

Building out the Fast Charging Network

EV Roadmap 2016

July 21, 2016

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Discussion Topics

- Introduction to EVgo
- DCFC network utilization trends
- Fueling costs

EVgo leads America's electric vehicle **revolution**.

OUR MISSION:

Build the nation's largest EV charging network while improving **the planet** and boosting **the economy**.

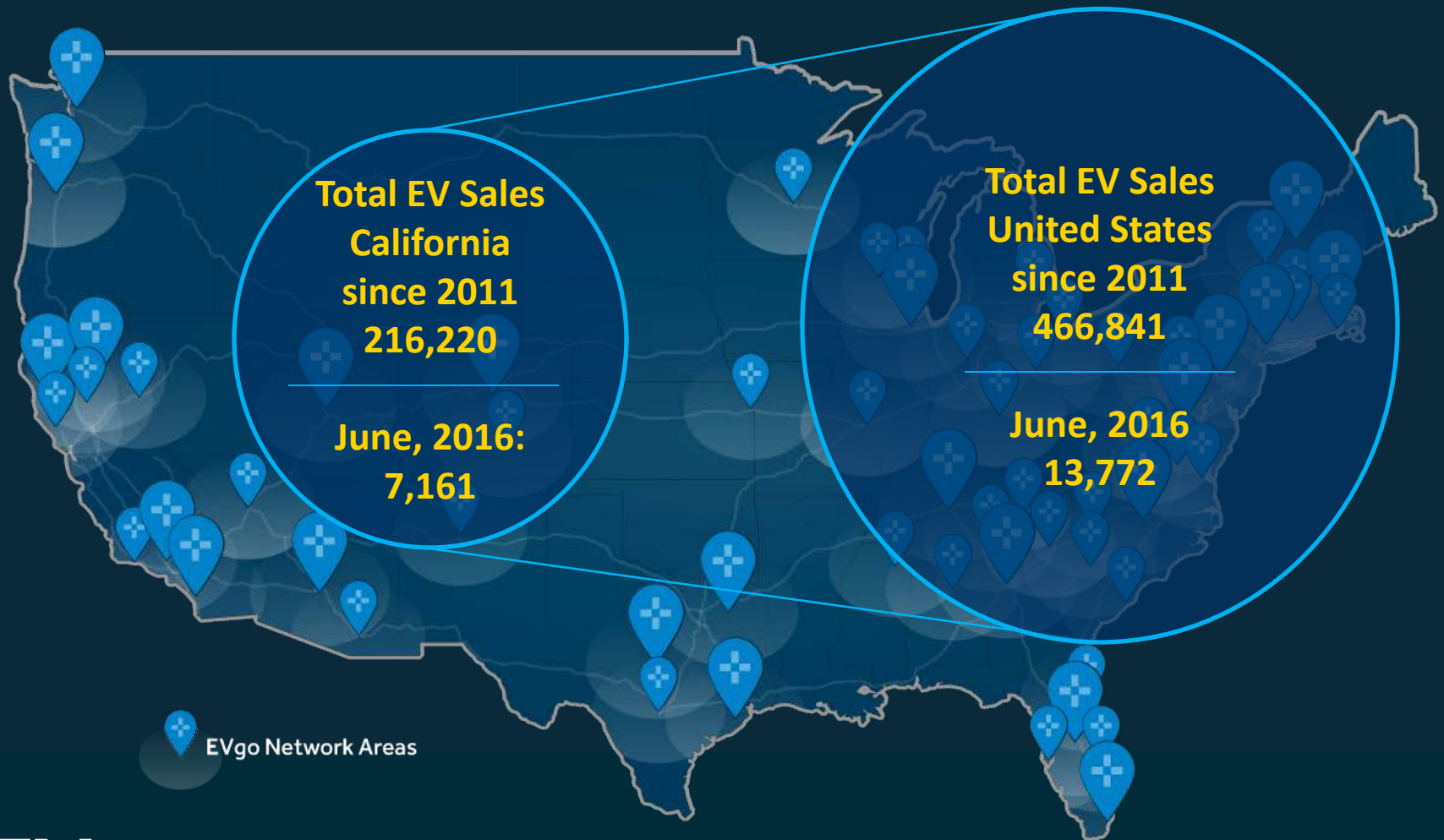
We put the right chargers in the right places.

Together, we **unite the EV movement** for all,
making it **unstoppable**.



Nationwide Fast Charger Network

Over 700 chargers in over 50 major U.S. markets



The Right Chargers In The Right Places

Retail
Engagement

Highway
Access

Well-Lit

Dedicated
EV Parking

Accessible



Photo: Lucky Fremont Freedom Station

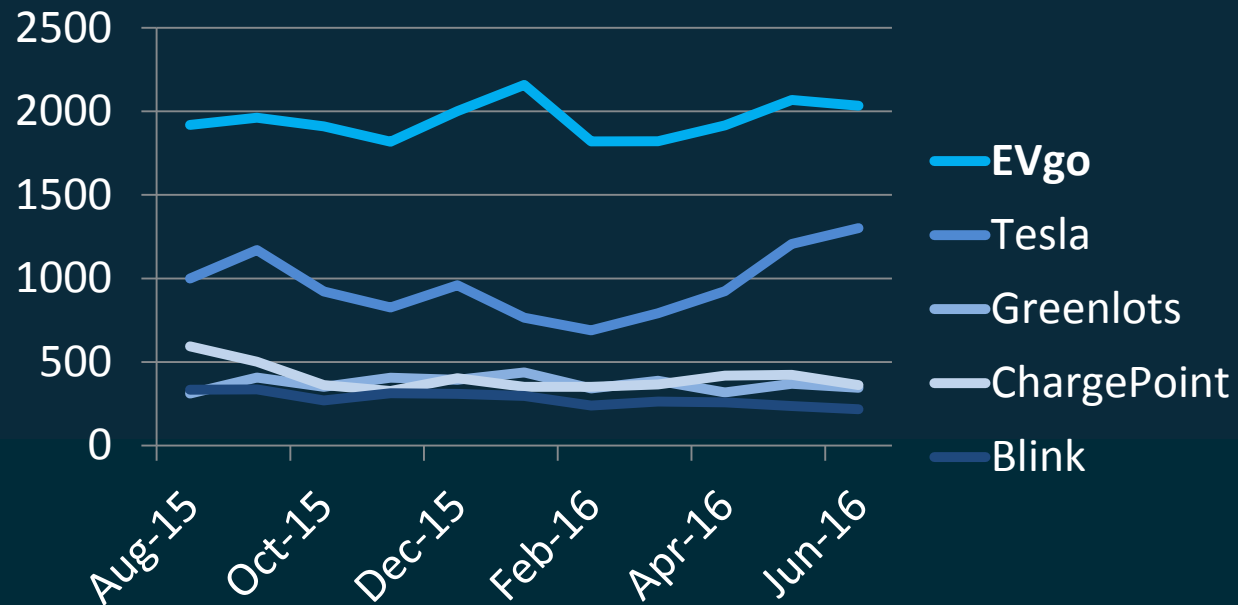
Outstanding Customer Experience

EVgo takes pride in our fast charger customer satisfaction ratings and seamless user experience.

DCFC Network PlugScores
July 2016

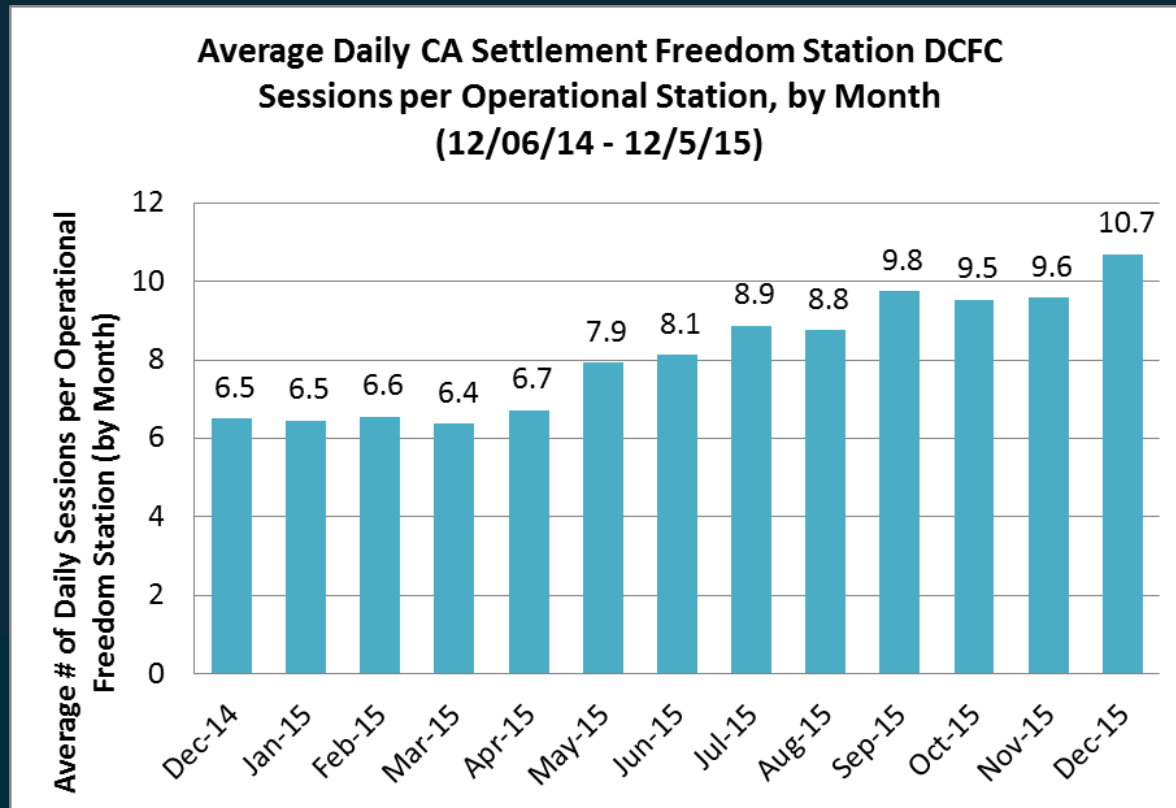
Network	Score
Tesla	9.9
EVgo	8.7
ChargePoint	7.6
Greenlots	7.4
Blink	6.8

Positive PlugShare DCFC Check-in Count,
by Network by Month



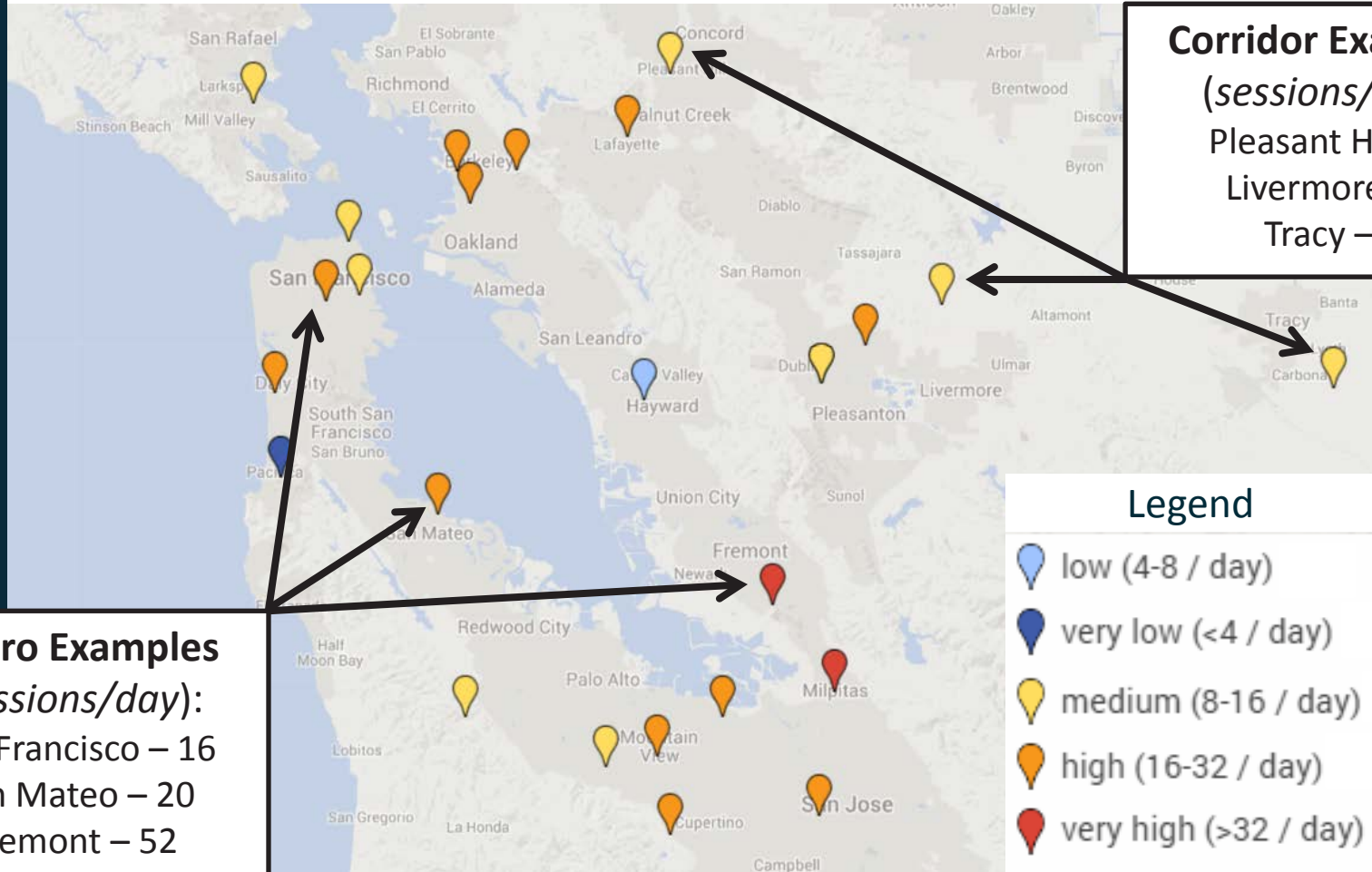
Fast Charger Utilization Growth

Average California fast charger utilization grew by an average of 5% each month of 2015: increasing from 6.5 daily sessions per site in Dec-14 to 10.7 daily sessions per station in Dec-15.



Utilization Varies by Location Type

Daily Fast Charging Sessions per Day per Location (Nov 2015)



Metro Examples
(sessions/day):
San Francisco – 16
San Mateo – 20
Fremont – 52

Corridor Examples
(sessions/day):
Pleasant Hill – 9
Livermore – 9
Tracy – 8

Legend

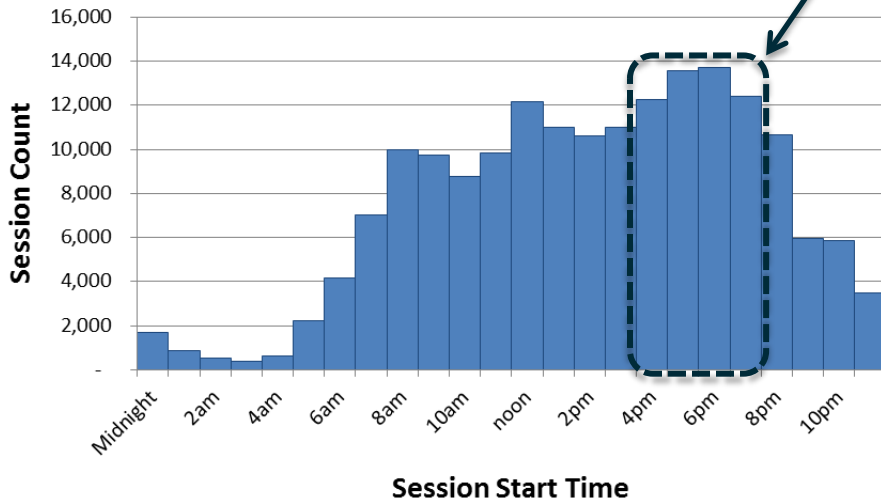
- low (4-8 / day)
- very low (<4 / day)
- medium (8-16 / day)
- high (16-32 / day)
- very high (>32 / day)

Utilization Varies by Time of Day

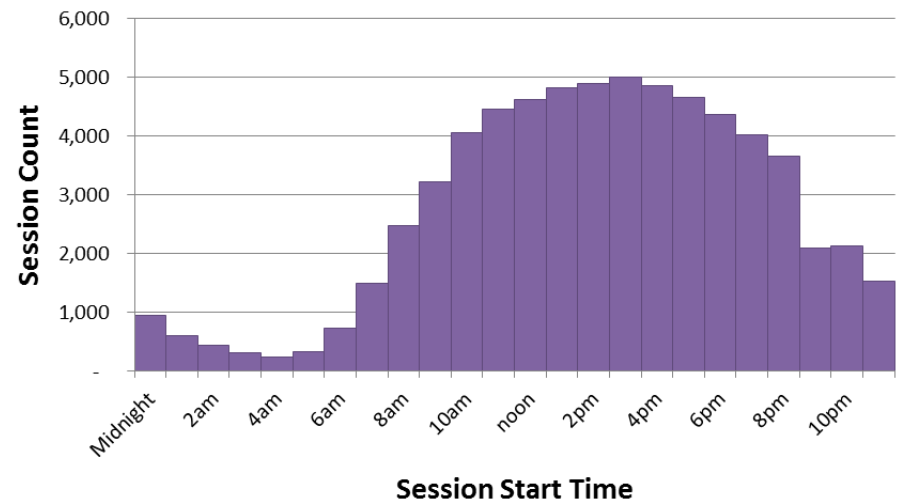
The most popular time to use EVgo fast chargers is between 4-8pm.

29% of weekday charging occurs between 4-8pm

CPUC Freedom Station Charging Session Start Times Weekdays
12/6/14 - 12/5/15 (n = 178,445)



CPUC Freedom Station Charging Session Start Times Weekends
12/6/14 - 12/5/15 (n = 65,818)



Fast Charger Energy Costs—California

Average electricity cost **\$0.24 - \$0.64/kWh***

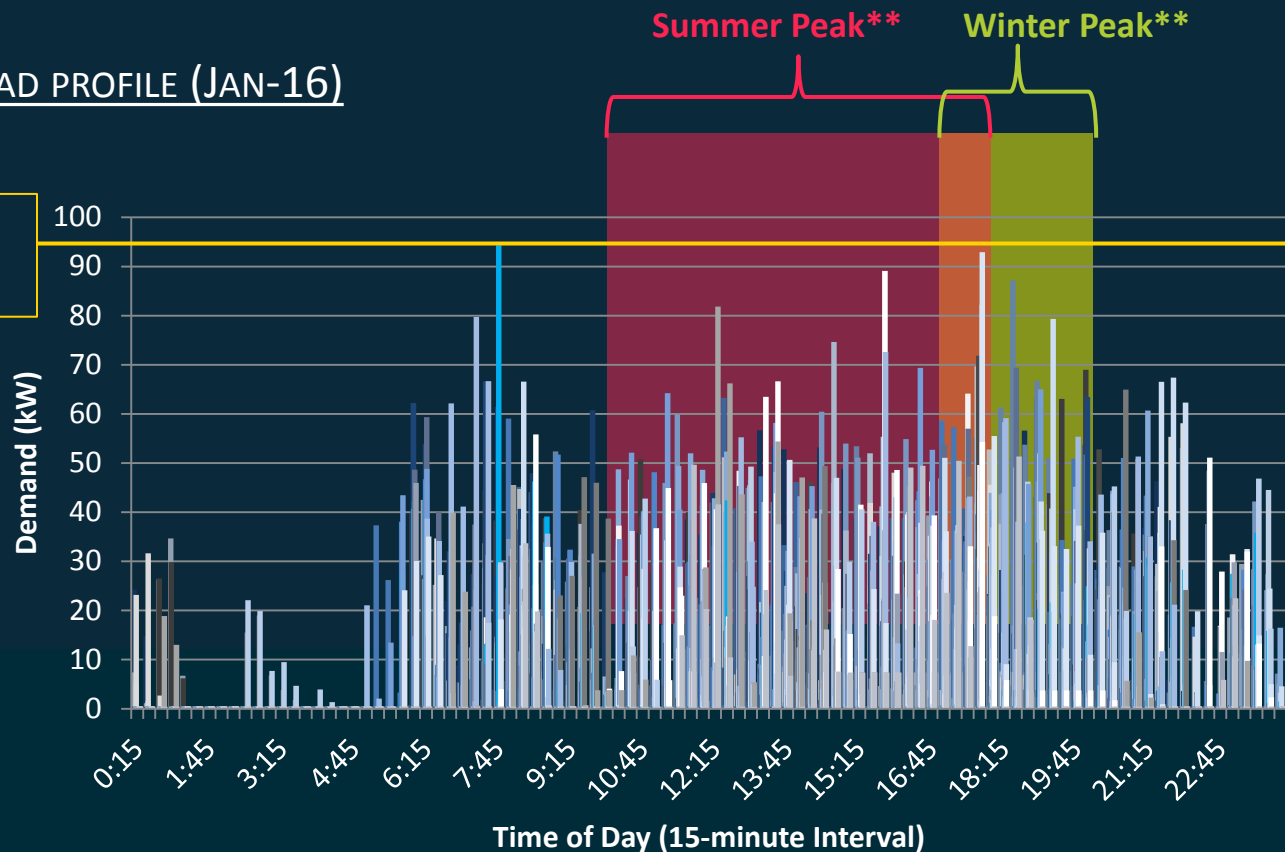
Largest component is a fixed cost: electricity demand charges **\$1,400 - \$3,100 per month per site** (\$15-\$33 / peak kW)

ACTUAL STATION LOAD PROFILE (JAN-16)

Peak Demand = 95kW

*Average total electricity cost (includes demand) in CA IOU territories

** Peak Times of SDG&E AL-TOU Tariff



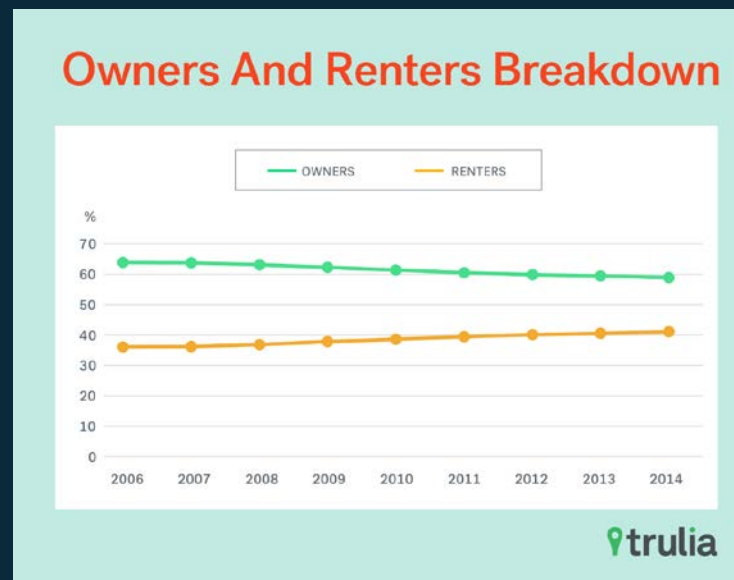
Fueling Price Comparison— Gas vs. Electricity

EV fuel can cost substantially less or more than gasoline depending on the electricity rate— especially at public charging stations.

Description	Cost
Gasoline cost (\$/gal)	\$3
Fuel tank capacity (gallons)	12
Miles per gallon (ICE-- 2016 Nissan Sentra)	32
Miles driven on 1 tank of gas	384
Gasoline cost per tank	\$36

Description	Cost
Home charging cost per kWh	\$0.12
EV kWh/mi	0.32
kWh required for 1 tank of gas equiv.	123
Home electricity cost of 1 gas tank equiv.	\$15

Description	Cost
Public charging cost per kWh	\$0.07 – \$0.64
EV kWh/mi	0.32
kWh required for 1 tank of gas equiv.	123
Public electricity cost of 1 gas tank equiv.	\$9 - \$80



Data sources:

- <http://gasprices.aaa.com/>
- https://www.fueleconomy.gov/feg/bymodel/2015_Nissan_Sentra.shtml
- https://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a
- http://www.afdc.energy.gov/vehicles/electric_emissions_sources.html
- <http://www.trulia.com/blog/trends/own-to-rent/>

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Appendix

California Utility Costs—Current and Future

Today’s “typical” Freedom Station (2 DCFCs, 1 L2) Tariffs; Peak Demand is ~95 kW:

Utility	Tariff	Demand Cost Components (\$/kW)	Average Electricity Cost (\$/kWh)*	Average Monthly Demand Cost (\$/kW/Mo)
SDG&E	AL-TOU	Base: \$23 Summer peak: \$10 Winter peak: \$7 Capacity reservation: \$3	\$0.08	\$33
SCE	EV-4	Facilities-related: \$15	\$0.17	\$15
PG&E	A-6	\$0	\$0.24	\$0

Potential future Freedom Station (configuration TBD) Tariffs; Assumes Peak Demand of 300+ kW:

Utility	Tariff	Demand Cost Components (\$/kW)
SDG&E	AL-TOU	Base: \$23 Summer peak: \$9 Winter peak: \$7 Capacity reservation: \$3
SCE	TOU-GS3A	Facilities-related: \$18 Summer peak: \$16 Summer mid-peak: \$3
PG&E	A-10	Summer: \$18 Winter: \$10

* Annual average kWh-only component of tariff based on:

- 4 summer months and 8 winter months
- Peak/Mid-peak/Off-peak breakdown of 14%/37%/49%, based on 2015 CPUC Freedom Station data analysis