EVS35 OSL2022

Technological Barriers to Electric Vehicle Charging at Multi-Unit Dwellings in the United States

FORTH Empowering Mobility

322

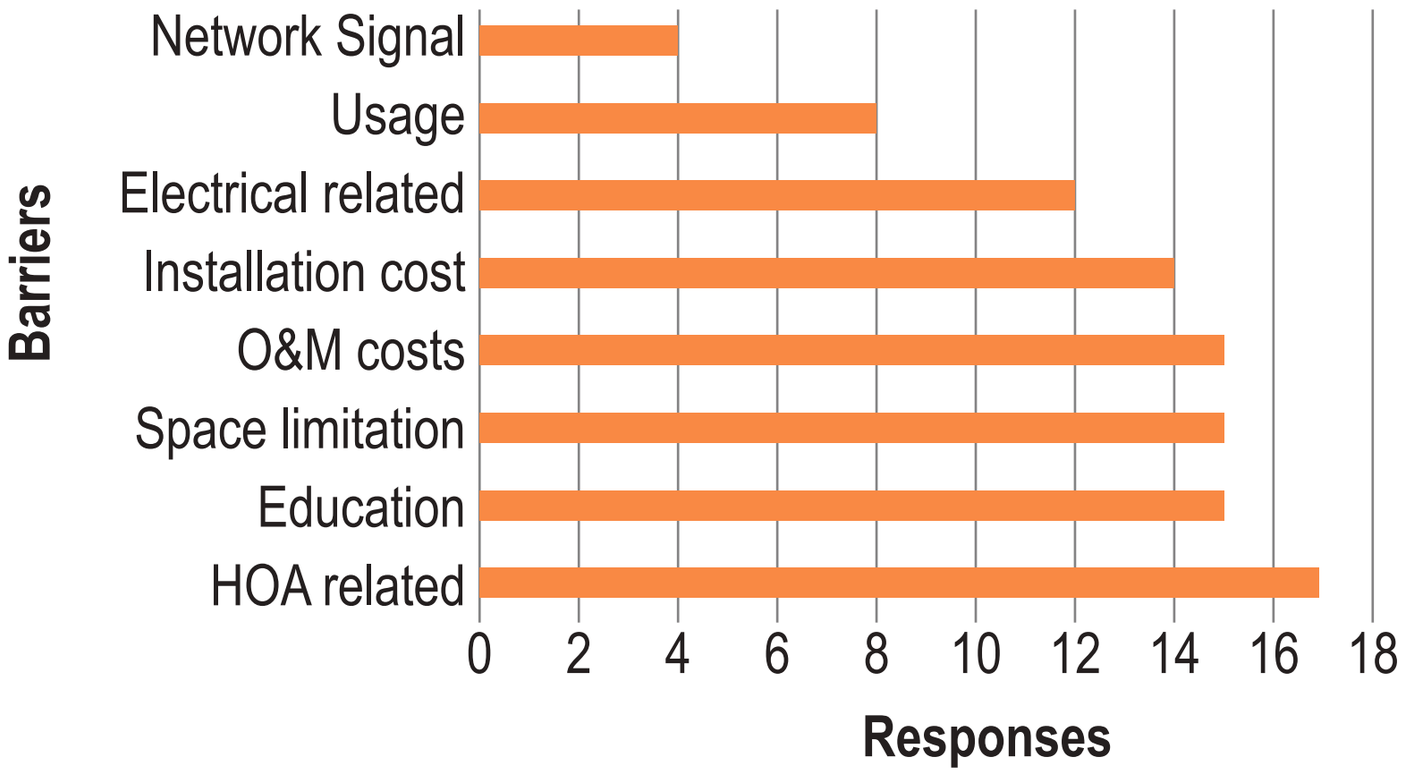
Whitaker Jamieson, Geoff Gibson, Kevin Wood, Russell Owens

WhitakerJ@Forthmobility.org
GeoffG@Forthmobility.org
2KCWood@Energetics.com

Project Summary

Our three-year project analyzed data from commercially-available technologies at and nearby multi-unit dwellings to test their abilities to overcome barriers to accessing charging.

Barriers to Charging at Multi-Unit Dwellings



Barrier	Description and Examples
HOA Related	Decision-maker alignment and bylaw restrictions
Education	Assumptions, misinformation and awareness limit interest in EV charger investment
Space Limitation	No excess parking spots and/or deeded spots
O&M costs	Mobile network, data subscription, and transaction fees
Installation cost	Equipment acquisition, permits, engineering and planning/construction
Electrical related	Adding electrical equipment, performing load studies, upgrading electrical panels
Usage	Unsecured parking allows non-resident charging, unenforced or no idle fees
Network signal	Weak internet signal in parking garages

Technologies Demonstrated

Power Management Systems

Large-scale adaptive load management for a group of chargers

Helps with:
Electrical, O&M Costs

Community Charging Station Management

Software integrated tools to facilitate access, pricing, billing, and idle fees

Helps with:
Usage, Installation Cost, O&M Costs

Shared Electric Circuit Systems

Multiplexing rotational charging for a group of chargers

Helps with:
Electrical, Installation Cost, O&M Costs

For more project details and findings, visit VCI-MUD.org (Online July 2022)