

Multi-Unit Dwelling (MUD)  
Electric Vehicle (EV) Charging  
Technology Solutions:

## Offsite Owned- Operated Charging Stations



### MUD BARRIERS TO INSTALLING EV CHARGING

**Parking Limitation:** Limited number of parking spaces can be allocated for shared EV charging

**Parking Operation:** MUD Property Managers need to maximize shared EV charging usage to minimize the number of shared parking spots. Alternatively, MUD Property Managers need a way to share power among a group of dedicated charging stations at assigned parking spots that minimizes disruption to parking spot logistics.

**Electrical Infrastructure Cost:** Conventional solutions require a dedicated circuit/power for each charging station. MUD properties without sufficient electrical capacity for the desired number of charging stations will require costly electrical infrastructure upgrades.

**Charging Station Cost:** MUD property managers want to use cost-effective charging stations that provide the required functionality

**Operating Cost:** It is challenging for MUD properties to establish a business case for offering EV charging to residents. MUD Property Managers want lower charging network provider fees and strategies to reduce power cost, along with ability to bill for usage.

### HOW OFFSITE OWNED-OPERATED CHARGING STATIONS CAN ADDRESS EV CHARGING BARRIERS

**Parking Limitation:** Does not require any changes to parking management approach

**Parking Operation:** The charging stations are located off-site. Does not require any changes to parking management approach

**Electrical Infrastructure Cost:** The charging stations are located off-site. None to MUD property

**Charging Station Cost:** The charging stations are located off-site. None to MUD property

**Operating Cost:** The charging stations are located off-site. No operating costs to MUD property. Users pay commercial public charging rates which may be higher than a MUD-located station could offer.

### Example VCI-MUD Project Innovative Technologies Demonstrations: Electric Vehicle institute



Source: PlugShare

### TECHNOLOGY OVERVIEW

This approach is unique compared to the other technology approaches in the VCI-MUD toolkit because a third-party commercial charging station network provider installs/owns/operates charging stations that are available to the MUD property's residents, as well as the general public. The technology vendor highlighted in the VCI-MUD project owns/operates the charging stations. In this case, the capital and operating costs are the responsibility of the vendor. Another option is for a nearby property to install charging stations that are made available for use by the MUD property residents (e.g., during off-hours). In both cases, charging station usage fees may be higher than a MUD-located station to compensate the third-party vendor's investment and costs. In both cases to make this approach work, the MUD property management will have to work to communicate/partner with nearby MUD/commercial properties to identify a charging station location(s).

