Utility Roles in Providing EVSE & Infrastructure Ownership Models

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PSC Technical Conference – Panel 5
July 19, 2018
ChargePoint: Largest and Most Open EV Charging Network

- ChargePoint spots nationwide: 51,000+
- Leading Network and AC/DC hardware provider
- Stations owned and operated primarily by local, independent site hosts

**Cumulative EVs in NY**

- Q1 2018: 28,000+
- YoY Growth: 48%

**ChargePoint Deployment**

- Charging Spots: 2,300+
- YoY Growth, 2013-17: 38%

**ChargePoint Utilization Statistics**

- Sessions (Total to Date): 691,000+
- Electricity (Total to Date): 5.5 GWh
- GHG Savings (Total to Date): 2.3M kg
A New Fueling Paradigm – Charging While Parking

+ Fueling outside the home takes place at where people work and visit
+ Site hosts are best positioned to manage the EV driver experience and optimize station utilization
+ Site hosts currently choose from a variety of hardware and charging service providers to meet their needs
+ Network Features: Access control, pricing, reports, remote station services, customer support

Today’s parking lots become a place where:

- Workplaces attract and retain employees
- Commercial properties attract tenants
- Retail/hospitality increases sales
- Apartments & condos attract and retain residents
- Fleets lower cost of transportation
Connected EV Charging Provides Value to All

**EV Drivers**
- Availability
- Consistent User Experience
- Convenience
- Seamless Payment

**Site Hosts**
- Drive up utilization
- Seamless Transaction
- Limited Administration
- Remote Diagnostics

**Utilities**
- Beneficial Load
- Grid Benefits
- Load Management
- Seamless Integration

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Utility Engagement is Vitally Important

- ChargePoint supports and encourages a greater role of utilities to support EV adoption
- Utility investment/incentives in EV charging infrastructure can help accelerate access to charging solutions while encouraging grid benefits
- Various investment models exist and each one can be designed to work alongside the existing competitive market and encourage the development of sustainable future

Questions surrounding ownership of charging infrastructure overlook the more central questions around operation that will shape the market for many years:

- Who sets pricing-to-driver, and at what level?
- Are charging services competitive, or are they a utility activity?
- How can we align charging services with onsite activities of site hosts?
- Do customers continue to have choice of different EV charging networks?
- How do we achieve grid benefits?
Charging Ecosystem: Open, Innovative, Secure

1. Open Access*
2. Roaming*
3. Interoperability
4. Access/Management

* Applies to public charging
Utility Infrastructure Programs and Best Practices

+ Provide forums for **robust dialogue** between all stakeholders and **regulatory clarity**
+ Maintain **site host choice** of charging solution and their ability to set **pricing to the driver**
+ Ensure **data collection** and **demand response** capabilities are part of qualification criteria
+ **Balance rate payer costs with benefits** (e.g. ensuring participant “skin in the game”)
+ Seek **efficient designs** that can deploy quickly, allow for **innovation**, and minimize legal burdens

**Utility Program Examples**

<table>
<thead>
<tr>
<th>Utility Program</th>
<th>Ports</th>
<th>Model Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Diego Gas &amp; Electric</td>
<td>3,500</td>
<td>Utility owned model</td>
</tr>
<tr>
<td>Southern California Edison</td>
<td>1,500</td>
<td>Make-ready plus EVSE rebates</td>
</tr>
<tr>
<td>Pacific Gas &amp; Electric</td>
<td>7,500</td>
<td>Rebates with portion utility owned</td>
</tr>
<tr>
<td>Eversource (MA)</td>
<td>4,167</td>
<td>Make-ready</td>
</tr>
<tr>
<td>National Grid (MA)*</td>
<td>1,278</td>
<td>Rebates towards EVSE + make-ready</td>
</tr>
<tr>
<td>Maryland Joint Filing*</td>
<td>~6,000</td>
<td>Rebates, make-ready, and utility owned</td>
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</tbody>
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* Filed, but not yet approved
Thank You

For further information on this topic, please contact Kevin Miller

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