Investor-Owned Utility Transportation Electrification

October 5, 2016

CEC Workshop on Transportation Electrification in POU IRPs
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California Public Utilities Commission
Overview

Objective

• Facilitate information sharing across IOUs and POUs

Agenda

• CPUC and IOU role in transportation electrification
• Implementation of Senate Bill 350
  – Guidance to IOUs for transportation electrification
CPUC Mission

- Regulate privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.
- Protect consumers and ensure the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.
Overview of CPUC TE Work

- Approve IOU electricity rates
- Oversee deployment of charging infrastructure (see next slide)
- Provide IOU customer incentives
- Enable Vehicle-Grid Integration
- Provide IOU customer outreach and education
- Collaborate with other state agencies
- Develop database of transportation electrification pilots
## IOU EV Infrastructure Pilots

<table>
<thead>
<tr>
<th></th>
<th>SDG&amp;E</th>
<th>SCE</th>
<th>PG&amp;E (proposed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
<td><strong>Approved modified settlement</strong></td>
<td><strong>Approved modified settlement</strong></td>
<td>Application <strong>pending</strong></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>3,500 L1 &amp; L2</td>
<td>1,500 L1 &amp; L2</td>
<td>7,500 L2; 100 DCFC</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>$45M</td>
<td>$22M</td>
<td>$160M</td>
</tr>
<tr>
<td><strong>Markets</strong></td>
<td>MUD, workplace</td>
<td>MUD, workplace, public</td>
<td>MUD, workplace, public</td>
</tr>
<tr>
<td><strong>Charger</strong></td>
<td>IOU</td>
<td>Site host</td>
<td>IOU</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Host cost</strong></td>
<td>Participant Payment</td>
<td>Rebate on base cost</td>
<td>Participant Payment</td>
</tr>
<tr>
<td><strong>Rates</strong></td>
<td>VGI rate to driver or host</td>
<td>TOU rate to host</td>
<td>TOU rate to driver or host</td>
</tr>
</tbody>
</table>
Senate Bill 350 (2015)

- Reduce GHG emissions 40% below 1990 levels by 2030
- Requires resource optimization and Integrated Resource Planning process
- Expresses intent for regional expansion of the CAISO
- Consider disadvantaged communities

Double **Energy Efficiency** Savings

Increase **Renewable Energy** procurement to 50%

Accelerate widespread **Transportation Electrification**
SB 350 Transportation Electrification

• **TE: Use of external sources of electrical power for:**
  – Vehicles, vessels, trains, boats, & other equipment that are mobile sources of air pollution and greenhouse gases

• **CPUC should direct IOUs to file applications to accelerate widespread transportation electrification**
  – Minimize costs, maximize benefits
  – Do not unfairly compete with non-utility enterprises
  – Include performance accountability
  – In the interest of ratepayers
Sept 14, 2016 ruling directed electric IOUs to file applications with CPUC to propose TE investments pursuant to SB 350

• Basic requirements
  – PG&E, SCE, SDG&E file applications by 1/20/17
  – Liberty Utilities, Bear Valley Electric, PacifiCorp file applications by 6/30/17
  – Adjacent large and small IOUs may propose joint programs
  – IOU must show how proposed TE portfolio meets SB 350 requirements (accelerate TE, minimize costs, maximize benefits, etc.)

• Regulatory review
  – Priority review for non-controversial, short-term (1-year) investments
    • total of $20M per utility, <$4M per project
  – Standard Review for all other investments
• **Scale and scope**
  – IOUs’ TE portfolios should achieve their proportional share of state vehicle and emissions reduction goals
  – Portfolio planning should also:
    • Align with IOU integrated Resource Plan
    • Plan for emissions reduction trajectories that align with ARB’s 2030 Scoping Plan and Mobile Source Strategy
    • Consider demand forecasts
  – Encourage utilities to target pilots in multiple sectors to gain experience
• Portfolio design
  – Address priority projects & programs
    • Rate design
    • Expand focus from light duty to include medium/heavy, transit, ports, etc.
    • Leverage results of previous pilots
  – Align with local, regional, state TE planning and investments
    • 2016 ZEV Action Plan is a comprehensive overview
  – Promote safety
    • During construction, interconnection, operation
    • For utility workers, electricity customers, drivers
CPUC’s SB 350 TE Implementation

- **2016: planning & guidance**
  - Mar: began regulatory process to address TE components of SB 350
  - Apr: public workshop to get stakeholder feedback
  - May: parties submit comments on workshop and straw proposal
  - Sep: Cmr. issued guidance to 6 electric IOUs
  - Nov: Commission will consider whether to adopt September guidance
  - Nov: IOU and CPUC workshop on pilot results and VGI standards
  - Throughout: confer with CEC and ARB

- **2017: application review**
  - Jan: 3 large IOUs file applications
  - Jul: 3 small IOUs file applications

- **2018 and beyond: program implementation**
  - IOUs implement approved programs
Thank you!

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CPUC EV Website:
cpuc.ca.gov/General.aspx?id=5597