EV Charging at Multifamily Properties

CHARGE at HOME

Charge at Home by Forth

FORTH

Charge at Home provides electric vehicle (EV) charging guidance, tools and support to multifamily decision makers.

www.chargeathome.org

Level Setting with NMHC's 2024 RP Survey

1. EV Ownership Among Renters Varies Significantly by Market with some above 10%
2. Interest in Electric Vehicle Charging at Multifamily Properties grew between 2022 and 2024
3. Just 25% EV-owning renters are satisfied with on-site EV charging set up
4. 1 out of 3 EV-owning renters say they have no charging on-site, strongly indicating EV driving renters go where the chargers are
5. Many renters are considering or for sure buying an EV as their next vehicle

New survey is published every few years. Stay tuned for NMHC's next survey report.

2024's Survey

Why Charging at Multifamily Housing?

For Cities/Utilities/TE industry:

Ensure renters/residents can access reliable home charging

****Help renters** reduce their transportation costs

Increase awareness of EVs for MFH residents

End goal -> reduce GHG emissions, **shift load if managed, and improve local air quality

Key stats:

- 100+ Million People live in MFH properties
- 75% of apartment households have at least 1 vehicle

Why Charging at Multifamily Housing?

For MFH Apartment owners/managers/developers:

Attract and retain EV driving tenants

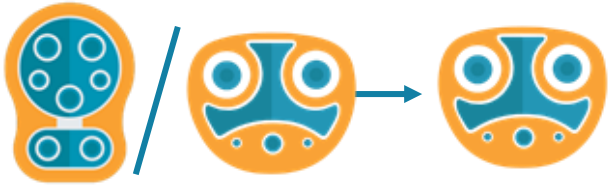
Differentiate their properties from similar competitors

****Demonstrate a commitment** to sustainability

How Apartment stakeholders justify EV Charging:

1. Attract higher income/wealthier tenants via property differentiation and ideally reduce turnover (tricky to track, but key NOI driver)
2. Increase parking fees (NOI driver)
3. Mark up electricity prices (Key for covering some of EVSE OpEx typically)
4. Increase property values (afterthought for some)

EV Charging at MFH Properties: The Details

Slowest → Fastest			
Level	**Level 1**	**Level 2**	**Level 3 (DC Fast Charging)**
Use Case	Home	Home/Work/Public	Public
Power	<2 kW *(Usually 1.2 kW)*	2.4 - 19.2 kW *(Usually 6-10 kW)*	25 - 350 kW *(New chargers are ≥150 kW)*
Plug Shape (Into Vehicle)	 J1772	 NACS/J3400*	 CCS / NACS → J3400*
Outlet Shape	 120 V	 208 or 240 V **	Hardwired only 
Cost	**$**	**$$**	**$$$$**

Multifamily Charging Configurations

First-Come, First-Served (Communal) Chargers:

- Extra/unused parking spots required
- Power-sharing can reduce # of circuits needed
- Typically requires users move car after charging is complete
- Reservation systems can improve UX

Dedicated Chargers for Assigned/Deeded Spaces:

- Increase home value for condo owners
- Better UX for EV drivers, but more circuits/higher costs
- Usually better for utility DR programs

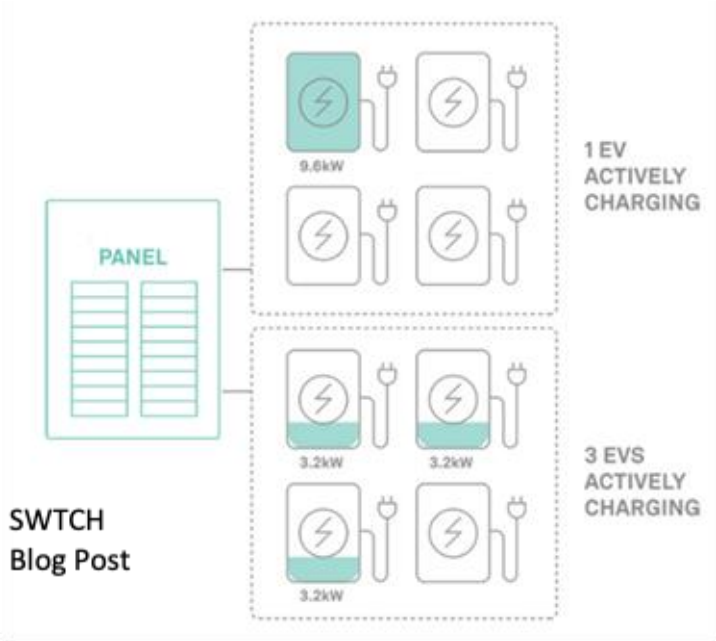
What is “EV-Readiness”, and why is it important?

Electrical infrastructure that supports quicker and lower-cost installation of charging ports in the future

What does EV-readiness look like?

- **Electrical panels** with available breaker spaces
- **Conduit** runs directly to the parking spaces
- **Junction boxes** and **outlets** close to parking spaces

Energy Management Systems (EMS/EVEMS)



- Monitor, control, and optimize electricity flow via software or hardware-enabled solutions
- Balancing UX and electrical constraints
- Scalability
- Transformer sizing

- Recommendations
  - Communal lower limit: ~5kW
  - Dedicated lower limit: ≤2kW

Lessons Learned from MFH Conversations

1. **Apartments**
   a. For New Builds- developers have to understand the value
   b. For Existing Properties - Energy management systems

2. **Condominium Boards**
   a. Communal chargers often needed to get buy-in for upgrades that enable dedicated configurations
   b. Typically lean toward low/no OpEx designs
   c. One-off installs where unit meters are close to parking spaces can use direct-to-meter wiring

Cities can support EV charging at MFH properties:

- Act as a coalition builder - connect properties with chargers to people asking questions
- Put resources online so MFH stakeholders can learn more
- Permitting streamlining
- Density or other property design bonuses if EV-readiness is done
- Permit or impact fee reductions or waivers for specific types of projects
    - **Note that this may also help eliminate un-inspected installs

Charge at Home provides free electric vehicle (EV) charging guidance, tools and support to multifamily decision makers and residents.

- Market-segmented multifamily EV installation toolkits
- EV charging project builder tool, designed specifically for MFH properties
- Educational one-pagers
- MFH EV charging project case studies
- A comprehensive glossary of terms
- Communication templates for updating residents about EV charging policies
- Resident empowerment resources
- Free EV charging consultations

Case Study Library

Case studies highlight:

- Innovative solutions like direct-to-meter wiring
- Impact of incentives
- Value of EV-readiness
- Varied charging setups for different properties

More case studies coming soon in 2026.

Learn more at: **www.chargeathome.org/case-studies**

Charge at Home's Consultation Program

www.chargeathome.org/free-consultations

FORTH ROADMAP
CONFERENCE

CALL FOR PROPOSALS

September 13-15, 2026

Seattle, Washington

roadmapforth.org

Questions about multifamily charging or Charge at Home? Contact us!

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Extra Slides

Charging Use Cases	Charger Type	Dwell Time
Single Family Homes	**L1/L2**	**>>10 hrs L1** and **5-10 hrs L2**
Multi-family Homes	**L1/L2** But it can depend on electrical configuration	**<10 hrs First-Come, First-Served Charging** **>10hrs Dedicated Charging** Depends on parking configuration
Public Charging (Corridors	**L2/DC**	**0-8 hrs generally**
Destination (Non-public)	**L2**	**3-10+ hrs**
Workplace	**L1/L2 (In unusual cases DC for retail)**	**0-10 hrs**
Corridor Charging	**DC**	**10-90 minutes**
Fleet (depends on fleet vehicles/use profile)	**L2/DC (Depends on fleet vehicles/use profile)**	**Varies**

MFH Property Electrical Basics

MFH electrical setups vary widely

- Individual units vs whole-building metered
- High-rise busbar systems vs standard electrical rooms
- Garden-style properties
- Transformer capacity and panel setup vary by permitting authority/state laws, construction year, unit appliances, and presence of a central hot water boiler and similar.

The most expensive Items:

- **Utility upgrades**
- **Master- and sub-panel upgrades**
- **Trenching + Long wire runs**
- **Electrician time**

Less expensive items that decision-makers spend considerable time thinking about:

- EVSE units/Networked Brands
- Internet Connectivity

Clocktower Electric

Barriers to EV Charging at Multifamily Properties

1. Electrical Capacity Constraints

How to address:

1. Future-proof new MFH developments
2. Utilize load management software-enabled chargers
3. Opt for low-power options to reduce upfront costs
4. Quality incentive programs (specifically make-ready)

Barriers to EV Charging at Multifamily Properties

2. Site Design + Accessible spaces

How to address:

1. Clear national design guidance on ADA charging spaces is needed
2. Wiring directly to resident meters difficult
   a. Higher cost, way better resident experience
   b. No third-party charging vendor needed

Barriers to EV Charging at Multifamily Properties

3. Connectivity, maintenance, and repair

How to address:

1. Modular chargers that are cheaper to repair
2. Track long-term OpEx data for EV charging across industry
3. Smart chargers that are not directly connected to the internet

Barriers to EV Charging at Multifamily Properties

4. Short ROI requirements

How to address:

1. Tailor incentive programs by new/existing, property type and market segment to boost participation in target communities
2. Quality incentive programs
3. Opt for low-power options to reduce upfront costs

Barriers to EV Charging at Multifamily Properties

5. Incentives overlook differences in MFH property types and segments

How to address:

1. Utility knowledge sharing
2. Industry development- Time

Barriers to EV Charging at Multifamily Properties

6. Property Owners/Managers/Developers knowledge gap

How to address:

1. Industry education about growing demand, EV charging technology, and available incentives
2. Industry development – will take time