

# Stanford University Housing Provides Ubiquitous and Affordable Low-Power EV Charging Without Electrical Upgrades

Palo Alto, California - University Terrace



## Property Details:

- 112 units | 2 buildings | Midrise | 4 stories each
- Underground garage beneath each building: 128 total EV parking spaces
- Condominium developed by Stanford University specifically for faculty
- Faculty purchase and own units while residing at property
- Property management group operates day-to-day
- 1 Homeowners Association serves the community, both buildings and garages

## EV Charging Project Details:

HOA initiated and led the project to meet resident demand. EV charging was included as an amenity to residents in their purchase agreements. HOA knew the number of EVs on site.

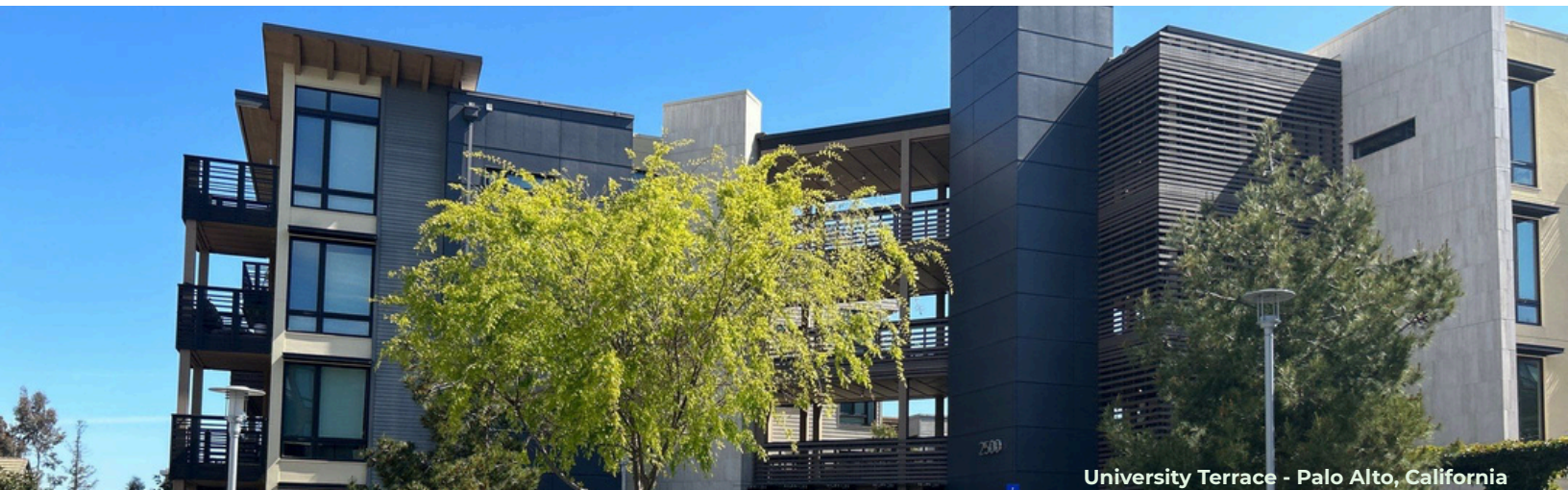
- No service upgrade, meter, or transformer work done
- Assigned parking configuration
- City of Palo Alto provided technical assistance
- 128 parking spaces electrified for EV charging
- 20 Amp breaker (2-pole) per smart outlet
- 64 breakers installed



GoPowerEV SmartOutlets

## Pre-existing EV Charging Set Up:

L2 chargers, many had become non-functional. Pre-existing set up did not meet resident need due to the number of EVs on site.

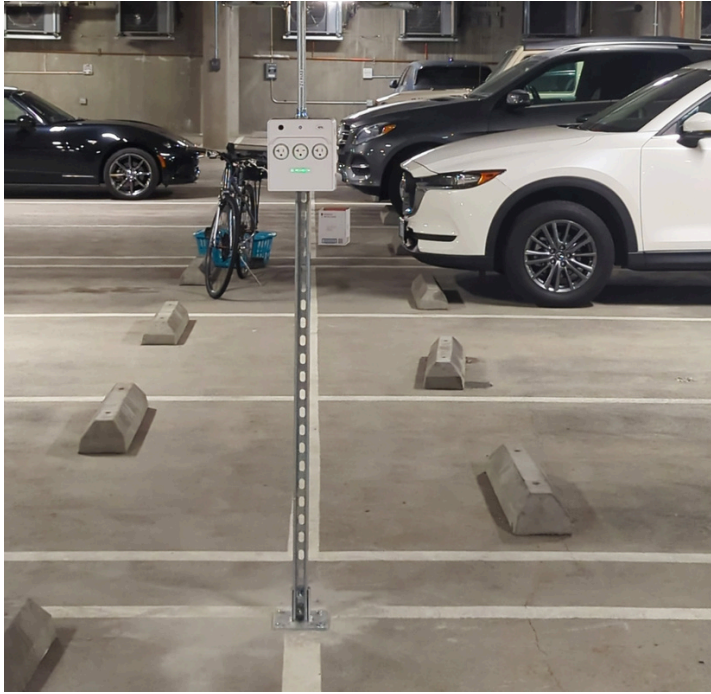


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## Technology Solution: GoPowerEV SmartOutlets & PowerShift Platform

3 outlets for each GoPowerEV SmartOutlet. Two L1 outlet ports on either side; one low-power (20A) L2 port in the middle. The GoPowerEV SmartOutlet can charge 2 EV's simultaneously at L1. If requested by the end user, the equipment can direct all energy to a low-power L2 (240/208V) port, turning off both L1 outlets while it does so. Electron flow is controlled by GoPowerEV's PowerShift technology to meet all users requested charging sessions.

- Resident requests charging sessions and pays for electricity through the GoPowerEV smartphone app
- Access control via property management portal; residents requesting to charge are approved by the property manager.



GoPowerEV SmartOutlets in the University Terrace Garage



GoPowerEV SmartOutlets

## Project Financials:

Project received \$160,000 in incentive funding (\$80,000 per charging project for two properties) through the [City of Palo Alto incentive program](#).

- Total cost before incentives: \$1,776 per EV enabled parking spot
- Property's out-of-pocket cost after incentives: \$526 per EV enabled parking spot

## Installation Process:

GoPowerEV was introduced by the property management company HOA officers. GoPowerEV facilitated the RFP to identify the commercial electrical contractor, JG Electric. Installation took less than 4 months after permit application approval. The building had existing 40-amp circuits planned for EV charging. The installer added small load centers with 20A circuit breakers throughout the garage to disperse energy for the EV enabled parking spots. All residential units now have at least one assigned parking space with EV charging capabilities.

## Project Permitting and Compliance:

The city requires Emergency Power Off (EPO) buttons for fire personnel safety.

## Current Use and Takeaways:

- 35 end user accounts registered & charging at the property
- L1 and low power L2 (LPL2) solutions meet the needs of most multifamily residents
- An electrical service upgrade was avoided by using low-power options
- Incentive programs for low power charging make a significant impact on project cost

