

Expanding Access to Affordable At-Home EV Charging For Residents of Multi- Family Homes

**California's EV-Ready Codes Can Accelerate an Equitable Transition to
EVs**

Dwight MacCurdy

EV Charging for All Coalition

June 2024

EV Charging For All Coalition Mission

To ensure equitable, safe, and convenient access to affordable EV charging at home and/or at work, for all residents in SFH and MFH

Electric Vehicle Charging for All Coalition (EVCAC)

EV CHARGING
FOR ALL
COALITION

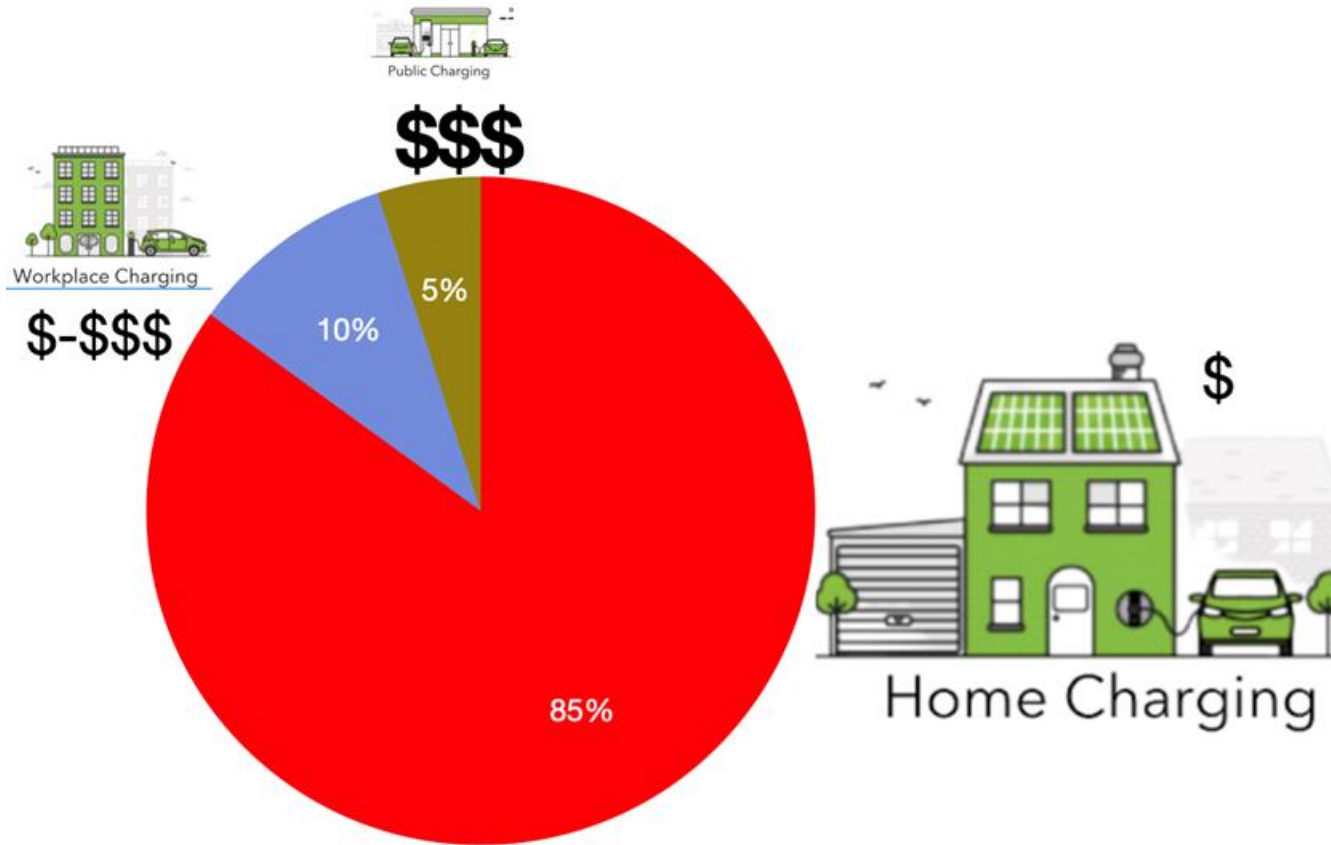
Our coalition is supported by 100+ organizations and 1000+ individuals with our website hosted by www.Acterra.org.





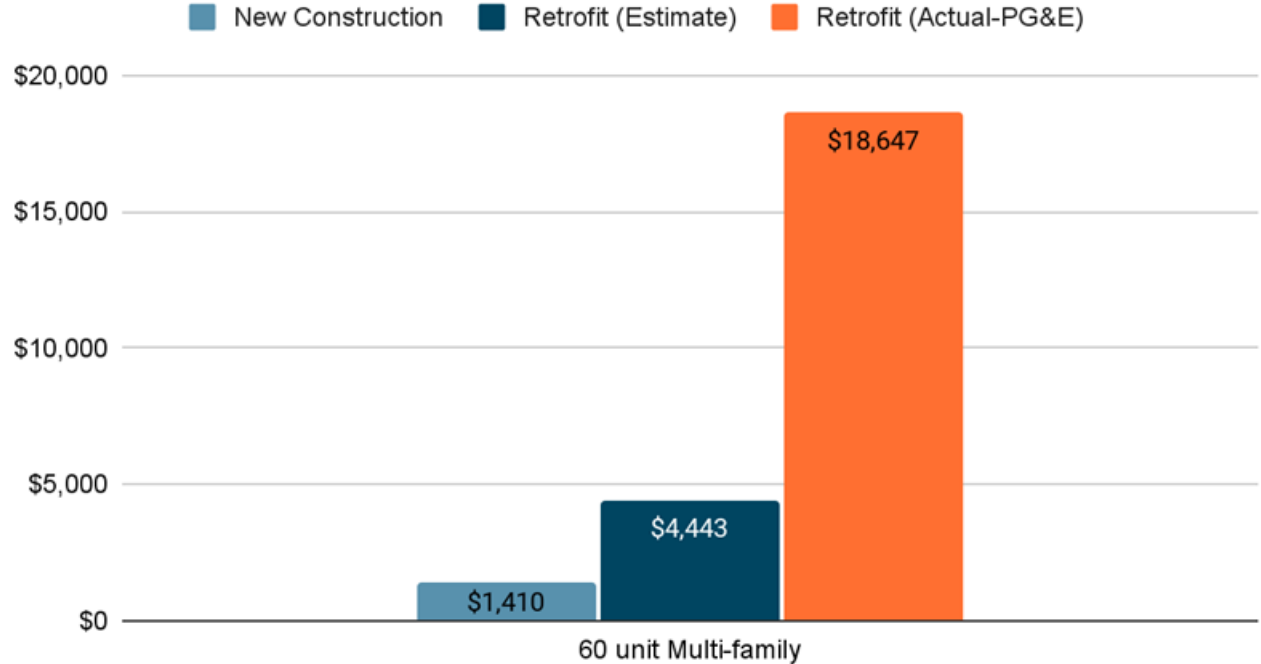
Meet our Leadership Team

Access: “There’s No Place Like Home” - Lower Cost and Convenience



New Construction Is Least Cost Option for MFH

Make-Ready Cost per Parking Space: New Construction vs. Retrofit

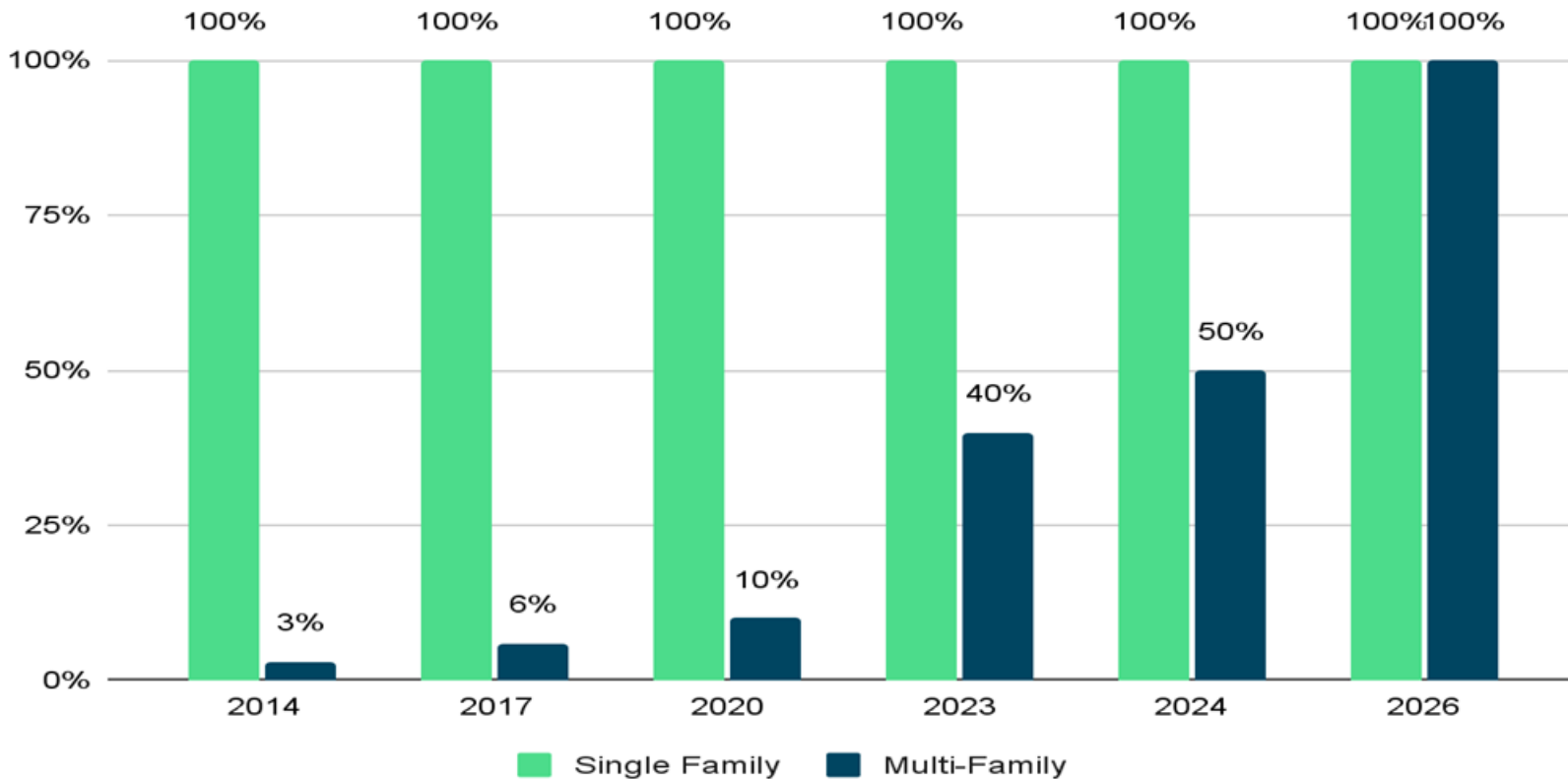


CALGreen EV Charging for Multi-Family Homes (MFH)

Jan 2014	Jan 2017	Jan 2020	Jan 2023	July 2024	Jan 2026
<ul style="list-style-type: none">• 3% of parking spaces EV Capable• 1 EVSE in common parking area.	<ul style="list-style-type: none">• 6% of parking spaces EV Capable• 1 EVSE in common parking area	<ul style="list-style-type: none">• 10% of parking spaces EV Capable• 1 EVSE in common parking area	<ul style="list-style-type: none">• 25% EV Ready parking spaces• 10% EV Capable parking spaces• 5% parking spaces EVSE (20+ homes)• ALMS allowed when mins. are exceeded	<ul style="list-style-type: none">• 40% of parking spaces EV Ready• Assigned EV Ready wired to dwelling unit• For unassigned parking, one EV Ready per unit.• 10% of spaces have EVSE• ALMS unchanged	<ul style="list-style-type: none">• 100% EV Ready per dwelling• Assigned EV Ready parking wired to dwelling panel• For unassigned parking, one EV Ready per dwelling• 25% unassigned have EVSE• ALMS unchanged

CALGreen Building Code Requirements: Single Family vs Multi-Family Homes

% of New Home Construction with Charging Infrastructure



Direct wiring... Key to equitable rates & resilience

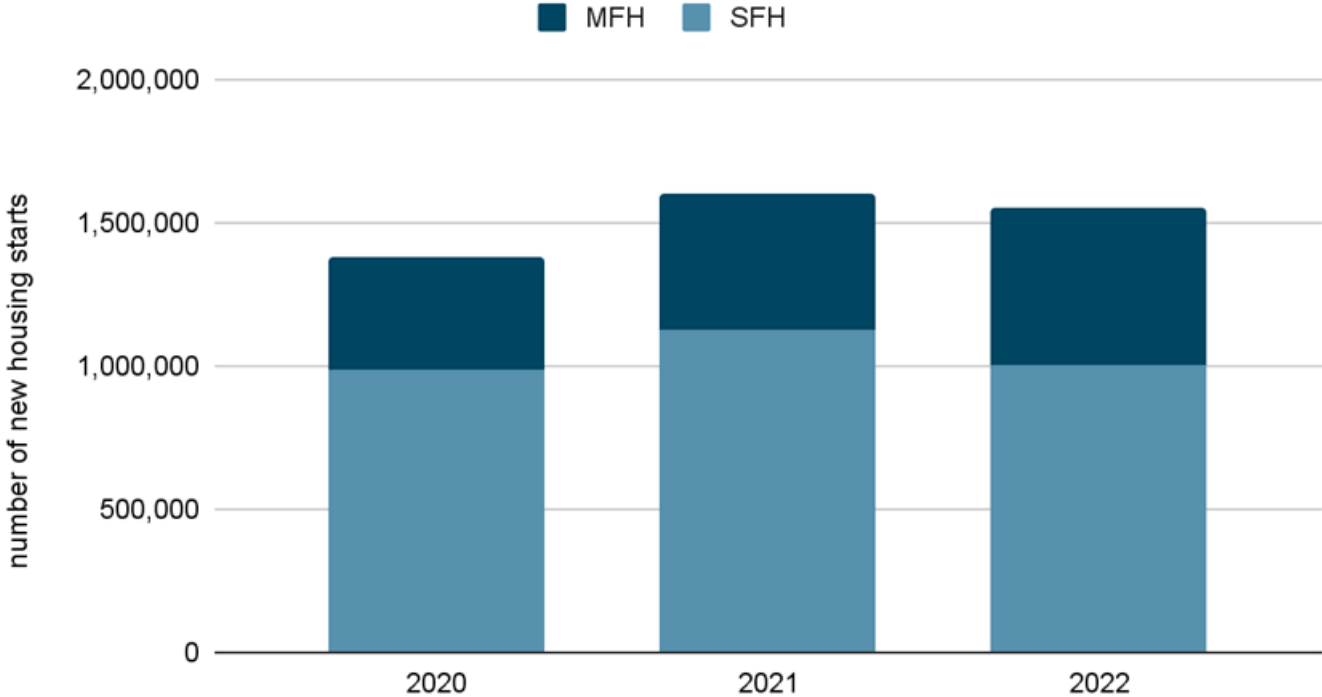
New California building code requires direct wiring!

*“EV charging receptacles in multifamily parking facilities at **assigned parking spaces** shall be provided with a **dedicated branch circuit connected to the dwelling unit’s electrical panel**, unless determined as infeasible by the project builder or designer and subject to concurrence of the local enforcing agency.”*



Every Year, 1.5M Potential New US Charging Stations

Multifamily vs. Single Family US New Housing Starts



2030 and 2035 Will be Here Soon

Thank you!

Dwight MacCurdy
EV Charging for All Coalition

Dwight.MacCurdy@SacEV.org

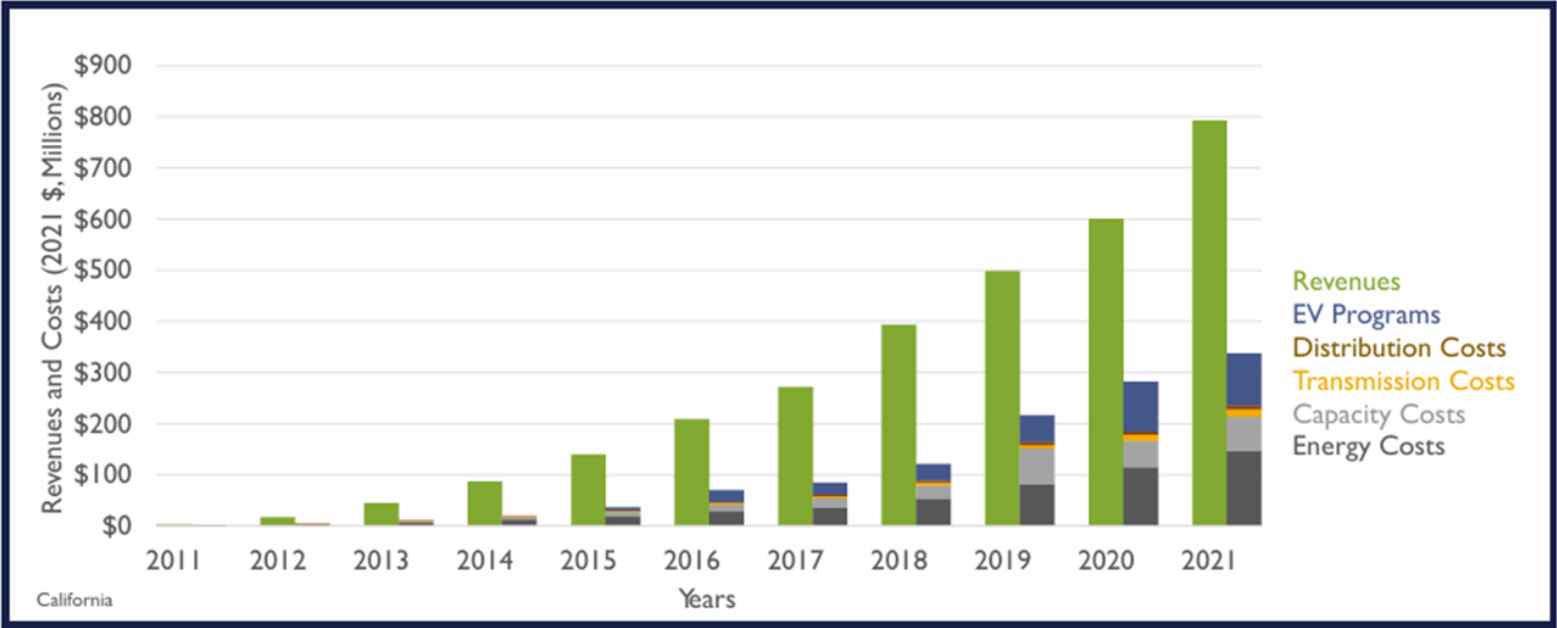


EV Benefit Cost Study Released by Synapse in May 2024

“Accordingly, this analysis examines costs and revenues associated with EVs between 2011 and 2021 in California. We observe that over the 11-year period, EV drivers in California contributed approximately \$2.2 billion more than their associated costs, driving rates down for all customers. When we also include utility expenditures for EV programs, EV owners have contributed approximately \$1.8 billion more in revenues than in costs.”

<https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20for%20All%20Customer%20California%20May%202024%2024-023.pdf>

“EVs have increased utility revenues more than they have increased utility costs, leading to downward pressure on electric rates for EV-owners and non-EV owners alike.”



What's Next?

The Challenge of EV Charging for Existing MFH

To ensure equitable, safe, and convenient access to affordable EV charging at home and/or at work, for all residents in SFH and MFH

Good News, and Not

- ~ 25% of CA light duty car sales in 2023 were EVs, and in Sacramento County
- The vast majority were by residents of SFH where EV charging is normally not a challenge. After all, most drivers can get an adequate nightly charge from a 120V outlet.
- EV charging access is still needed for residents of **EXISTING** MFH for equity purposes and in order for California to meet its 2035 GHG and EV adoption goals

How California Is Keeping Electric Vehicles Out ...

POLITICS 05/27/2021 05:45 am ET | Updated May 31, 2021

How California Is Keeping Electric Vehicles Out Of Reach For Apartment-Dwellers

Even in the nation's most EV-friendly state, inertia and business interests are delaying the energy transition and leaving the working class behind.

By Alexander C. Kaufman




The Washington Post
Democracy Dies in Darkness

BUSINESS

Without access to charging stations, Black and Hispanic communities may be left behind in the era of electric vehicles

By Will England
December 9, 2021 at 7:00 a.m. EST



ons.

Grist

Why the slowest EV chargers may be the fastest way to get people into EVs

Apartments need EV charging. Supporters of trickle-slow "Level 1" chargers argue that access is more important than speed.

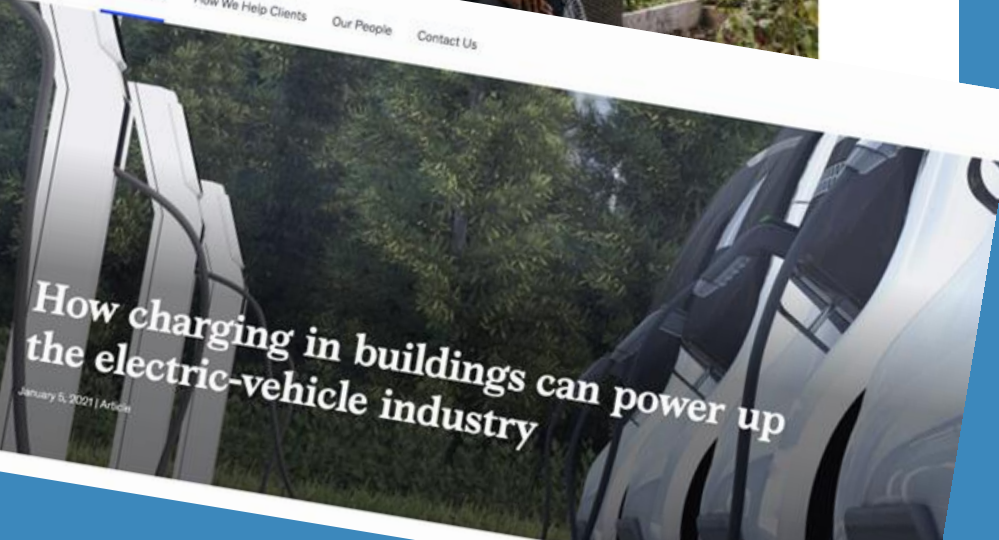


McKinsey & Company

Electric Power & Natural Gas
Our Insights | How We Help Clients | Our People | Contact Us

How charging in buildings can power up the electric-vehicle industry

January 5, 2021 | Article



The Challenge – EV Charging for Existing MFH, or those with Street Parking Only

- How to Serve the 30 - 40% of Residents living in Existing MFH, or in homes with street parking only, by 2035 when only EVs will be sold in California?
 - **EV Charging Retrofits of Existing Apartments and Condos**
 - May be expensive with service only to residents of the complex
 - May require service upgrade to the complex by the local electric utility
 - Possible deployment of load management technology such as the DCC-9 or simple switch at the meter, electrical panel,
 - Possible deployment with some form of or receptacle sharing
 - **Curbside charging retrofits**
 - Serves mainly nearby residents or nearby business destinations
 - May be expensive and require service upgrade by the local electric utility

The Challenge – EV Charging for Existing MFH, or those with Street Parking Only

eMobility Hubs!

- Can do triple duty by locating
 1. Near MFH or major corridors to serve local residents;
 2. To serve further away residents whose travel pattern makes it convenient;
 3. Near freeway exits for road-trip travelers
- Serves an unlimited number of EV drivers

However, other considerations:

- Lower adoption rates will be observed unless electricity is cheaper than gasoline
- **Goal – Residents of MFHs pay no more for electricity than residents of SFH**
- May require subsidies for MFH residents in DACs, under-resourced areas

The Challenge – A Regional Implementation Plan: EV Charging for Existing MFH, or those with Street Parking Only

- AB 2127 Infrastructure Implementation Goal for 2030
- Governor's 2035 Goal for EV Only Sales in California
- Great start with the “Sacramento Region Zero Carbon Transportation Initiatives” by Momentum, supported by RT, SMAQMD, SACOG and SMUD
 - Estimated budget of \$182 million for 52 mobility hubs serving under-resourced communities
- The Sacramento EV Blueprint (Task 6.3) Identified Advanced E-Mobility Options
 - Prepared for the City of Sacramento by DKS Associates and Frontier Energy
 - Community CarShare, On-Demand Transit, Microtransit, eMobility Hubs

2030 and 2035 Will be Here Soon

Thank you!

Dwight MacCurdy
EV Charging for All Coalition

Dwight.MacCurdy@SacEV.org

