

San Diego Regional Electric Vehicle Infrastructure Working Group Meeting

March 21, 2013

Initial Findings from Draft Report

Providing a Place to Plug In

*The Value Proposition of Hosting Level 2 Non-Residential Electric Vehicle Supply
Equipment and Driver's Willingness to Pay for PEV Charging*



Melanie McCutchan, Senior Analyst

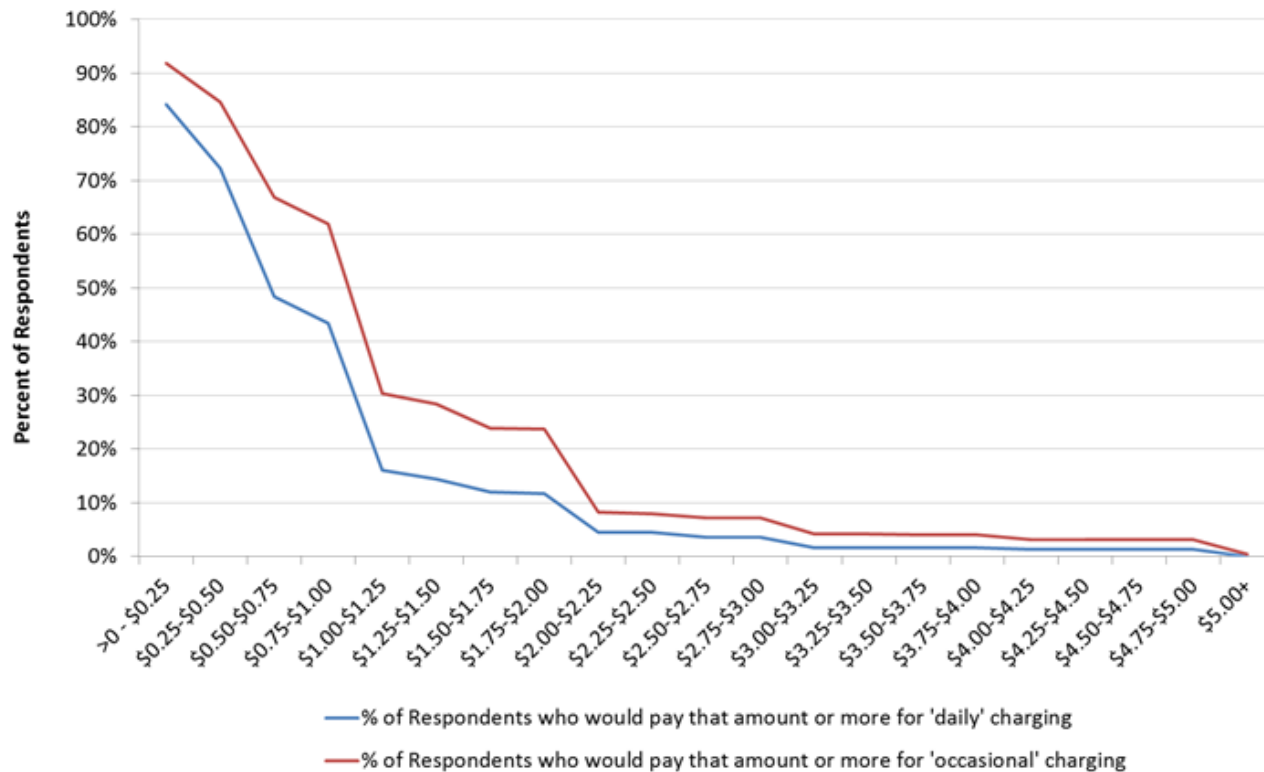
Key Study Questions

- What are the costs of hosting Level 2 electric vehicle supply equipment?
- Are PEV owners likely to be willing to pay user fees that are sufficient to cover those costs?
- What is the importance of non-revenue benefits that can add value to site hosts?

Methods

- NR EVSE Host Survey (22 respondents of 43)
- Cash Flow Modeling of Project Economics
- PEV owner survey (1,040 respondents of 4,270)

Willingness to Pay



N= 1,014 for daily, and 1,040 for occasional
 (97% of respondents were Nissan Leaf owners with 3.3kW on board chargers)

Reported Willingness to Pay

	<i>WTP for Daily Charging</i>	<i>WTP for Occasional Charging</i>
Median (\$/hour)	\$0.50	\$1.00
Median (\$/kWh)	\$0.15	\$0.30

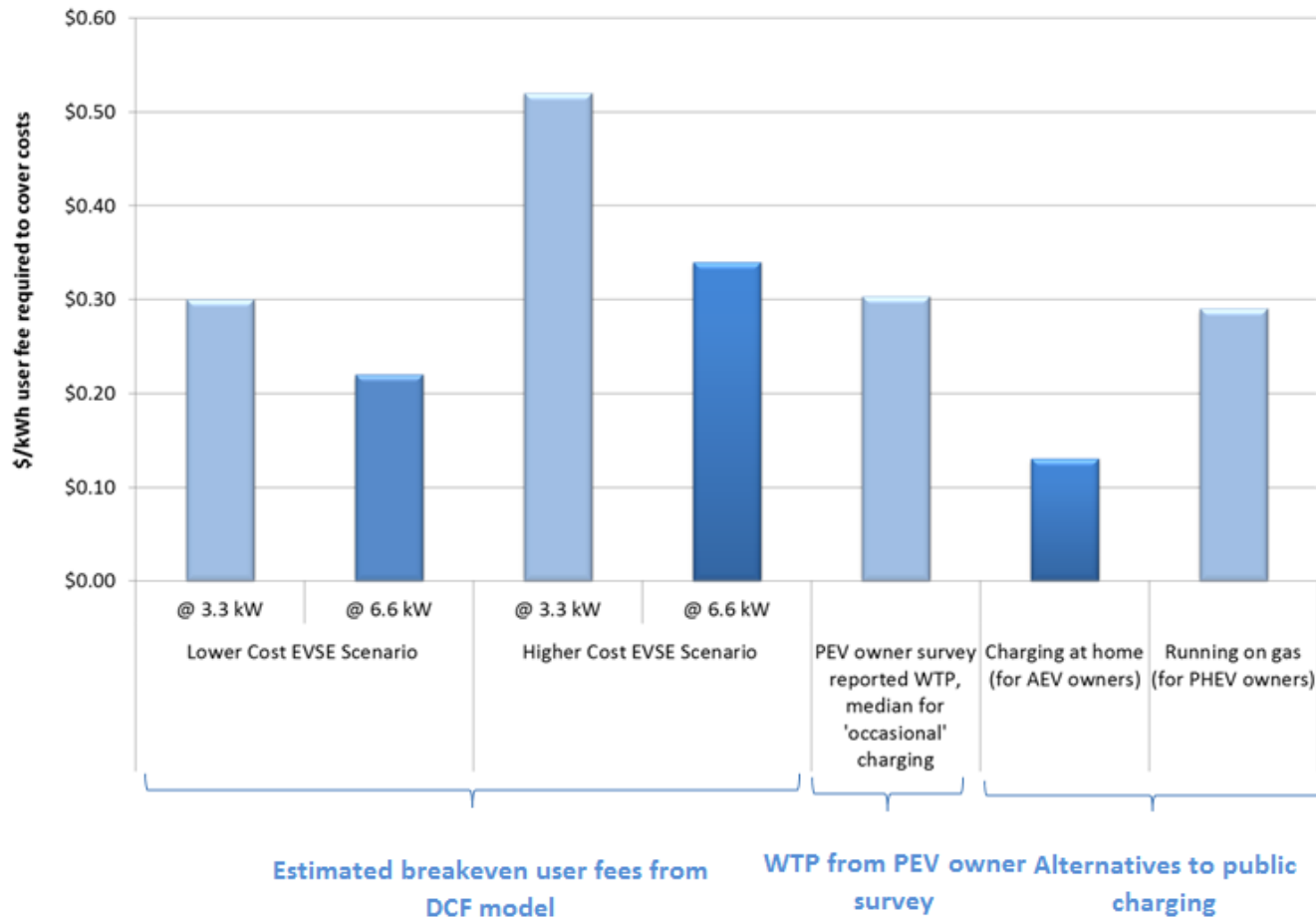
Utilization Scenarios for Breakeven User Fees:

- Workplace 
- Public 

Reported WTP

- Daily
- Occasional

Public Utilization Breakeven User Fees & WTP for Occasional Charging



Notes: Public Level 2 usage scenario assumes 4 charge events per day for 1.5 hours per charge event, 360 days per year, or a 25 percent utilization rate

Lower cost EVSE assumes Equipment & Installation @ \$2,000, Billing Cost @ \$0.40 per transaction and 3% of user fee

Higher cost EVSE assumes Equipment & Installation @ \$10,000, Billing Cost @ \$0.50 per transaction and 7.5% of user fee

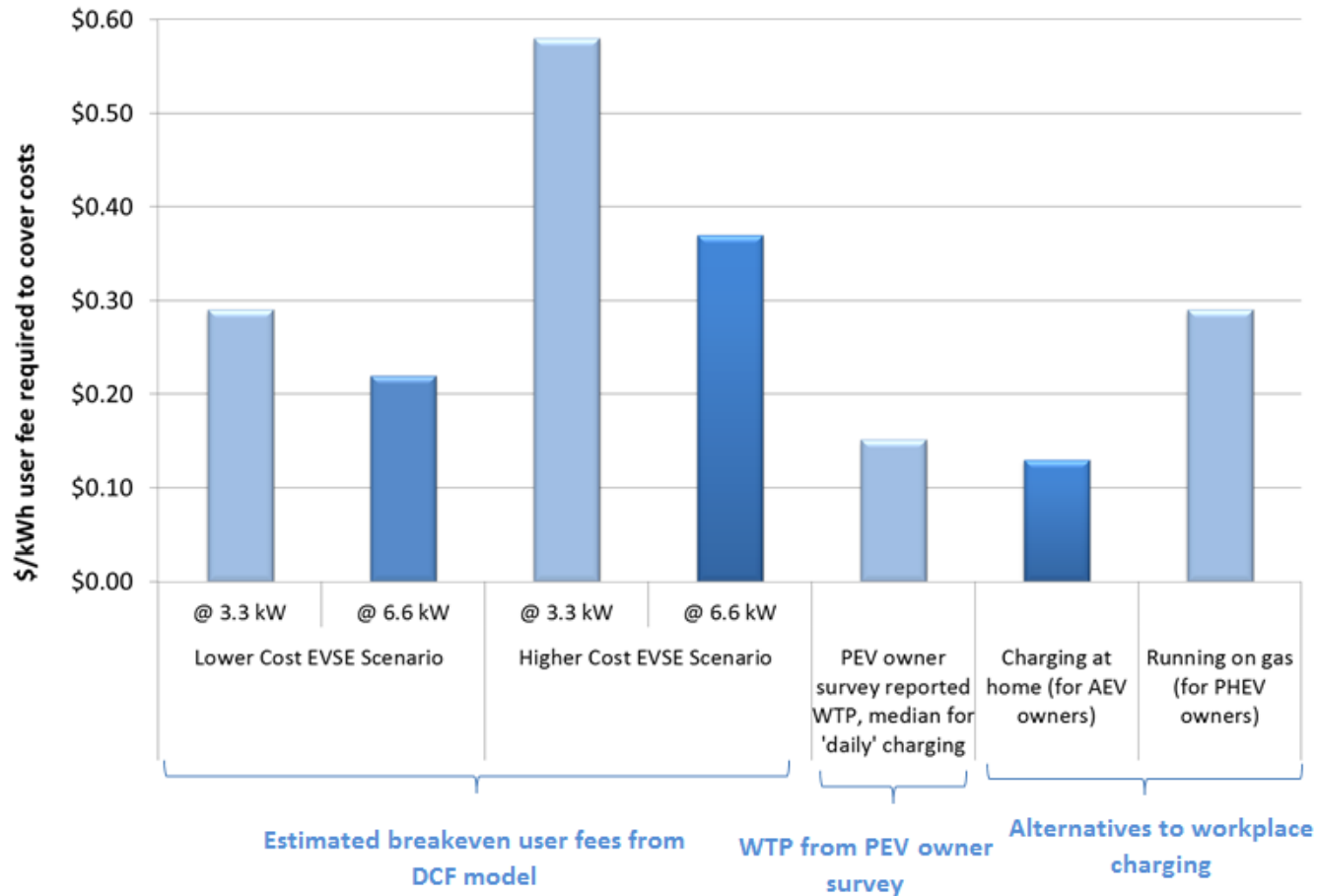
No subsidies or tax credit assumed

Breakeven user fees assume electricity costs to site host at \$0.15 per kWh

Residential electric rates assumed to be \$0.13 per kWh for AEV driver charging at home

Gasoline cost of \$3.80 and 40 mpg assumed to calculate \$/hour charging equivalent for PHEV driver

Workplace Utilization Breakeven User Fees & WTP for Daily Charging



Notes: Workplace Level 2 usage scenario assumes 3 charge events per day for two hours a day, 255 days per year, or a 17 percent utilization rate

Lower cost EVSE assumes Equipment & Installation @ \$2,000, Billing Cost @ \$0.40 per transaction and 3% of user fee

Higher cost EVSE assumes Equipment & Installation @ \$10,000, Billing Cost @ \$0.50 per transaction and 7.5% of user fee

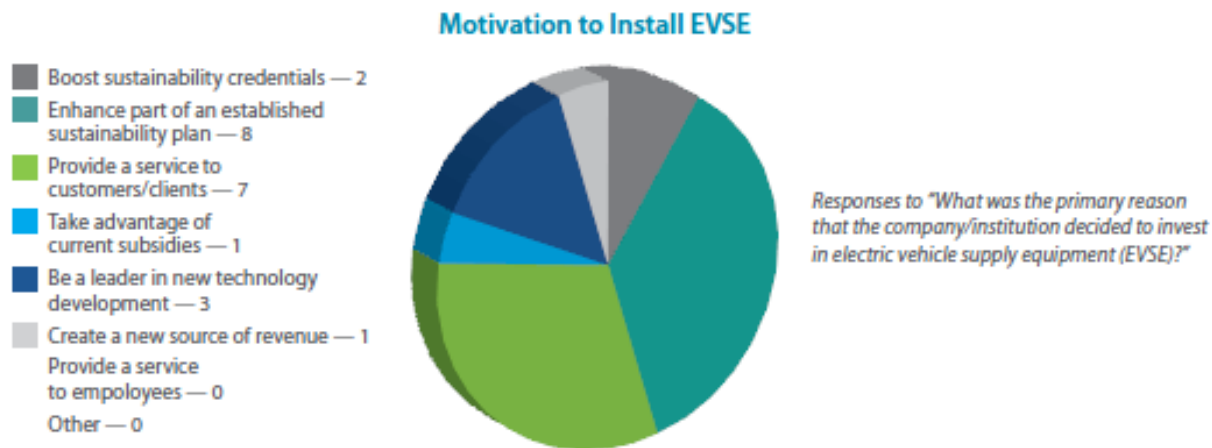
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Breakeven user fees assume electricity costs to site host at \$0.15 per kWh

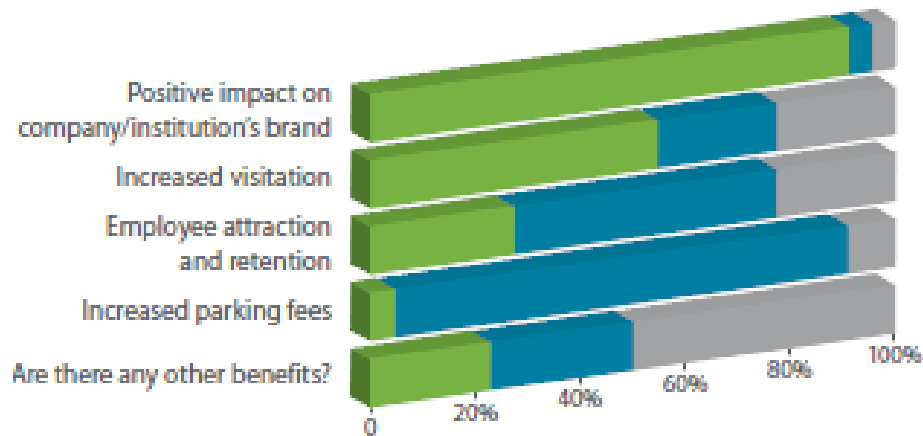
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Benefits of Hosting EVSE



Benefits of Hosting EVSE



Responses to "Does the company or institution expect any of the following benefits as a result of investing in electric vehicle supply equipment?"

■ Yes
■ No
■ Don't know/
no answer

Key Takeaways

- PEV Owner's WTP for "occasional charging" is more in line with breakeven user fees at lower EVSE costs and/or 6.6 kW on board charging capacity
- PEV Owner's WTP for "daily charging" does not appear to be high enough to cover EVSE costs, may be higher for PHEV owners
- Non-revenue benefits are important to early adopters, hosts may be willing to subsidize charging to enjoy those benefits
- Breakeven user fees are very sensitive to utilization rates