Charging Plug-in Electric Vehicles at Multi-unit Dwellings

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EV Roadmap 7 – Drive Oregon
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The California Plug-In Electric Vehicle Collaborative is a public/private organization focused on accelerating the adoption of PEVs to meet California’s economic, energy and environmental goals.

Using the expertise of each member, the PEV Collaborative *convenes, collaborates* and *communicates* on emerging PEV market trends and works to address challenges and enable strong PEV market growth.
2014 Membership

Automakers
- BMW
- Daimler
- Ford
- GM
- Honda
- Kia
- Nissan
- Tesla
- Toyota

State Government
- Air Resources Board
- CA Energy Commission
- CA Public Utilities Commission
- Legislature members
- Governor’s office

Local Government
- Bay Area AQMD
- South Coast AQMD
- Northern Sonoma APCD

Utilities
- LADWP
- PG&E
- SCE
- SDG&E
- SMUD

Education/Research
- California Center for Sustainable Energy
- CaIETC
- CALSTART
- EPRI
- Plug In America
- UC Davis – ITS
- UCLA – Luskin Center

Environmental NGOs
- American Lung Association
- Center For Energy Efficiency And Renewable Technologies
- International Council for Clean Transportation
- National Resources Defense Council
- Union of Concerned Scientists

EVSE/Network Providers
- AeroVironment
- Clean Fuel Connection
- ChargePoint
- Greenlots
- NRG
- Recargo
Why Are We Here?

• Many cities have high populations living in MuDs
• Tenants will be asking to charge their PEVs
• MuDs have unique challenges that can be overcome with creative solutions
The Growing PEV Market

National Sales:
Cumulative 2014: 54,791
Cumulative 2011-2014: 223,110
June: 11,493

California Sales:
Cumulative 2011-2014: 92,866
Why Install Charging at Your MuD?

• Amenity that attracts tenants
• Provides a “green” image for marketing
• Makes property a leader in sustainable practices
• EV sales are growing
• LEED points toward certification
• Tenants are asking for it
Key Considerations

- Building architecture and physical electrical design
  - Proximity of electrical service room to desired charging location
  - Wiring needed to accommodate charging stations
- Commercial electricity rates for common-area meters
- Cost of installation
- Parking ownership models
Different Approaches

• Hire turnkey operator to handle all charging and payments
• Install individually assigned charging units
  – Residents can individually select and own their charging units
  – Residents can pay directly for their energy use
• Install chargers as shared community resource
• Arrange for use of nearby business or commercial chargers
Example of Challenge

Park here

Meter here
Case Studies

- Case studies provide examples of a variety of successful MuD charging installations
- Case studies are available at: www.pevcollaborative.org/MuD
Resources – MuD Guidelines

Includes information on:
- Charging a PEV
- Charging equipment installation process
- Considerations for charging station installation
- Ownership costs
- Financial recovery models and technology solutions
- Case Studies

Resources are online:  www.pevcollaborative/MuD
Resources – Decision Guides

Guide 1: Great primer on electric vehicle charging for multi-unit dwellings

Guide 2: Information for property owners, managers, and homeowner associations

Guide 3: Information for residents of MUDs

Resources are online: www.pevcollaborative/MuD
Resources - Resident Survey

- Find out tenants’ and homeowners’ current and future interest in PEVs
- Available in hardcopy or electronic formats

Resources are online: www.pevcollaborative/MuD
For More Information

www.PEVCollaborative.org

www.DriveClean.ca.gov/pev