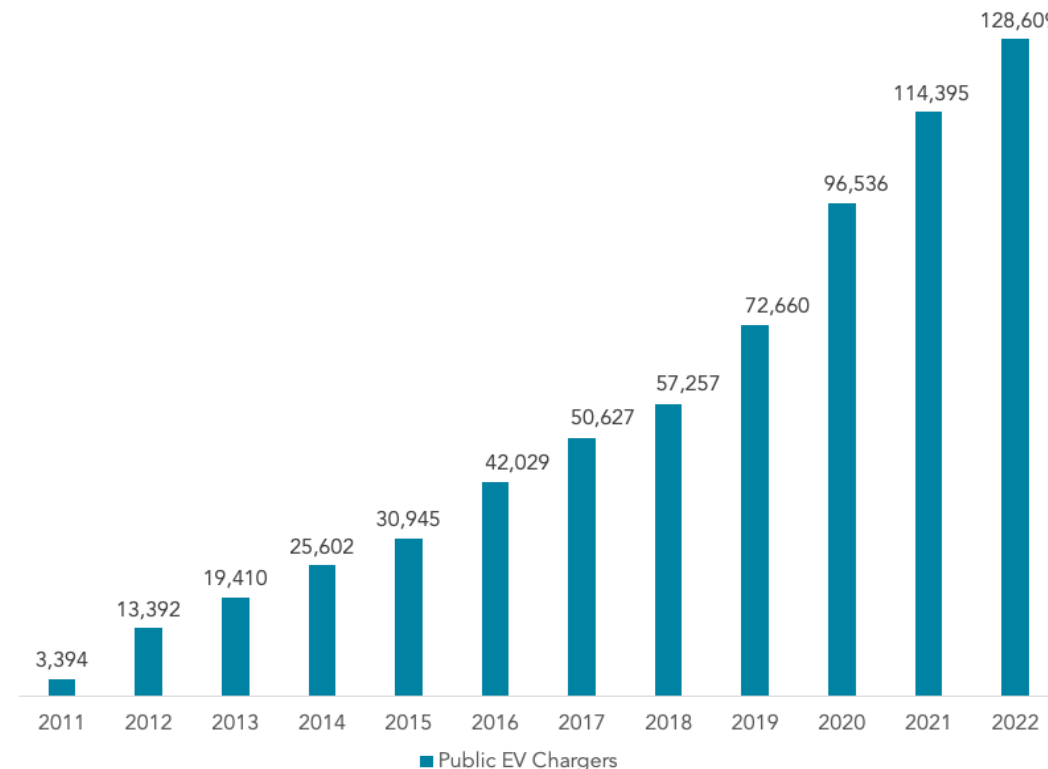


Growing Charging Infrastructure

One of the keys to mass adoption of EVs in the US is having adequate EV charging infrastructure. While most EV drivers charge where they live about 90% of the time, they will need to rely on public charging when taking road trips and weekend jaunts to the mountains or beach. And those without convenient access to charging where they live will need to rely on charging where they work, shop, eat, or play.

Fortunately, billions of dollars from both private and public sources are being invested in US EV charging infrastructure. In fact, an estimated \$35 billion will be invested in public charging the rest of this decade, including \$5 billion as part of the National Electric Vehicle Infrastructure (NEVI) program. These programs and investments give EV drivers confidence they will be able to access convenient charging wherever they travel.

Since 2011, the number of public Level 2 and DC fast chargers increased 38-fold, and 2.5 times since 2018. With the huge increase in EV sales expected this decade, hundreds, if not thousands, of companies are racing to build out chargers wherever people park their cars. As consumers increasingly notice EV chargers at the local mall, coffee shop, or where they work, concerns about availability of chargers and range anxiety become less of a hurdle to mass adoption.



Data: Alternative Fuels Data Center | Research, Analysis & Chart: EVAdoption, LLC 2023

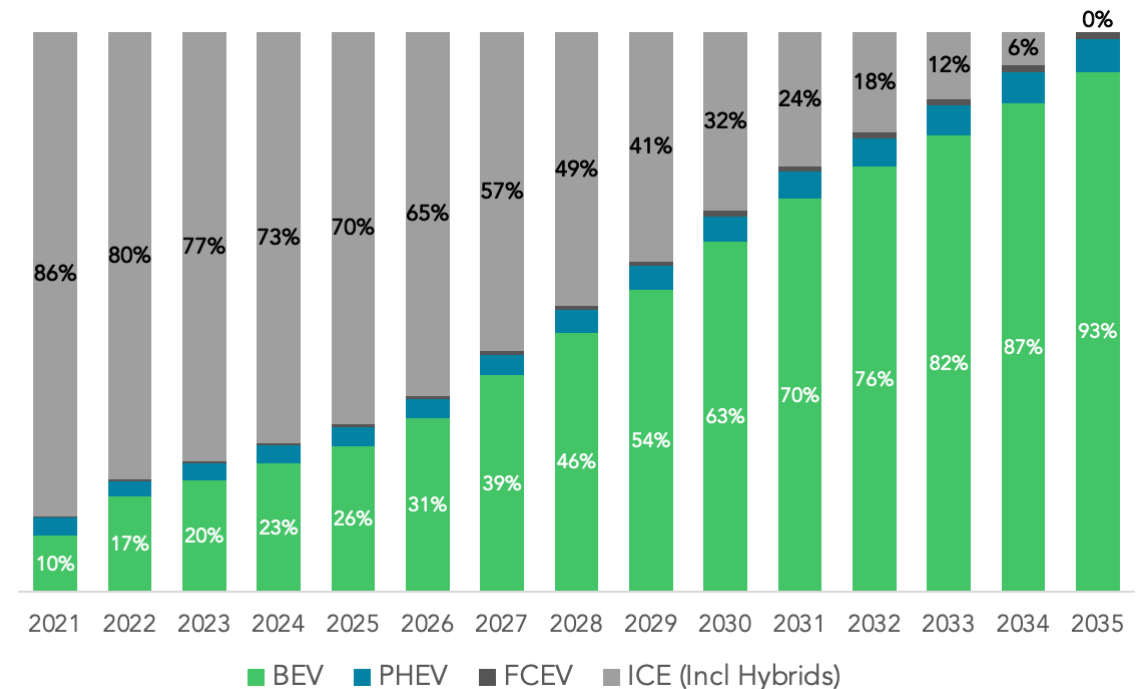
Regulations & ICE Bans

FEDERAL ADMINISTRATION'S "50% ELECTRIC VEHICLE SALES BY 2030" GOAL: While not a binding regulation, the goal has lit a fire among the leading automakers — and all have said they should be able to reach 40% to 50% of their production models being electric by 2030.

CALIFORNIA AIR RESOURCES BOARD (CARB) 2035 BAN OF NEW ICE VEHICLES: In August 2022, CARB approved regulations that will ban sales in California of new gas- and diesel-powered vehicles in 2035. The significance of the CARB ruling is that many of the 14 states that follow the CARB zero emission vehicle guidelines may also adopt the 2035 regulations. In fact, in recent months Washington, New York, Oregon, and Massachusetts have all confirmed they will follow the California regulations.

These goals and bans — together with growing consumer interest — are driving automakers to significantly increase investments in EV and battery factories and scale up production. In 2022, consumer demand for EVs outstripped supply, and these regulations will provide additional motivation for automakers to ramp up their factories.

FORECAST OF CALIFORNIA EV SALES SHARE



Research, Forecast, & Chart: EVAdoption, LLC 2023

EV Charging Incentives & Grants

One of the main hurdles to consumer adoption of EVs is the perceived and actual need for more EV chargers. But deploying chargers can be quite costly. Fortunately, a number of incentive programs, including grants, loans, rebates, and tax credits have become available to help businesses buy and install chargers. These incentives are available from four main source types:

FEDERAL

Through the National Electric Vehicle Infrastructure (NEVI) program, federal funds are available to deploy EV chargers on highway corridors and are disbursed by each state.

Qualifying businesses may also be eligible to receive a 30% tax credit up to \$100K for installing EV chargers.

STATE

Many states offer incentives for EV charging, including infrastructure grants, and will disperse funds from NEVI and other federal infrastructure programs.

California also offers carbon credits through its 'Low Carbon Fuel Standard' (LCFS) program, which can help offset the cost of EV chargers. (These credits are not available to multifamily owners.)

LOCAL/REGIONAL

Cities, regional governments, and air quality management boards frequently provide EV infrastructure grants.

UTILITY

Utilities are a major source of EV charging incentives from "make-ready" programs which cover adding additional power supply and equipment, to charging hardware rebates. These incentives are generally available for multifamily properties.

Section 3

The Case for EV Charging at Multifamily Properties

Why Your EV-Driving Tenants Want Access to EV Chargers

When developing an EV charging program for multifamily properties, it is critical to understand the importance electric vehicle drivers place on having access to chargers.

Electric vehicles are “refueled” differently than gas-powered vehicles, as drivers charge their EVs while their car is parked, and they eat, shop, relax, and sleep. After a drive home to their apartment, an EV driver wants to be able plug into a charger, without having to wait for other tenants or even charge offsite.

A key benefit for tenants is that access to charging at their apartment can eliminate the need to go offsite to a public charger. Further, an assigned parking stall with charger access means your tenants have the same charging experience as a homeowner — which is what apartment tenants desire.

A SIGNIFICANT PERCENTAGE OF US HOUSEHOLDS DON'T HAVE CONVENIENT ACCESS TO CHARGE WHERE THEY LIVE



35% of US households live in apartments



4% of US households live in condos



31% of US population lives in dense urban core cities



10-30+% of US households cannot/do not park in their garage

25% of people with 2-car garages don't park in them at all – (US Department of Energy)

Access to Charging Where Drivers Live is Key to EV Adoption

One of the main hurdles to EV adoption is convenient access to EV chargers, be it where drivers live, work, or regularly shop. According to a 2022 survey by JD Power, 27% of EV buyers who own their home say they are "very likely to consider" an EV, versus only 17% of those who rent.

Part of the difference is homeowners are more affluent, on average, but they are also more likely to be able to charge an EV at their residence. Underscoring this, 34% of those who indicate they are unlikely to consider purchasing an EV say they lack access to any charging capabilities at home or work.

Further, a 2021 study by the UCLA Luskin School, found that in the Southern California market, people who drive EVs and live in apartments/condos versus single family homes have very similar access to charging at their workplace. But only 5% of single-family home dwellers don't have access to charging at their home. Whereas 48% of renters don't have access to charging.

The implication being, that multifamily property owners that don't offer EV charging as an amenity for their tenants are in essence holding back EV adoption, making charging extremely inconvenient, and are missing out on the tenant population, which is to be 16% of US households in 2030. And of the 22 million new households expected to form by 2030, 59 percent will be renters and a high percentage are likely to be EV drivers. Bottom line, multifamily property owners who do not provide a sustainable EV charging solution will have less demand for renters as EV adoption increases.

Apartment tenants are

10x

more likely than homeowners to
NOT have access to EV charging
where they live.

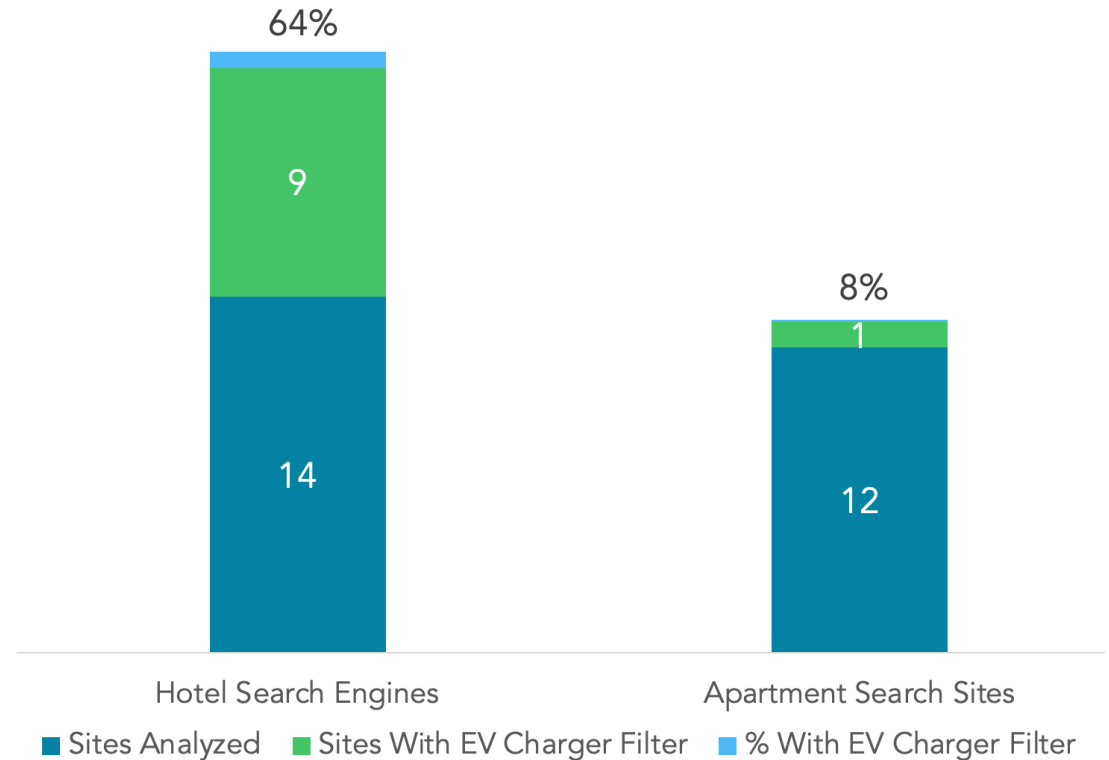
Evaluating Multi-Unit Resident Charging Behavior at Direct Current Fast Chargers |
UCLA Luskin Center for Innovation (LCI), 2021 | Chart: EVAdoption, LLC

Apartment Search Engines Lack EV Charger Filters

Tenants that currently drive or plan to purchase an EV soon want convenient access to EV chargers at their apartment. So, when prospective tenants are searching for their next apartment, the ability to filter properties on popular apartment search sites by those offering chargers is an immensely helpful feature.

However, an EVAdoption analysis of 12 of the leading apartment search sites found that only one of them — Craigslist — offered an “EV charger” filter. When comparing to analysis of hotel booking sites/search engines, 64% or nine of 14 sites offer an “EV charger” search filter.

The comparison is telling as hotels and apartments offer similar amenities to guests/tenants — both of whom typically want convenient access to charge overnight with a Level 2 charger. This lack of a simple EV charger search filter feature on the leading apartment sites is indicative of how far behind the multifamily industry is in recognizing the growing importance of offering EV charging as an amenity to current and prospective tenants.



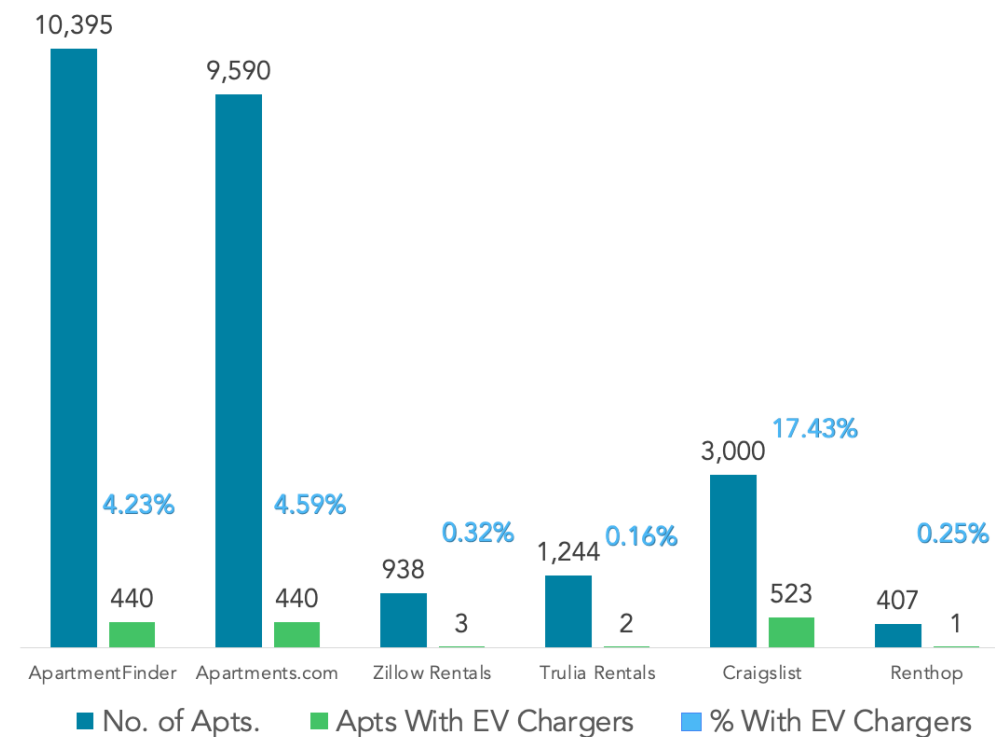
Research, Analysis, & Chart: EVAdoption, LLC | January 2023

Orlando, FL — Sample EV Charger Penetration at Apartment Properties

Solid data on the number and percentage of multifamily properties offering EV charging as an amenity doesn't exist. So EVAdoption analyzed a sample market — Orlando, FL — to help paint a picture of the current state of EV charger penetration at apartment properties. The Orlando market was analyzed using either the EV charging search filter or the general property search function offered in six of the most popular apartment search sites. (The other eight sites did not offer keyword search functionality.)

Three of the apartment search sites analyzed had less than 0.5% of apartment properties with EV chargers, while two were between 4-5%. Craigslist, the only site with an amenity filter for EV charging, had the highest percentage in Orlando at the more than 17%. We suspect that these percentages are lower than actual (except for Craigslist - which may be overstated with properties including nearby offsite chargers), due to limitations of the search engines, the terminology used by an apartment owner, or that they simply didn't include in the property description or amenity list, that their property offered EV charging as amenity.

However, we believe the percentages are directionally accurate, and is further evidence that many multifamily properties may be lagging behind both the local market adoption of electric vehicles, and competitive properties that are moving more quickly to add EV chargers as a highly-valued amenity for tenants.



Analysis of Orlando, FL Apartment Properties Using Leading Apartment Search Sites
Research & Chart: EVAdoption, LLC | January 2023

Tenants Want EV Chargers — And Will Pay Extra

While the data is clear that EV sales in the US are growing rapidly, multifamily owners may still be unsure that their tenants are interested in access to charging where they live.

They are, and renters are also willing to pay a premium for the capability. According to a 2022 National Multi Housing Council and Grace Hill Renter Preferences Survey of 221K renters living in 4.6K communities and 79 markets, 27% said they were interested in EV chargers.

Can't EV drivers install their own chargers? Nine states have right-to-charge laws that require landlords to allow renters to install chargers, but the renter must pay for the installation themselves. This approach is not ideal and raises many issues and potential complications.

While it may not seem like it at the moment in some markets, in the coming years not offering EV chargers will be like not offering amenities such as cable TV, laundry facilities, or a workout room.

27%

**of renters are currently
interested in EV chargers**

The Value & Benefits of EV Charging for Multifamily Owners & Managers

As you design your EV charging programs, it is important to understand and prioritize the reasons for adding EV chargers. These reasons can include:

ATTRACTING NEW HIGH-VALUE TENANTS

While the early EV adopters were higher-income drivers, lower prices and tax credits are helping EVs expand to the general population.

COMPETITIVE ADVANTAGE

EV drivers will increasingly choose an apartment that has EV chargers over those that do not. Where competitors have a less desirable EV charging program, multifamily properties may be able to attract tenants away from other multifamily properties.

INCREASINGLY EXPECTED

EV chargers will transition from “desired” to “expected” in the the next few years.

RETENTION OF TENANTS

Your EV-driving tenants tend have higher incomes on average, and early technology adopters who may also spend more on other add-on amenities than other tenants. Also, by tenants having their own assigned spot to charge, they get to have the same experience of charging as homeowners.

BRAND DIFFERENTIATOR

Adding charging stations positions your property and multifamily brand as being on the leading edge from the perspective of tenant amenities and corporate sustainability goals. Properties not offering EV chargers will be viewed as “behind the times” and less desirable.

“Very soon, it’s going to move from being an amenity to table stakes.”

— Jill Brosig, managing director and chief impact officer for investment management firm Harrison Street, via [Multifamily Dive](#)

Section 4

A New Approach for Multifamily Owners

Failures of the Current Approach to EV Charging Solutions for Apartments

We learned in the previous sections that the multifamily industry is perhaps years behind many others in enabling their customers (tenants) to conveniently charge when their EV is parked. So, what is holding apartment owners back?

ELECTRICAL UPGRADE COSTS

According to US Census data, 60% of US apartment units were built between 1959 and 1989. These older properties generally lack the necessary electrical infrastructure to support several Level 2 chargers at once. As a result, deploying EV chargers can require significant and expensive upgrades, which most property owners are not willing to bear.

SHORT-TERM CAPITAL REQUIREMENTS

Between the cost of charging equipment, power upgrades, installation, and on-going maintenance — property owners must front significant capital, but without near-term payback on the investment.

SHARED CHARGING

It is 11:30 pm, and a tenant's EV is done charging. Assuming, they move it, the next tenant must put on some clothes and head out to the parking lot, move their EV and plug it in. This is the approach that many companies are pushing, and while it reduces costs to the apartment owner, it is an unacceptable solution for EV-driving tenants.

OPERATIONS & ON-GOING MANAGEMENT

EV charging companies love to sell apartment owners their hardware and on-going monthly dashboards. But when you or your tenants have an issue, good luck.

INFLEXIBLE & PROPRIETARY CHARGING EQUIPMENT

Charging as a service (provided by charging hardware vendors) may not be a viable or the best choice for apartment owners, as these vendors offerings are limited to just their products. Multifamily owners, however, are not experts in EV charging, and can be overwhelmed. But a new approach has emerged to take the worry and cost out of EV charging at apartment properties.

A New Approach That Puts Multifamily Owners & Tenants at the Center

Having tracked dozens of approaches to solving the multifamily charging challenge, EVAdoption believes that the following framework will be critical to getting apartment owners on board.

LONG-TERM CAPITAL & TURNKEY OUTSOURCED SOLUTION

Multifamily owners are not experts in EV charging, just as they aren't experts in washing machines, swimming pool pumps, and exercise equipment. Full ownership of the entire charger deployment process and operations has been needed.

By combining long-term capital with an outsourced approach to deploying and operating EV chargers, multifamily owners gain the near-term opportunity to bring EV chargers to tenants, without risking or tying up owner short-term capital. With this model, property owners aren't saddled with maintenance and customer support — but benefit from shared revenue from the chargers, increased property value, and competitiveness with a key amenity.

ASSIGNED CHARGING

By providing tenants an assigned parking space and charger, your tenant has convenient, reliable, and certain access to charging 24 hours per day where they live. This gives tenants the same charging experience as a homeowner and provides an additional source of monthly revenue stream for apartment owners.

HARDWARE AGNOSTIC

Not every multifamily property has the same charging hardware needs, whether it be based on the parking set up, access to power and panels, and even the mix of EV types. As such, when working with a vendor, multifamily owners should have multiple options of EV charging hardware to choose from (not just the one their company sells) that best fits their needs and requirements. Further, a best-in-class, non-proprietary software management solution that works with a variety of charging hardware and is tailored to multifamily property requirements ensures flexibility and scalability for owners.



Our Approach & Services

At Amperage Capital, we pay 100% of construction costs to get your building ready for assigned parking spaces, we own the construction management, and you receive a lease payment and revenue share, contributing to NOI.

With 24/7 dedicated EV charging, your residents will plug in when they return home and wake up to a fully charged EV — all without the interruptions and a painful resident experience.

HOW AMPERAGE PARTNERS WITH MULTIFAMILY COMPLEXES

EV Retrofitting With the Right Infrastructure Finance Partner

Under a lease agreement, we pay for 100% of the cost for at-scale installation of dedicated EV charging spaces.

Revenue Optimization With a Focused NOI Cap Rate Return

Amperage pays a monthly fee to the owner/operators, as well as a revenue share from the small monthly fee tenants pay to reserve a space with an EV charger.

EV Infrastructure With Lifecycle Contract Management

We own the installation & maintenance of the dedicated charging solution while you collect your lease payments and revenue share.

OUR PROCESS

STEP 1: Site Survey

Amperage will survey your property and develop an infrastructure design plan.

STEP 2: Lease Agreement for the Space

Once we've signed the agreement, we'll be able to get started.

STEP 3: Construction

We'll contact you to schedule our build-out once our lease agreement is approved.

STEP 4: Installation

Once we've upgraded the infrastructure, residents will plug in, and you'll start collecting revenue.

Amperage Capital's Software & Solution

SOFTWARE

1. Our software will manage thousands of connected Amperage parking spaces assigned to tenants.
2. The centralized dashboard enables us to easily manage all members remotely.
3. Our software seamlessly creates a driver experience akin to that found in single family homes
 - Connect/monitor
 - Access management
 - Power management
 - Revenue collection

IF THERE ARE ISSUES, AMPERAGE HAS IT COVERED

1. Continuous Monitoring

- Software proactively monitors and alerts Amperage to issues.
- Majority of issues are solved before tenants are affected.

2. 24/7 Support

- 24/7 support via our software partner.
- First call resolution rate of 95% for drivers calling in with issues.
- If a charger is not working or unavailable, Amperage will direct the tenant to another parking space to charge their EV.
- If multifamily owners ask for 10 spots, Amperage will install 15.

3. Simple Hardware

- Level 2 chargers are deployed for simplicity, reliability, and minimal hardware issues or need for maintenance.
- Any handyman can troubleshoot/fix issues that require a site visit.

BUILD TO SCALE

- Chargers installed to handle current demand + ~30% buffer for expansion.
- ~50 spaces will be permitted and wired, ready for capacity increases.
- As EV adoption grows within the building, Amperage simply installs additional chargers.

Amperage Capital's Customer Experience



A different kind of EV charging experience for tenants

With 24-hour assigned EV charging, your residents will plug in their cars at home and refresh their daily miles at night while they sleep — all without interruptions by sharing a charge or paying high electricity costs.

TENANT CHARGING PROCESS

1. **Park:** Tenants park in their dedicated space and activate their charger.
2. **Plug:** Tenants then plug in their EV to refresh their daily miles.
3. **Play:** Then, they head up to their apartment to unwind and relax.

IN-APP CUSTOMER EXPERIENCE

- Each tenant has access to their own, assigned charging space via bluetooth on their phone or other fob device - no Wi-Fi required.
- Charging experience is branded as either that of the property owner/operator or Amperage (decided mutually).
- Because tenants access only their assigned charger, pricing is not listed on the charger as the cost is included in their monthly payment and no other individuals are able to activate that specific charger.
- Phone number for 24/7 phone support is listed directly in charging app.

FAQs

Q: Who owns the infrastructure?

A: Like utility companies, Amperage owns the infrastructure.

Q: Will we be able to use our current electrical infrastructure?

A: Your Owner Representative determines hardware and the essential infrastructure upgrades to charge the EVs. Amperage will work with the utilities when significant upgrades are required.

Q: Who sets the rates for the dedicated parking spaces with chargers?

A: In partnership with the tenant, property owner, and management company, a small monthly fee is determined for their EV charging experience.

Q: Who is responsible for maintaining the charging stations?

A: Amperage is responsible for the maintenance programs supporting all parking garages nationwide.

Q: How does the revenue share work?

A: Our revenue share arrangement provides owner-operators with long-term income without the expense and resources needed to operate and manage the EV infrastructure.

Q: How does Amperage manage EV Adoption Risk?

A: Amperage starts with 50+ charging outlets. When a parking space is leased, the tenant holder receives a parking space with the required charging infrastructure (including the charger).

Q: How long are Amperage contracts with the owner-operators?

A: 10+ years.

Q: How much does a site survey cost?

A: Site surveys are free of charge.

Q: Who pays for the power?

A: Amperage Capital owns the hosted capacity for each charger, enabling the tenant to pay one small monthly bill for power, charging equipment, and space upgrades.

Section 5

About Amperage Capital & Contact

About Amperage Capital

Amperage Capital is an infrastructure investor and operator, focused on addressing a large and rapidly growing gap in infrastructure investment to support residential electric vehicle charging solutions in apartment communities. By paying for 100% of construction costs to get power to parking spaces and the costs of charging equipment, Amperage Capital enables apartment owners and operators to provide their EV driving tenants with assigned EV charging in apartment communities.

Amperage is addressing a major pain point for apartment residents today and paving a path towards accelerated EV adoption by apartment residents. Based in Dallas, Texas, and backed by several large Dallas family offices, Amperage is committed to making charging EVs as simple as parking at home and plugging in - irrespective of where you live.

EXECUTIVE TEAM

Amperage Capital is founded and led by an executive team with more than 40 years experience leading and in senior management roles at global financial services firms, venture capital, private equity, and institutional capital totaling over a billion dollars.

The Team



Farrukh Malik
Co-Founder & CEO



Kelsey Holshouser
Co-Founder & COO



Shannon Johnson
Co-Founder & CRO

Contact Us

Do you want to learn more about EV charging at multifamily properties? Our team is ready to answer all EV charging questions or concerns.

If you have any questions, please email us at retrofit@amperagecapital.com or [fill out our form](#) on our website. You can also call us direct at 704-604-5944.

Follow Amperage Capital on [LinkedIn](#).

