

Long Term Vehicle Charging Plans April, 2014

The ChargePoint Network



3.8 Million gallons of gas avoided



28,000,000 pounds of CO₂ avoided

91,000,000 gas-free miles driven



1,900+ organizations use ChargePoint



70% market share





30,400 megawatt hrs of energy dispensed

35% of EV drivers carry a ChargePoint card



Every 9 seconds, an EV driver charges at one of our 16,500 stations

Charging Services will Increase in Importance

- + Charging Stations
- + Billing Software
- + Reservations
- + Smartphone Apps
- + Advertising
- + Authentication
- + Asset Management
- + Energy Management
- + 24/7 Driver Care
- + Station Owner Care
- + Monitoring & Statistics
- + Remote Maintenance



Networked Charging Becoming Dominant Model





Charging Service Models

Business	Cost Plan	Value Prop
Workplace	Subsidized	\$550/year to retain an employee
Workplace	Paid	Employee pays \$2 a day
City	Cost recovery	Resident pays \$1 a charge
Apartment building	Vending Machine	6 year payback, then \$1000 a year income
Pure service provider	Subscription business	\$60/month, 6 year payback
Hotel	Amenity	\$550/year to attract guests
Retail	Amenity	\$1 subsidy to bring in a customer





California has Initiated Dramatic EV Car Adoption across the US!



According to Pike, by 2020 2.4% of total Light Vehicles are expected to be PEVs In California year-to-date, PEV sales have already eclipsed the 2.5% mark!



And Growth will Continue

Electric Vehicle Market: USA 2012-2020



	2009-2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Light Duty Car Sales									
LDV Sales - Pike Research	14,925,097	15,622,301	16,057,614	16,378,767	16,689,161	17,005,591	17,330,805	17,663,771	18,004,053
New EV Sales	55,000	100,000	160,000	220,000	300,000	390,000	500,000	625,000	750,000
New EV Sales as % of LDV Sa	0.4%	0.6%	1.0%	1.3%	1.8%	2.3%	2.9%	3.5%	4.2%

Forecasting Attach Rate to 2020 Analysis by Vertical (long-term cumulative attach rate)

+ Based on expectation of long-term industry attach rates by vertical, we can forecast our <u>cumulative attach rate</u> based on an 85% networked market and 65% CP market share

	Expected Share of US Total Industry	Expected Long-Term Cumulative Attach Rate	Weighted Avg Cumulative Attach Rate (Industry)	Weighted Avg Cumulative Attach Rate (ChargePoint)
Workplace	45%	25%	11.25%	6.22%
MDU	20%	50%	10.00%	5.53%
Municipality	15%	5%	0.75%	0.41%
Parking	10%	10%	1.00%	0.55%
Hospitality	5%	5%	0.25%	0.14%
Retail	5%	5%	0.25%	0.14%
TOTAL	100%		24%	13%

Forecasting Attach Rate ChargePoint Annual and Cumulative



ChargePoint Attach Rates

Forecasting Attach Rate Profile of Station Utilization – Location Matters!



- Utilization characteristics of our leading customers are indicative of future potential
- Location drives utilization! Poorly located ports distort utilization trends.

Public EV Infrastructure is not keeping up with EV Adoption

20000 **ChargePoint Accounts** 18000 16000 14000 12000 Infrastructure 10000 No. of public ports & Gap 8000 6000 4000 2000 0 02-2012 09-2012 10-2012 11-2012 01-2013 02-2013 03-2013 04-2013 01-2012 03-2012 04-2012 05-2012 07-2012 08-2012 05-2013 06-2013 03-2011 04-2011 05-2011 06-2011 09-2011 10-2011 11-2011 12-2011 12-2012 06-2012 02-2011 07-2011 08-2011 01-201 Total Ports - CA Total Ports - Rest of US CP Accoutns - Rest of USA CP Accounts - CA

Rise in EV Drivers Outpaces Available Ports

Consequently, Public Ports are Increasingly Over-Utilized

+ Current attach rate (EVs per port) in CA is ~7:1



Case Study: Major CA Workplace Customer

+ Infrastructure investment stimulates EV adoption!



Case Study: Major CA Airport

+ Illustration of typical customer utilization in our portfolio



Quantifying California's EV Infrastructure "Gap"

Attach Rate: Relationship between EVs & public EV ports—defined as # of "public" EV ports deployed per EV sold ("public" defined as non-single family residential)

- 50% Attach Rate: Short-term "target" rate to support rapid pace of EVs sold in next 5-10 years
- **15% Attach Rate**: Historical relationship observed in ChargePoint's charging port portfolio, which has already generated complaints from EV customers regarding lack of public EV infrastructure
- 5% Attach Rate: Unsustainable public EV infrastructure platform and will retard new EV adoption

Projected EV/PHEV New Car Sales Projected Growth (Cumulative Sales)							
	2012 Registered EV Cars	2012 Public EV Charging Ports (# of Ports)	2015 Projected Cumulative EV Cars (Est # of cars)	Required 2015 Public EV Charging Ports(50% Attach)	2020 Projected Cumulative EV Cars (Est # of cars)	Required 2020 Public EV Charging Ports (50% Attach)	
CA	29,640	4,348	90,625	45,312	442,895	221,448	
US Total	76,133	17,203	391,672	195,836	2,006,143	1,003,072	

Based on conservative Pike Research projections for EVs sold, California needs approximately \$1 billion in "public" charging ports by 2020!



- + We're installing 1 a day in the US
- + They can pay their way except....
- + Demand charges are killers
- Proposal in Hawaii is Demand Charges are waived if DR is implemented

Obstacles to Adequate Infrastructure

- + Landlords aren't interested
 - HOA, Apartment landlords, Business parks
- + Installations are expensive
- + Lack of adoption of HB 130
- + Lack of awareness of the inevitability of installing EVSE
- + Lack of awareness of scaling of EVSE
- + Lack of time pressure to deploy infrastructure
- + An expectation that the government will build the infrastructure
- + Energy Services market doesn't work
 - FR, DR, LCFS, Capacity Management
- + Still a lot of chicken and egg parking garages, curbside

Opportunities

- + We need Dept. of Commerce help to proliferate HB130
- + If a business or a resident wants EVSE, they shall get it
- + Workplaces should have 1 port for every two EV's
- + Some people are doing it right
- + Awareness of the inevitability of installing EVSE
- + We need funding for make readies in HOA/Apartments
- + Methods for getting energy service money to flow
- + Leveraged financing



Thank You

www.chargepoint.com