DOCKETED	
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Description:	4B. Phillip Kobernick, Peninsula Clean Energy
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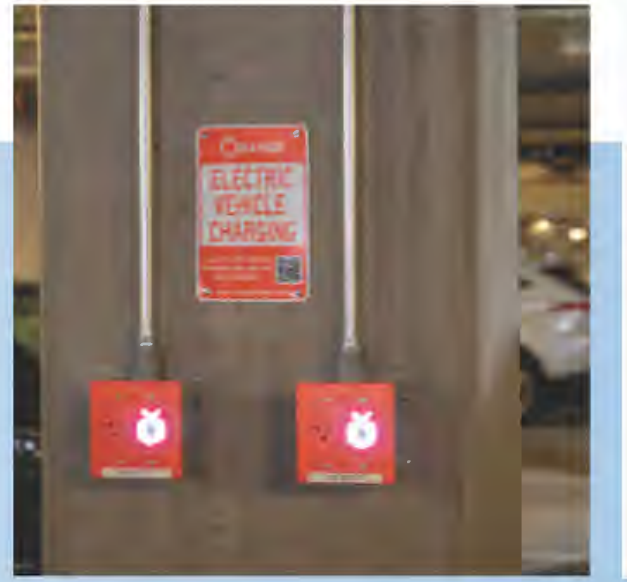
PENINSULA CLEAN ENERGY



Right-Sized Electrification

2025 IEPR Workshop

August 2025

Panel upgrade media

REAL ESTATE > HOME

Will your house need an electrical upgrade to power energy-efficient cars and appliances?

As many as 48 million homes may need expensive electrical upgrades to handle the increased power demands of solar panels, heat pumps, and electric car chargers.

Major Systems

How Much Does It Cost to Replace an Electrical Panel?

bob vila — Tried, True, Trustworthy Home Advice

Enhancing the Customer Experience of Upgrading an Electric Service Panel

BUILDING DECARBONIZATION COALITION

E Source

How much does it cost to upgrade an electrical panel? 2024 guide

USA TODAY

Addressing an Electrification Roadblock: Residential Electric Panel Capacity

PECAN STREET

An Alternative Approach
Right-Sizing

ID customer needs → Use what's available first to meet needs → Upsize only when needed

Total State-wide Savings Potential

	FTM / Rate-based	BTM / Property
Single-family electrification	$10B+	$50B+
Multi-family EV charging	$12B+	$50B+

New Tools at Our Disposal

Circuit Controllers (splitters, pausers, throttlers)	**Smart Panels and Breakers**	Option 1 **120V Equipment**
   	 	    

What if we got it right?

Right-Sizing in Action

Single-family home, Menlo Park

Comprehensive electrification

Service Upgrade: none

Avoided cost: $6-50K

Station Park Green, San Mateo

63 Level 1 ports

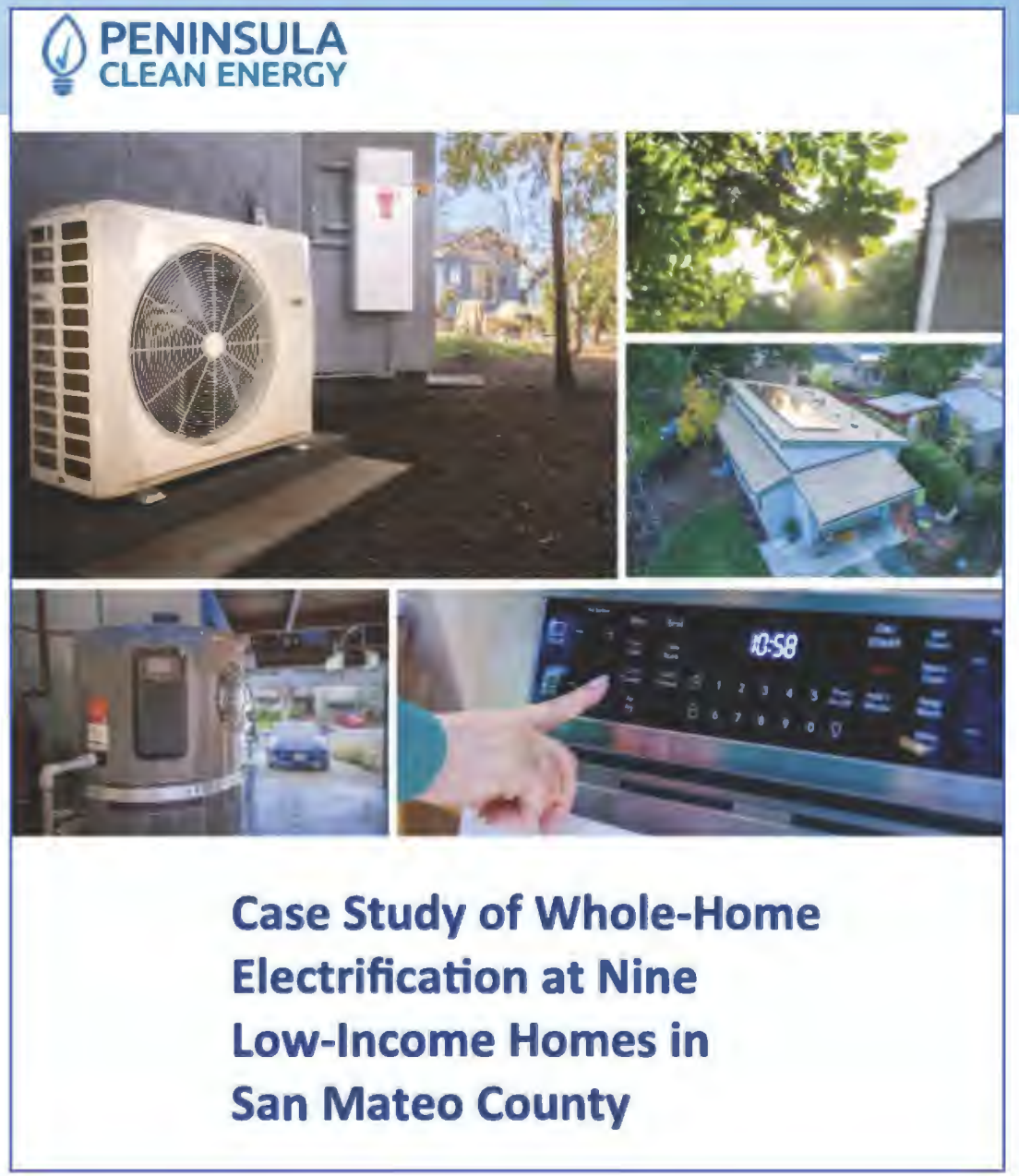
Service Upgrade: none

Avoided cost: $650K+

Right-Sizing in Action

Report highlights:

1. 9 electrified homes
2. **0 service upgrades (5 with 100A service)**
3. 20% avg. energy bill savings, post electrification. 28% savings if rate optimized.
4. Informing PCE's current Home Upgrade (direct install) program



Largest in the nation EV charging projects at multi-family housing

Over 2,000 EV chargers installed in PCE program

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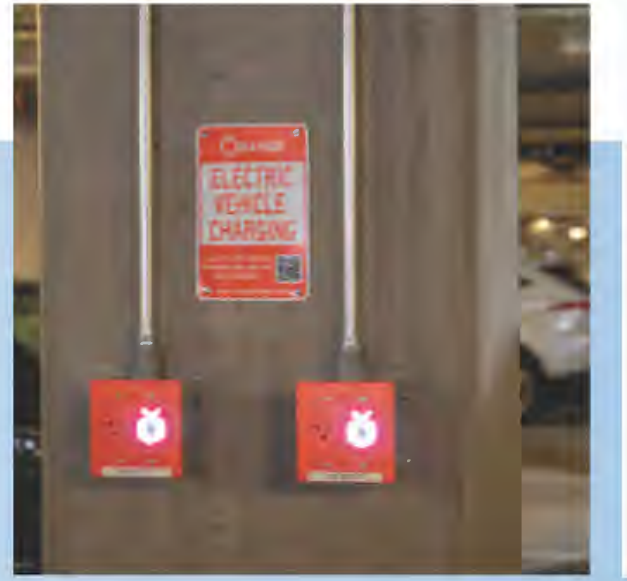

Thanks!

Case studies, design guidelines, etc. at

https://www.peninsulacleanenergy.com/residential/home-electrification/design-guidance-residential-electrification/