EV Readiness:
Context & Opportunities for Action

BayREN Local GovT Resources for Energy Efficiency Forum

November 2014
Bay Area Climate Collaborative

- Private-public 501c3 partnership
- Accelerating the clean energy economy
- Scalable market-oriented initiatives
Bay Area Target: 100,000 by 2020

Annual Savings
$150 million
July 8, 2014
90 all-battery EVs
2013
50 all-battery EVs
5,000 test drives
2.3 million impressions
Electric Vehicle - Context
Fuel Price Comparison

$0.10-0.15 per mile

$0.03 per mile

EVs are quiet, quick and have virtually NO MAINTENANCE
EV Adoption in Bay Area

Total Statewide: 82,626
Growth: ~3% car sales

Rebates Issued and Reserved to Date

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>BEV</td>
<td>18,702</td>
</tr>
<tr>
<td>PHEV</td>
<td>11,661</td>
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<tr>
<td>FCEV</td>
<td>2</td>
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<tr>
<td>Other</td>
<td>177</td>
</tr>
<tr>
<td>Grand Total</td>
<td>30,542</td>
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</tbody>
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Last updated: Nov. 3
Benefits Delivered

- 30,000 PEVs in Bay Area
- Saves every year
  - 14 million gallons gas
  - $36 million in fuel
  - 75 million lbs. CO2
Infrastructure Priorities

Residential (80%)
- Satisfying consumer-driven home installation process
- Permits, electrical contractors, inspections, meters, rates

Workplace
- Corporate
- Municipal parking lots

Public
- High visibility
- Commercial/Retail
- Public education and outreach
Variables for Future Charging Needs

- Adoption levels of Hybrid vs. Battery EVs
- Battery technology and price > EV range
- Fast charge deployment
- Price of gas

- It is early days yet
Local Government Action
Role of Local Governments

- Local Governments
  - Fleet adoption
  - Codes & Permitting
  - Education
  - Local planning

- EV Industry Technology
- Utilities
  - Power infrastructure
- Private Sector
  - Chargers
  - Fleets
  - Employee
EV Fleet Adoption

- Municipal LDV fleets are *highly* appropriate
- Do a TCO/duty cycle analysis
- Pilot PEV vehicles into high mileage use
- Lease the vehicles
- Consider comprehensive conversion (see Indianapolis plan)
Building Codes & Permitting

- Look at leadership code positions above CalGreen
  - New *multi-unit dwellings* are especially critical to “pre-wire”
  - Consider triggers on existing construction to add panel capacity for EV charging and possibly conduits

- Implement online or over-the-counter permitting
  - *Turnaround time* for residential EV charging critical
  - Consider simple electrical permits for private garages

- Educate staff on EVs, permitting, ADA

Public Education

- Direct experience of EVs is the #1 interest builder
- “Ride & drive” events are very effective
- Local governments can collaborate with
  - Plug In America
  - Charge Across Town
Local Planning

- Zoning
- Signage
- Enforcement
- Siting

**Don’t fixate on public infrastructure**
- *It is the least important action*

**Resource:** [http://www.pevcollaborative.org/pev-readiness](http://www.pevcollaborative.org/pev-readiness)
THANK YOU
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