

Driving EV Charging for New Construction



EV Charging Infrastructure in New Construction Should be Simple, Right?

✓ Available electrical capacity & contractor, cheaper installation

Surprisingly, NO!

- ✗ Split incentives & first costs
- ✗ Unfamiliar technology; unclear what's "best practice"
- ✗ Confusing non-standard equipment vendor and service packages
- ✗ New operations concerns: Billing users? Maintenance? Usage rules?



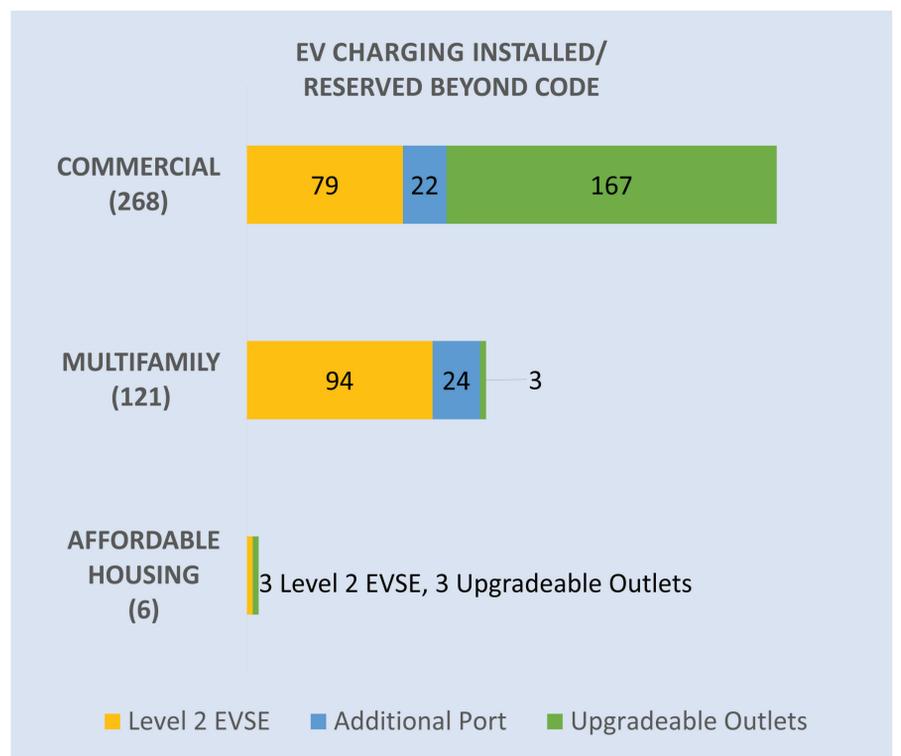
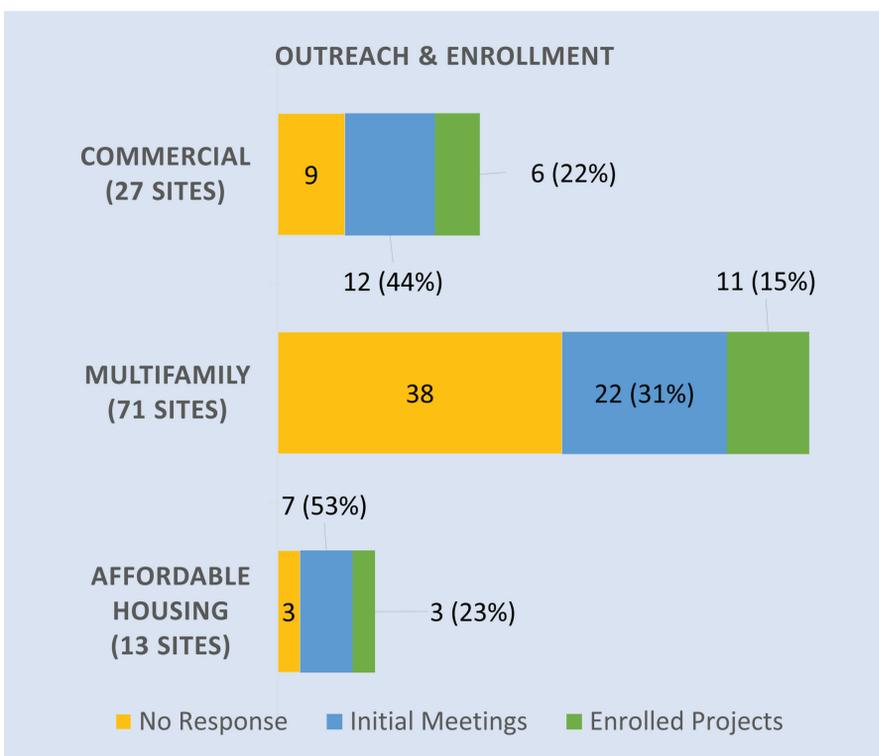
EV Charge SF Innovative Approach



- Leverage Reach Code electrical capacity
- Incentives to exceed code: \$100K cap
- Fact Sheets, Code Guidance, Case Study
- Tools: Min Code, Incentive Calcs, Load Management Options

Commercial & Residential Incentives	
Upgradeable L1 Outlets \$1,000 per stall (beyond 10%)	Empty Conduit \$250 per stall (above code)
L2 Chargers: \$2,000 per EVSE (first 10%); \$3,000 per EVSE (beyond 10%); \$500 per extra port	
Affordable Housing + 20%	

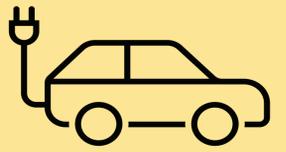
Key Results



- ### High Level Results
- Enrolled Projects: 16
 - Projects with Incentives Reserved/Paid: 8
 - Stalls Enrolled: 2,179
 - Stall Electrified: 389
 - Incentives Reserved/Paid: \$512,000

Annual Operating Budget

• Consultants:	\$165,000
• Staff & OH:	\$175,000
• Incentives:	\$380,000
Total:	\$720,000 (CY 2023)



Driving EV Charging for New Construction

New Construction Teams Still Have Many Questions

Level 1 Outlets vs Level 2 Chargers

Right-sizing for Fleets

Business Models for EV Charging & Resident billing

Free or Fee for Employee Parking

Circuit Sharing vs Panel Sharing

Confusing Lingo: Smart EVSE, LPL2, ALMS, EV Ready, EV Capable, SLA, OCCP, etc.

Vendor-neutral Advice

Free Installation

Revenue Generation vs Amenity

Proprietary vs Open Protocol

Avoiding Network/Software Subscriptions

Working with IOU on Capacity

Equipment Costs

Vendors Other Than ChargePoint

Rapidly Evolving Tech

Parking Stackers

Technical Assistance and Fact Sheets* Created in Response

Background for Making Your EV Action Plan

EV Code Guidance (Two Code Cycles)

Case Study: MultiFamily EV Charging

EV Charging Level Options & Considerations

EVSE Ownership, Management & Billing

Questions for EVSE Vendors

EV Charge SF: Challenges & Lessons Learned

- Cyclical new construction market – SF currently in a down cycle
- Affordable housing has high barriers, but important opportunities
- Expansion to commercial garages is meeting barriers
- SFFD Fire Regs: Can add \$100K cost to \$25K EVSE investment
- Code reqts. keep increasing – can leapfrog program offerings



EVSE & Smart Outlets at Habitat For Humanity Housing Site

Next Steps

- Tailored approach for affordable housing
- Expansion to existing buildings – some different barriers
- Adapt to July 2024 CALGreen code changes (& 2025)
- Meet evolving tech, e.g., NACS and J-plug



Acknowledgements

