

SOUTHERN CALIFORNIA EDISON WORKPLACE CHARGING PILOT

OPENADR AND ELECTRIC VEHICLES

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Objectives

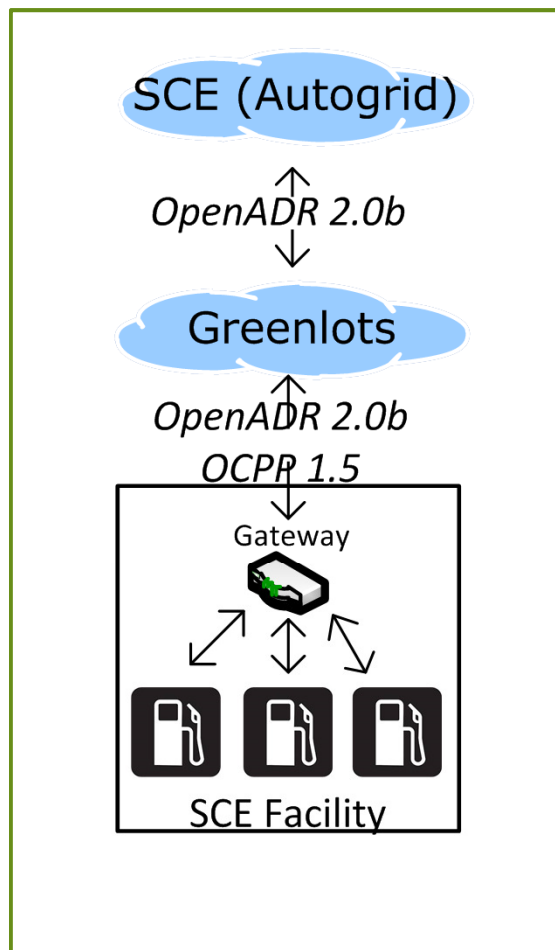
- ▶ Gain a better understanding of consumer behavior related fee-based charging and DR events.
- ▶ Evaluate DR technologies that support non-proprietary charging options and an open communications standard (OpenADR 2.0b).
- ▶ Measure system and building load impacts related to plug-in electric vehicle charging.
- ▶ Better quantify DR potential of EV charging in the workplace.
- ▶ Help determine the balance between DR and customers' needs for EV charging at the workplace.
- ▶ Advise business customers regarding the costs, benefits, and impacts of workplace charging to inform future installation plans at customer properties.

Pilot Overview

- ▶ Pilot Execution
 - ▶ January - December 2015
- ▶ Deployed 80 L2 EVSEs with payment modules at 9 SCE facilities.
 - ▶ Varying geographic and staffing attributes.
- ▶ EVSP Management: Billing, Communication and Control, Customer interactions, Reporting
- ▶ Payment modules/GWs: Network support, Customer interface, EVSE status
- ▶ Open Standards: OpenADR 2.0, OCPP



Architecture

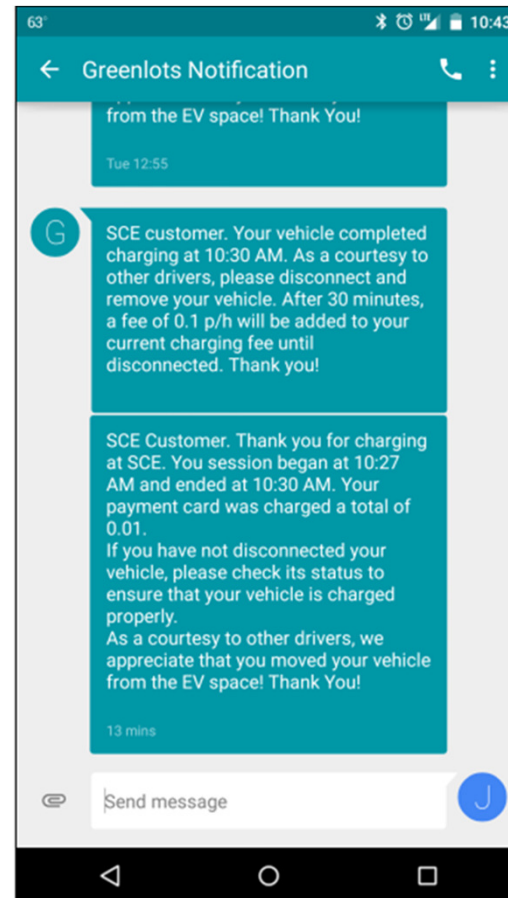


New Program Development & Launch

- ▶ OpenADR 2.0b: DR, Pricing and Reporting
 - ▶ Varied Pricing: Tiers, Rate of Charge, Penalty
 - ▶ Varied Curtailment Events
- ▶ OCPP- Reporting, Monitoring & Authorization
 - ▶ Session Reports
 - ▶ EVSE Status
 - ▶ Credit Card
- ▶ Customer Text Notifications

Use Case

1. Choose Station
2. Choose Charge Level
3. Choose Event Activity
4. Confirm and Authorize
5. Notifications
 - ▶ Events
 - ▶ Charging completed/Remove Vehicle
 - ▶ Disconnection (New session needed)
 - ▶ Errors (Resume charging)



Thank You

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