Program Advisory Council Meeting Q4 2020

January 27, 2021

Together, Building a Better California

Agenda

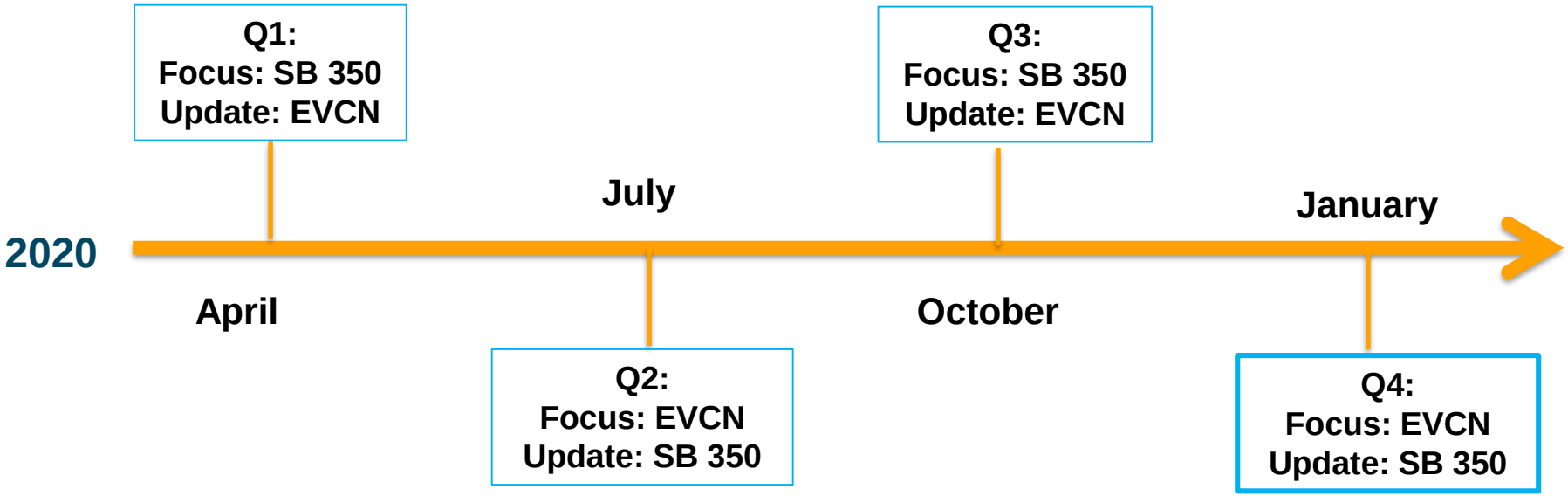
Safety/ Introductions	**9:00 – 9:10**
Program Portfolio Update	**9:10 – 9:20**
EVCN Detailed Update	**9:20 – 10:00**
EV Savings Calculator	**10:00 – 10:05**
PAC Discussion	**10:05 – 10:20**
Questions	**10:20 – 10:30**

COVID-19 Safety

Clean Transportation Program Advisory Council

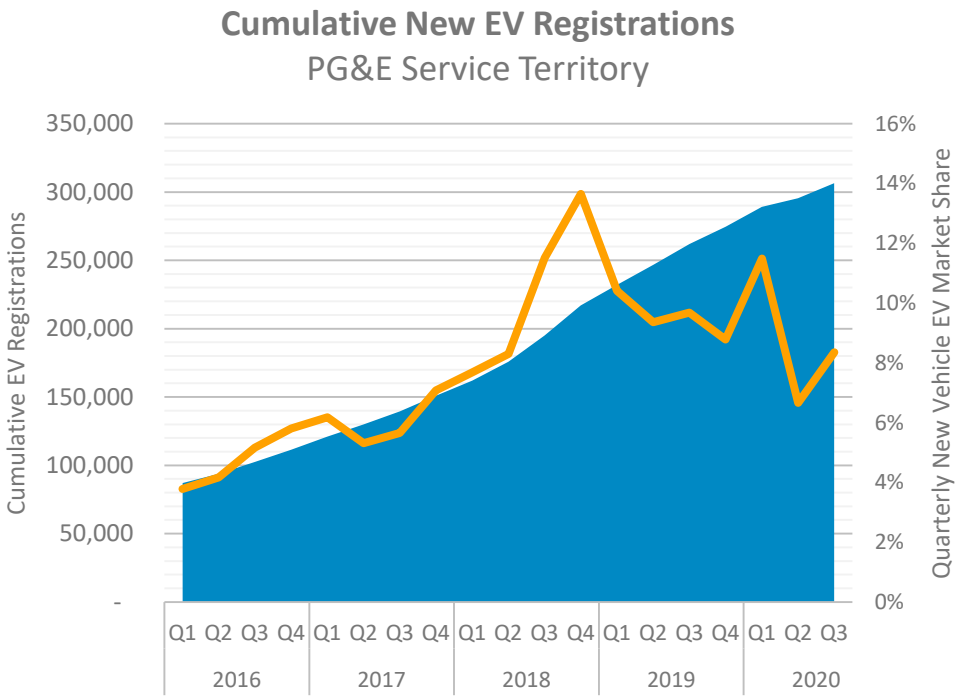
Overview

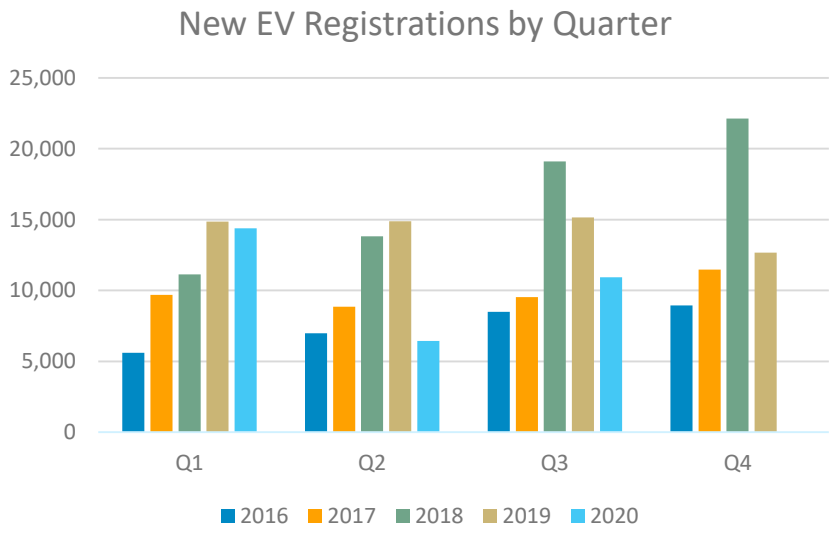
- PG&E has expanded our efforts on transportation electrification, with a number of filings, pilots and programs in progress
- CPUC has directed PG&E to consult a Program Advisory Council in the development of these pilots and programs to gain feedback from industry stakeholders
- This platform will serve to gather insight and feedback on PG&E's proposals and ongoing programs



EV Market Update

315,949 **EVs registered** in PG&E service territory, through November of 2020





Source: EPRI, Based on external registration data through November 2020

Program Portfolio Update

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Program Deployment Status Update

- PG&E construction is proceeding with COVID19-related safety protocols in place & with the goal of minimizing impact to customers during the pandemic
  - COVID-related safety protocols include daily health verification, safe distancing, proper face mask wearing, and use of good hygiene
- The programs continue to work to minimize impacts to construction resulting from PSPS and wildfires
  - Proactively monitoring scheduled work compared to high fire threat districts
  - Being prepared to reschedule clearances as necessary
- PSPS and wildfires throughout service territory have had minimal impact on construction and scheduled clearances so far

Programs Status Update

- After a COVID19-related pause to programs' construction in Q1/Q2, PG&E resumed its pre-shelter-in-place construction pace in Q3
- In Q4 2020,
  - EVCN: 720 ports (20 projects) were substantially complete
  - EV Fleet: 9 projects were substantially complete
- Through December 2020, PG&E has installed over 90% of target EVCN ports (4,180 ports out of 4,500 port target)

EV Fleet Program Update

Status as of 12/31/2020

	Sites	EVs
Applications	135	-
Viable[1]	55	956
Final Design	36	384
Construction substantial complete	19	215
Activated	8	106

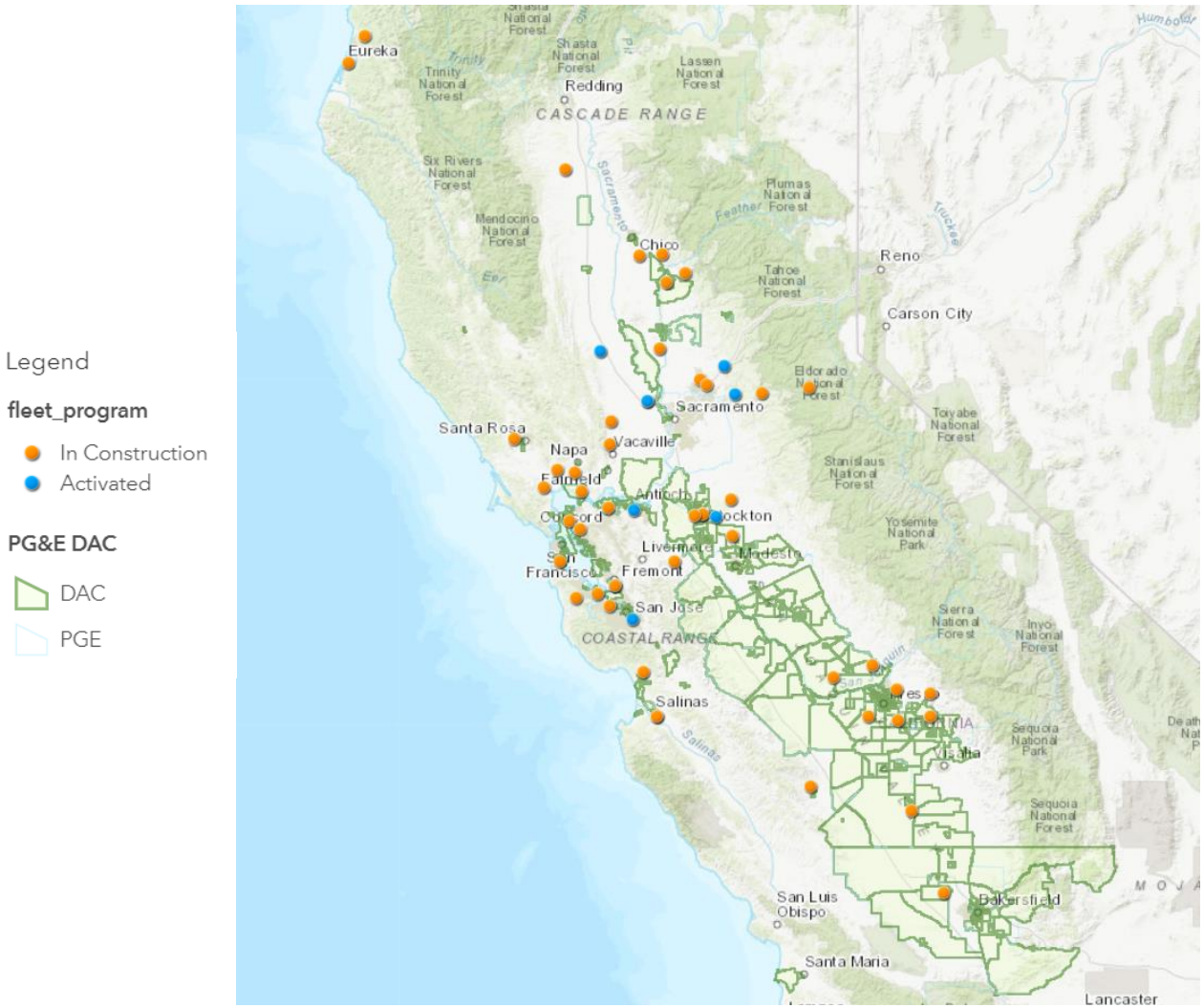
- **Customer acquisition:** Ended 2020 strong with seven signed contracts in Q4.
- **Marketing:**
  - Drove over 1,000 prospects in 2020.
  - Finalized online survey to prospects in order to nurture them with personalized content and resources. Survey was deployed in mid-January.

Port of Stockton

[1]*Viable contracts are all contracts signed to-date including on hold and waitlisted but excludes cancelled and withdrawn sites.*

Fleet Construction and Activation

- Activated sites and sites in construction updated on public map
- Sites are summarized by zip code to maintain site host anonymity



EV Fast Charge Program Update

Status as of 12/31/2020

	Sites	Ports
Applications	156	664
Viable[1]	6	27
Final Design	6	27
Construction substantial complete	1	4
Activated	1	4

- **Customer acquisition:** 88 applications received in Q4 site solicitation (largest applicant pool to-date)
- **Q4 solicitation:** 7 EVSPs, 32% of apps within DACs
- **1st activated site:** 7-Eleven, West Sacramento

[1]*Viable contracts are all contracts signed to-date including on hold and waitlisted but excludes cancelled and withdrawn sites.*

EV Charge Schools & Parks Program Update

REGULATORY

- CPUC Ruling on Tier 3 Rebate Letter Pending (11/5/20)
- Upcoming Tier 2 Letter Due (3/1/21)

PROGRAM LAUNCH

- **Application**: https://energyinsight.pge.com/SchoolPark/
- **Program Information**: www.pge.com/evchargeschools and www.pge.com/evchargeparks
- **Email**: EVSchoolsandParks@pge.com

SITE SELECTION

- Rolling Basis
- Seeking Program Fit

EVCN Update

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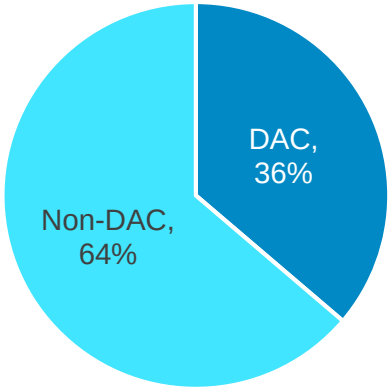
Overall EVCN Progress Update

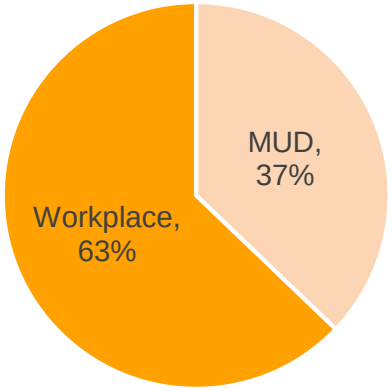
Status as of 12/31/2020

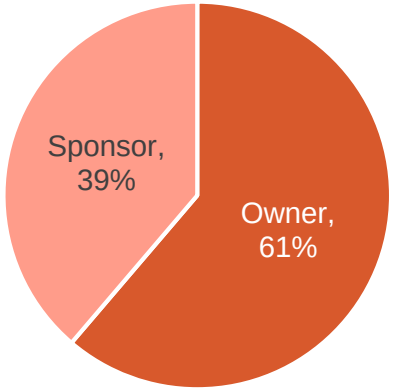
	Ports	Sites[2]
Submitted	15,828	816
Viable[1]	4,898	198
Final Design	4,834	193
Construction substantial complete	4,180	177
Activated	3,760	166

- **Customer acquisition** complete: application portal closed Q2 2019
- **Site eligibility** complete: all customer agreements in place
- **Construction** at a steady capacity following shelter-in-place measures

Installed port portfolio



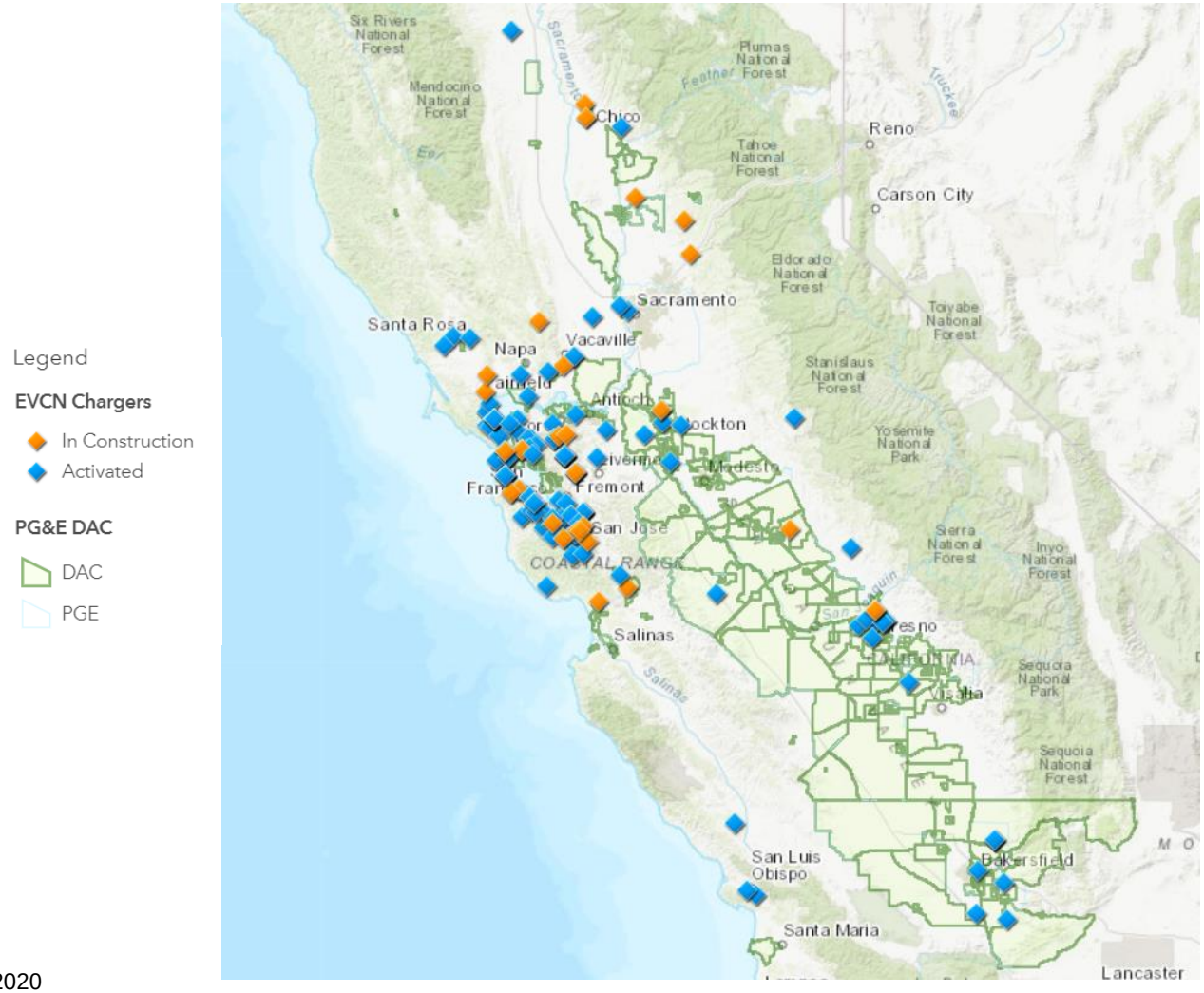




Notes: [1] *Viable sites are those sites for which contracts are signed and the project will be constructed*

EVCN Construction and Activation Map

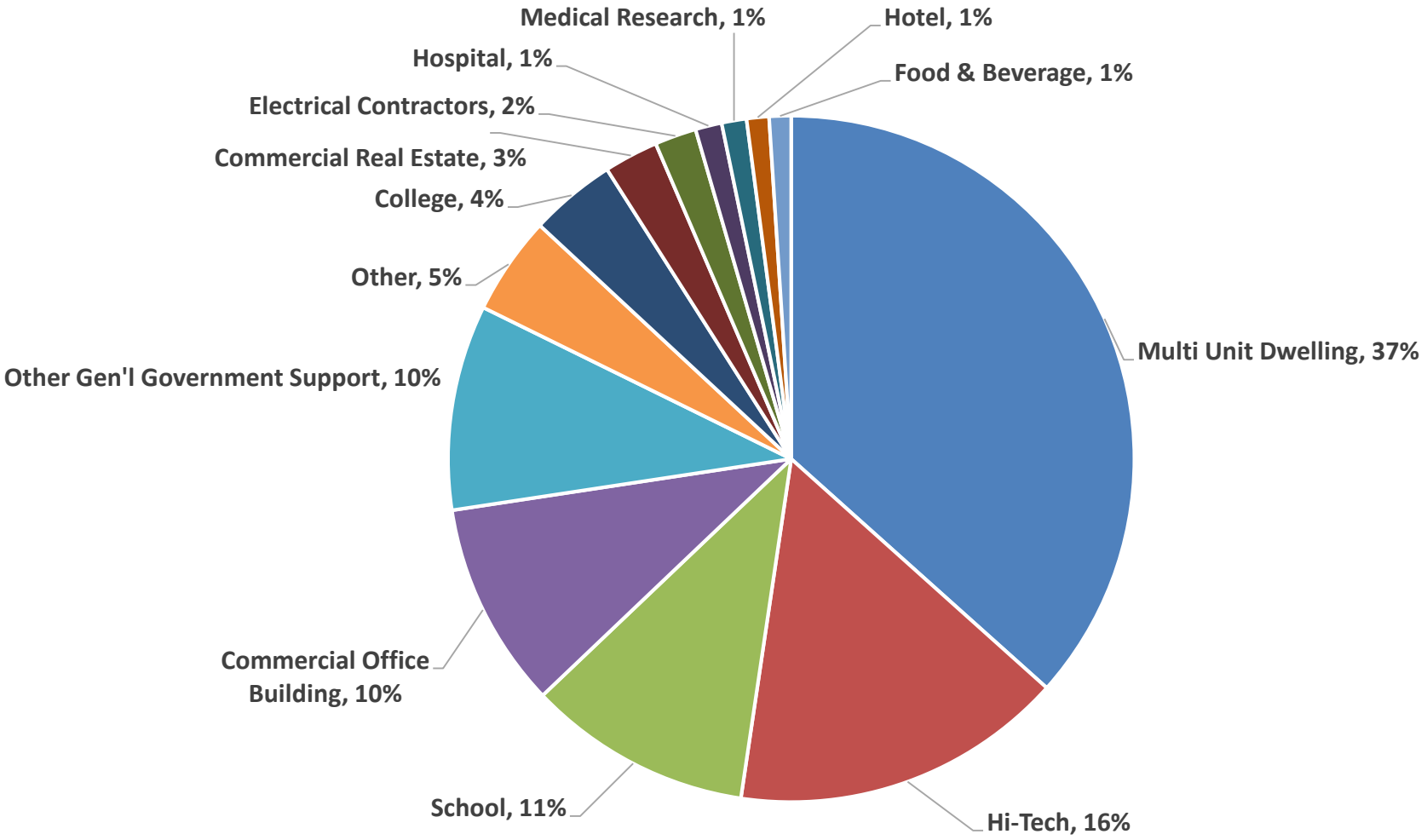
- Activated sites and sites in construction updated on public map
- Sites are summarized by zip code to maintain site host anonymity



Note: Data as of December 2020

Site Demographics

Substantially Complete Port % by Facility Type



Notes: *The "Other" category represents facility types with less than 1% of substantially complete ports and consists of Commercial Shopping Center, Credit Unions, Engineering Manufacturing, Financial Consulting, High School, Industrial, Industrial Real Estate, Industrial Warehouse Facility, Medical Office Building, Non-Profit, Pharma, Scientific Laboratory, Storage Unit Facility, and Supermarkets-Other Grocery*

Load Management

Benefits of on-site Load Management:

- Can use a smaller size of panel and service
- Saving ranges from $30K to $200K per project
- Some projects are infeasible if load management is not used, due to the physical constraints of the site

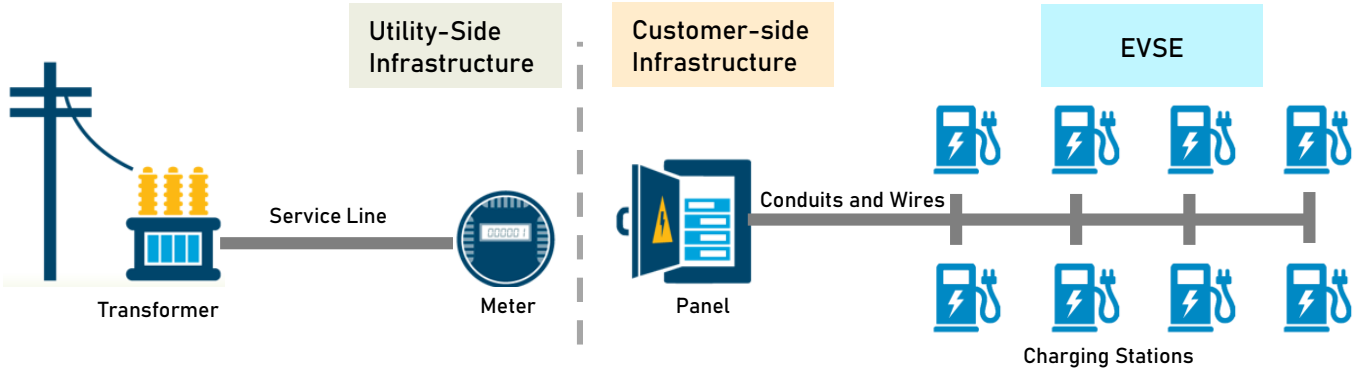
Multi-Unit Dwellings

# Ports	Panel Size Installed (Amps)	Load Management (% of full load)
98	*98 ports split 49 / 49 across 2 panels*	
49	400	47%
49	400	47%
206	*206 ports split 107 / 48 / 51 across 3 panels*	
107	800	43%
48	400	48%
51	400	45%
106	1000	51%
163	1200	43%
135	600	56%
38	400	61%
22	400	99%
53	800	87%

Workplace

# Ports	Panel Size Installed (Amps)	Load Management (% of full load)
49	800	88%
80	1000	72%
90	1000	64%
50	800	87%
20	600	94%
48	800	90%
22	400	99%
50	800	87%
34	600	96%
50	800	92%
25	400	87%

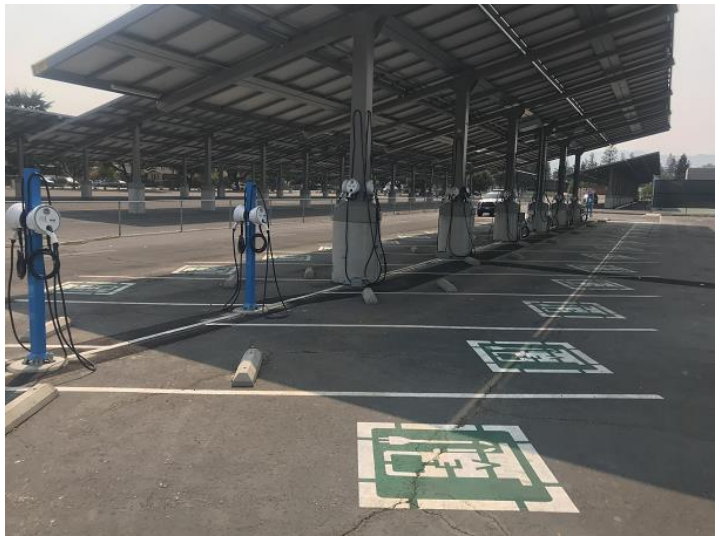
The EVCN make-ready program covers infrastructure costs on both sides of the customer meter



Cost category	Utility-Side Infrastructure (To-the-Meter, TtM)	Customer-side Infrastructure (Behind-the-Meter, BtM)	EVSE = Charger Charge Owner (site host owns) Charge Sponsor (PG&E owns)	Rebate	Participation payment
Details	PG&E-installed/owned	PG&E-installed/owned	Charge Owner: Customer-installed/owned	Rebate to customer	n/a
			Charge Sponsor: PG&E-installed/owned	n/a	Customer payment, unless MUD/DAC

EVCN Cost Summary – EVSE Cost Ranges

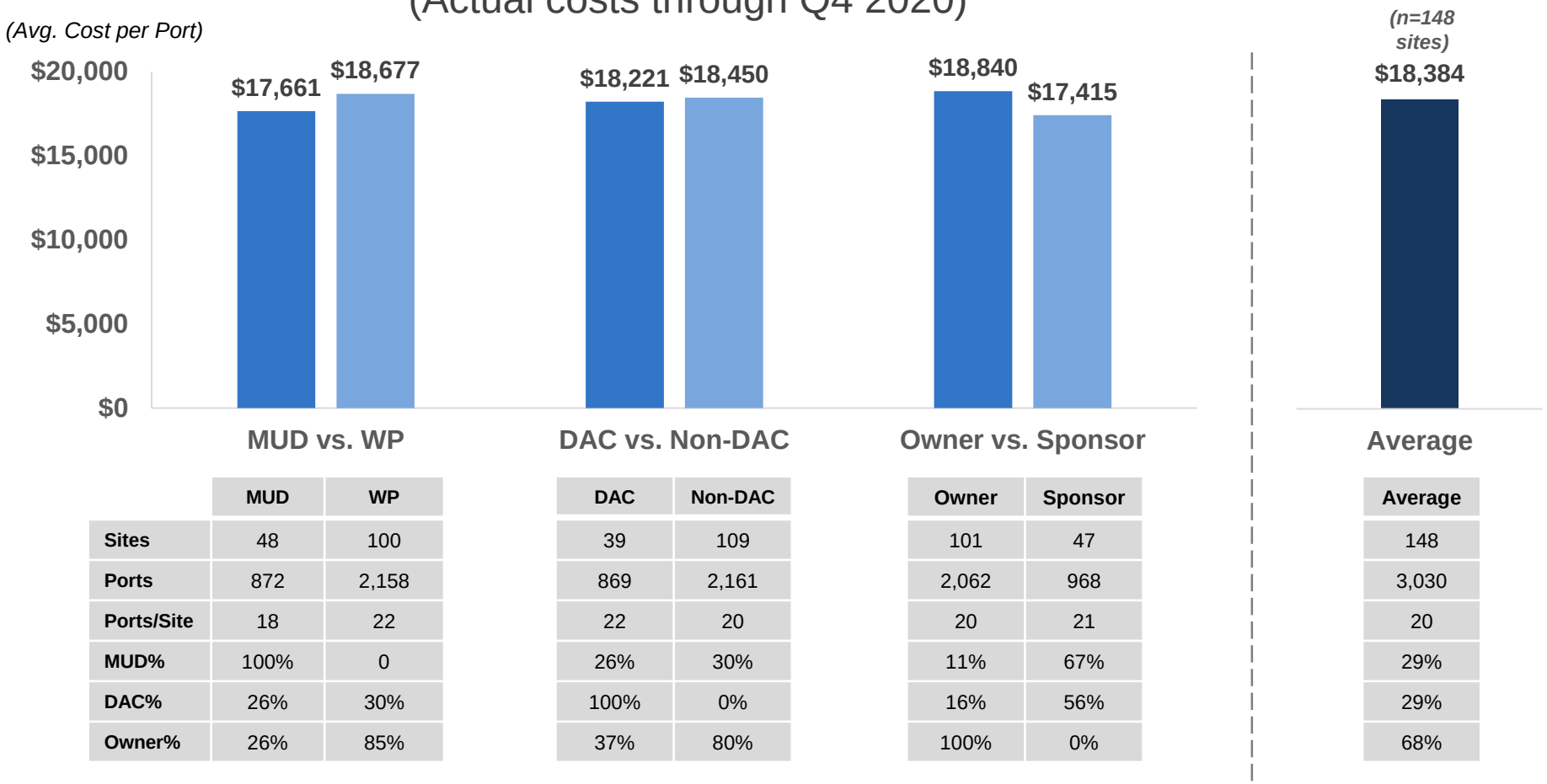
Cost Category	Frequency	Units	Approx. Range	Median
Charger	One-Time	Per Port	$1,000-$5,000	$2,300
Installation[1]			$150-$1,850	$800
Maintenance			$50-$1,000	n/a
Network			$50-$700	$250



Note: [1] For owner sites, the site host pays the installation costs

EVCN Infrastructure Cost Update

Average cost per port, by EVCN segment
(Actual costs through Q4 2020)



	MUD	WP
Sites	48	100
Ports	872	2,158
Ports/Site	18	22
MUD%	100%	0
DAC%	26%	30%
Owner%	26%	85%

	DAC	Non-DAC
Sites	39	109
Ports	869	2,161
Ports/Site	22	20
MUD%	26%	30%
DAC%	100%	0%
Owner%	37%	80%

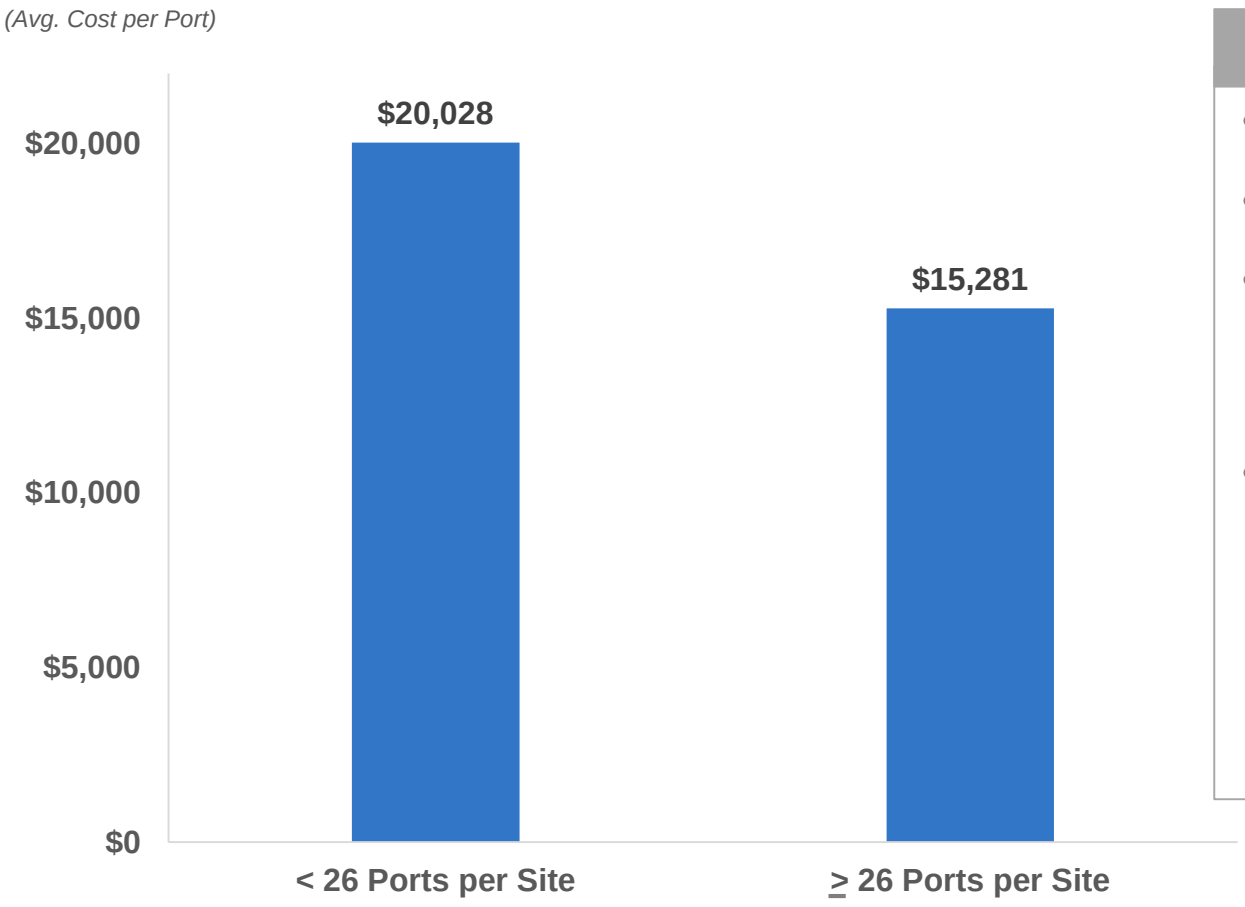
	Owner	Sponsor
Sites	101	47
Ports	2,062	968
Ports/Site	20	21
MUD%	11%	67%
DAC%	16%	56%
Owner%	100%	0%

	Average
Sites	148
Ports	3,030
Ports/Site	20
MUD%	29%
DAC%	29%
Owner%	68%

***Note**: 1) Includes cost data through Dec. 2020, representing 148 projects that have been completed and fully invoiced; does not include costs for all 4,180 ports that were substantially complete at end of Q4 2020. 2) Costs include capital costs (design/permits, materials, to-the-meter construction labor, behind-the-meter construction labor, chargers for Charge Sponsor sites, overhead), rebate expense (for Charge Owner projects), and participation payment (credits to project cost, for Charge Sponsor sites). Costs shown here exclude PM labor.*

Higher port count sites enable economies of scale in average cost per port, resulting from fixed costs

Avg. Cost per Port, by Project Size (n=148 sites, through Q4 2020) – 24% delta



Fixed Costs Include:

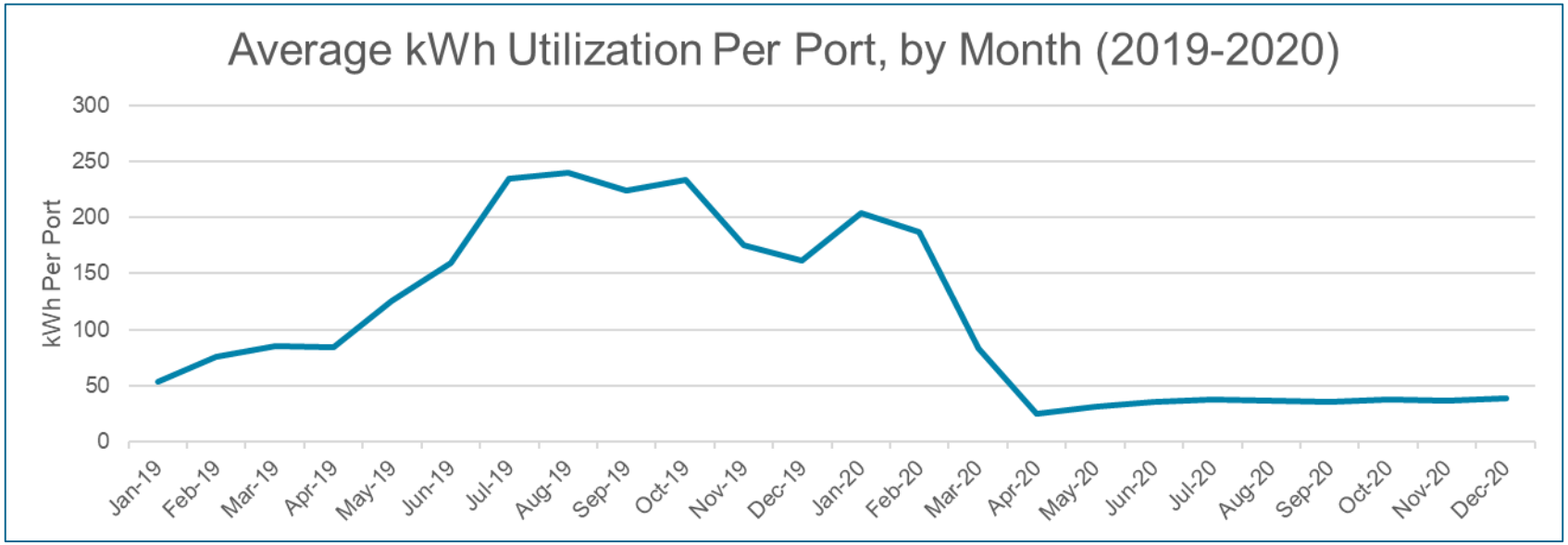
- Design
- Permits
- Some materials (e.g. meter / distribution panel)
- Some TtM and BtM construction labor (e.g. linear feet of trenching and/or conduit, mobilization / demobilization)

Note: *The segmentation of projects above and below 25 ports per site is informed by 1) ADA compliance-related scope considerations, and 2) an observable decrease in avg. cost per port at sites with more than 25 ports*

Overall utilization increased throughout 2019 and held steady through early 2020

Key Insights

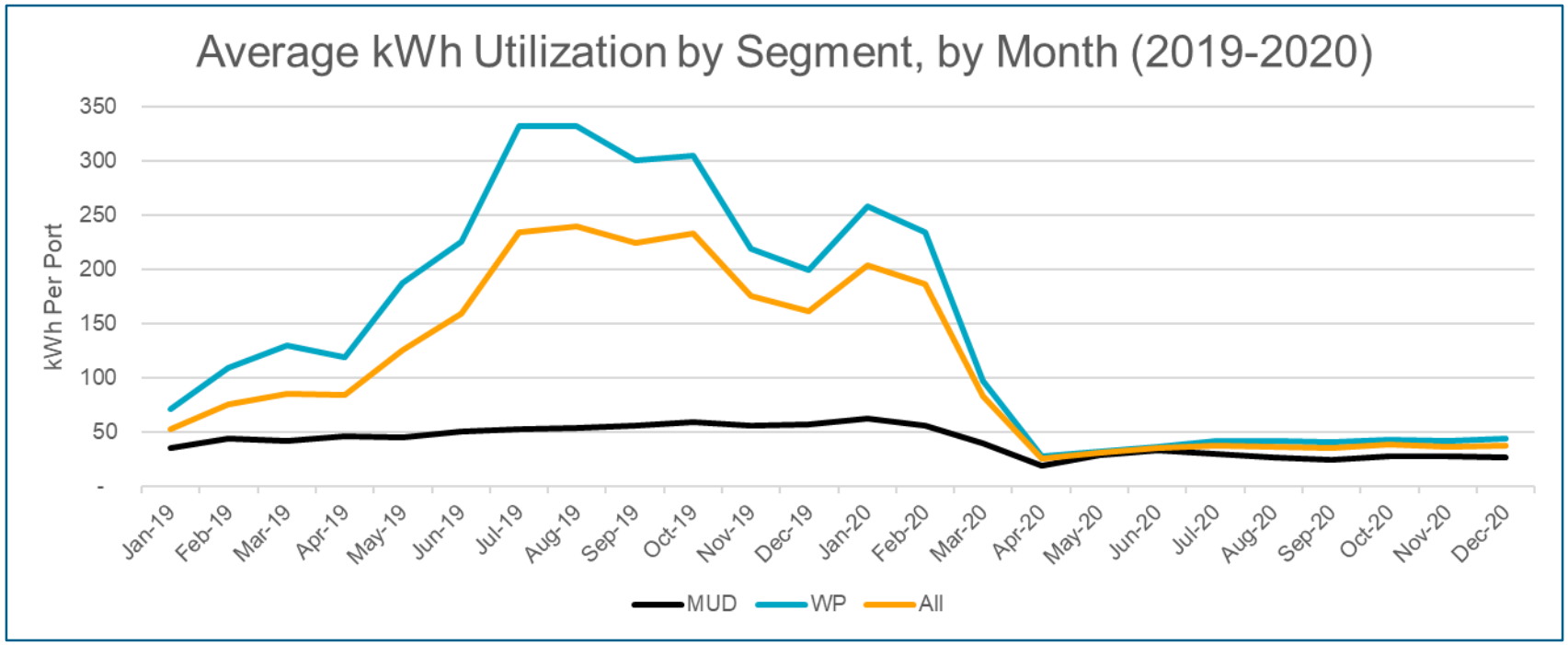
- Impact of holidays can be seen in Nov/Dec 2019 for workplace usage
- Impacts of COVID-19 are clearly seen from March onward
- There has been an increase in utilization throughout the latter part of 2020



	2019				2020			
	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4
Active Sites	37	52	73	92	110	117	134	145
Active Ports	520	832	1233	1577	1937	2088	2469	2972

Note: For each month, kWh were included for ports that were active during the entire month and had usage data available. 2018 utilization not shown due to limited sample size. In bottom-most table, active sites and ports designates those that were active for at least a full month during the quarter and data is available. Chart shown here is updated relative to the data shown during the 1/27 PAC meeting, in order to reflect the most accurate data.

Workplaces have shown higher average utilization per port so far



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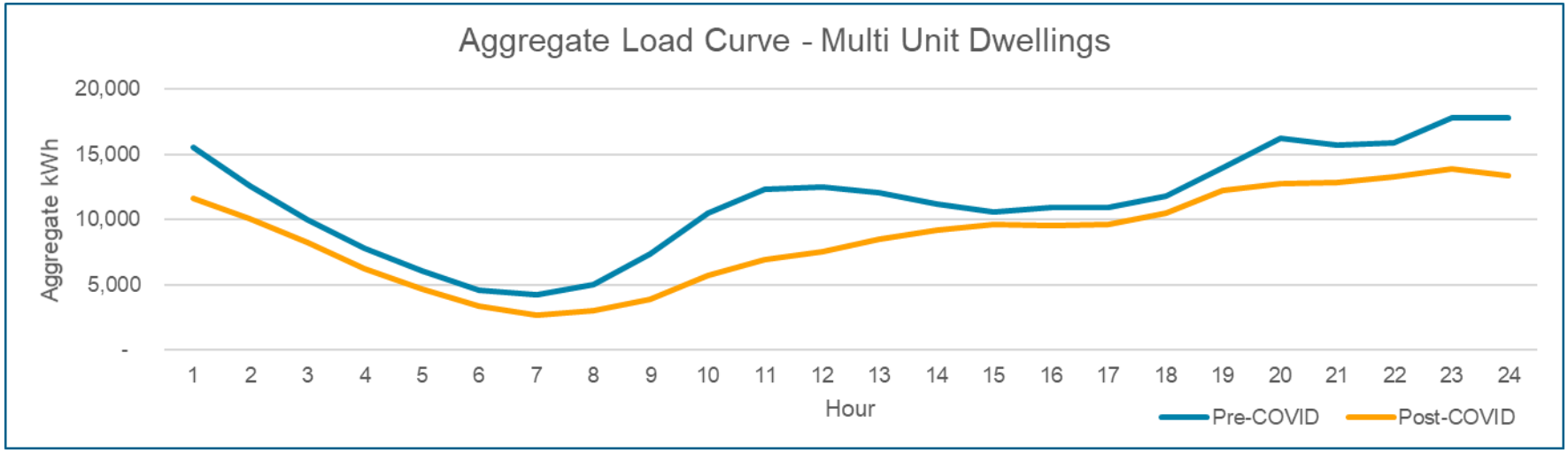
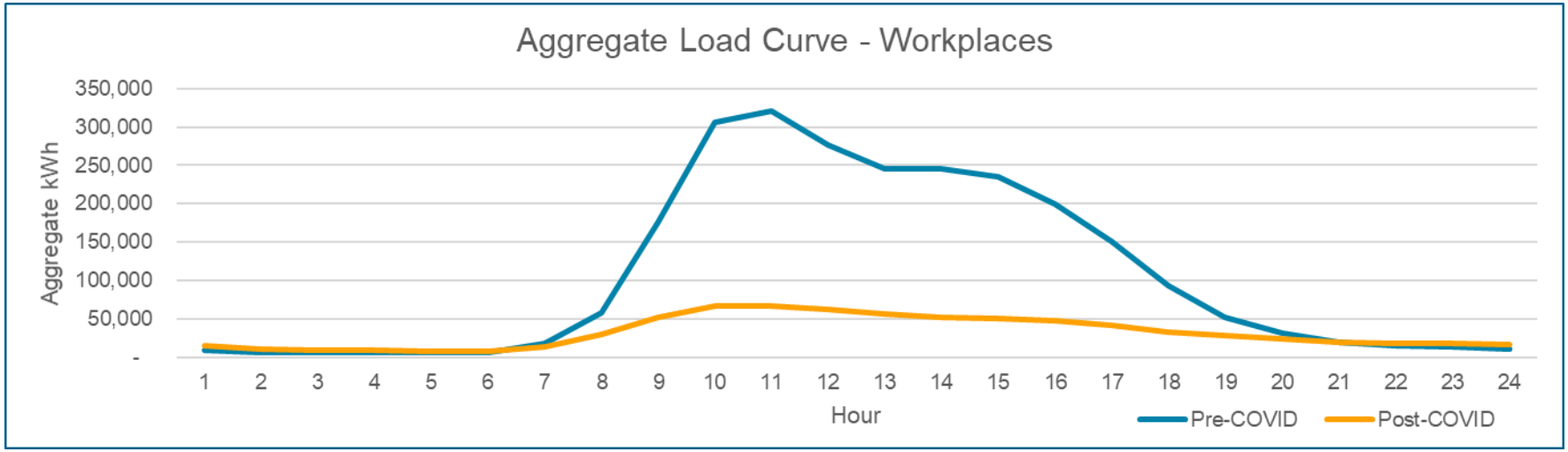
Aggregate Load Curve WP vs MUD

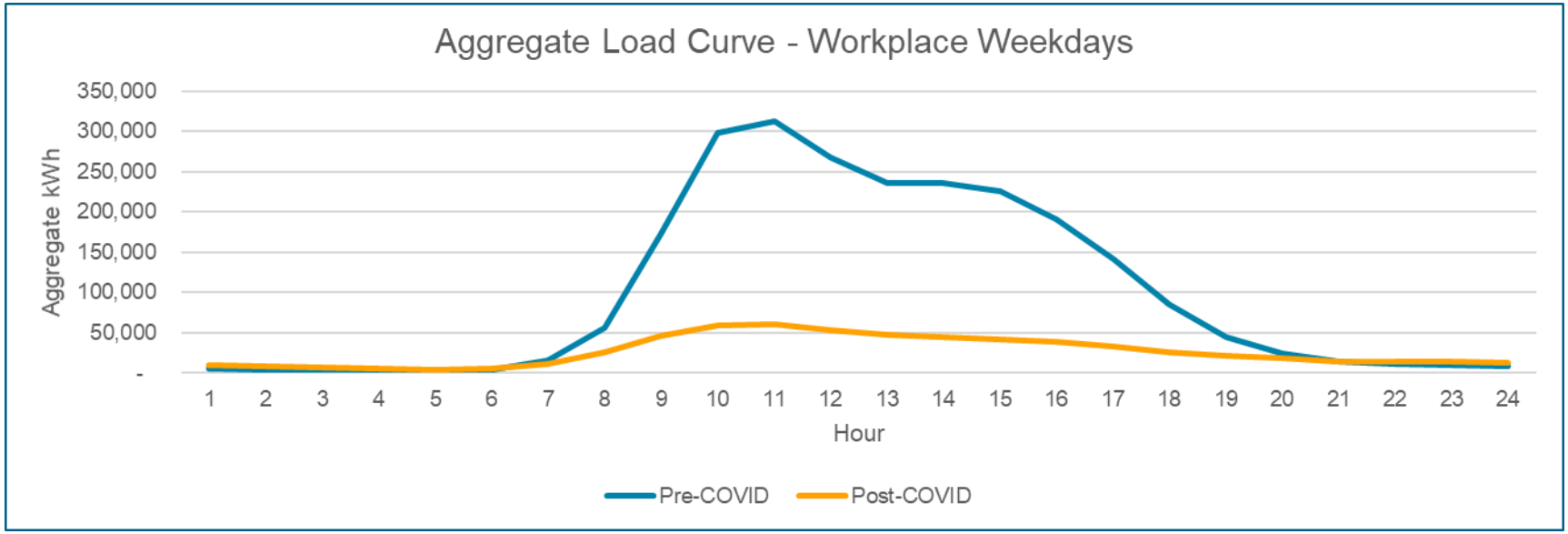


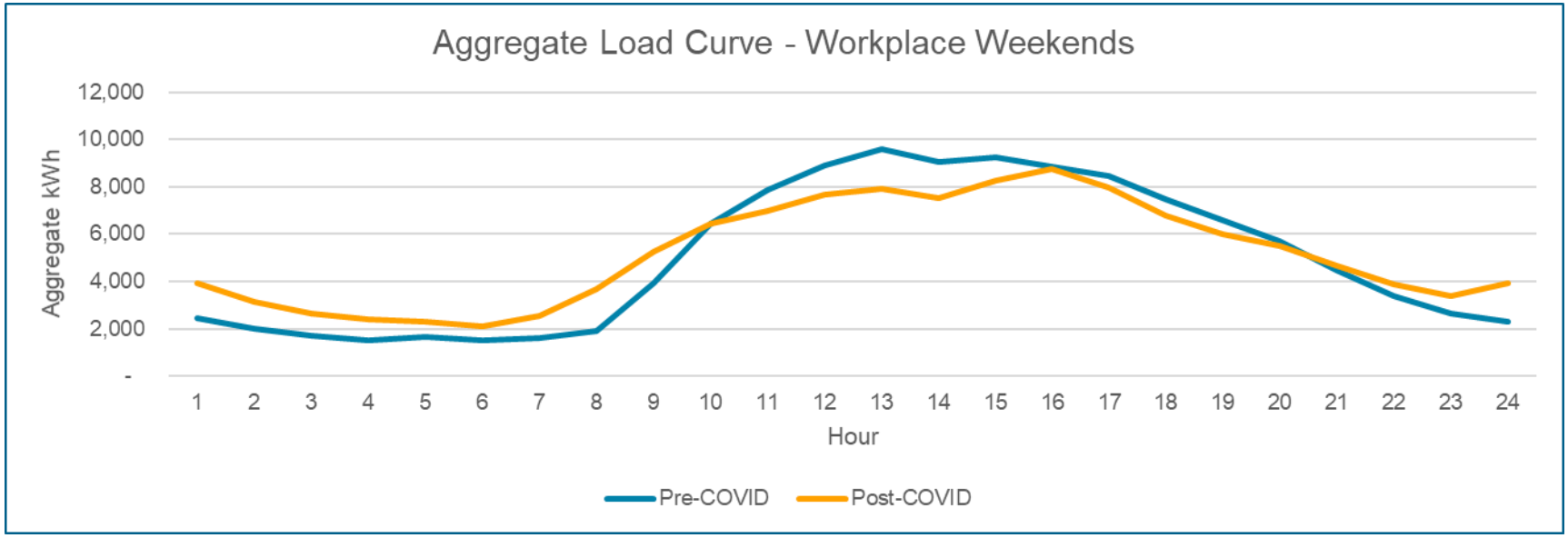


Note

- **Pre-Covid = 2019 through February 2020**
- **Post-Covid = March 2020 through December 2020**
- Charts shown here are updated relative to the data shown during the 1/27 PAC meeting, in order to reflect the most accurate data

Aggregate Load Curve WP Weekday vs Weekend





Note: Charts shown here are updated relative to the data shown during the 1/27 PAC meeting, in order to reflect the most accurate data

EV Savings Calculator

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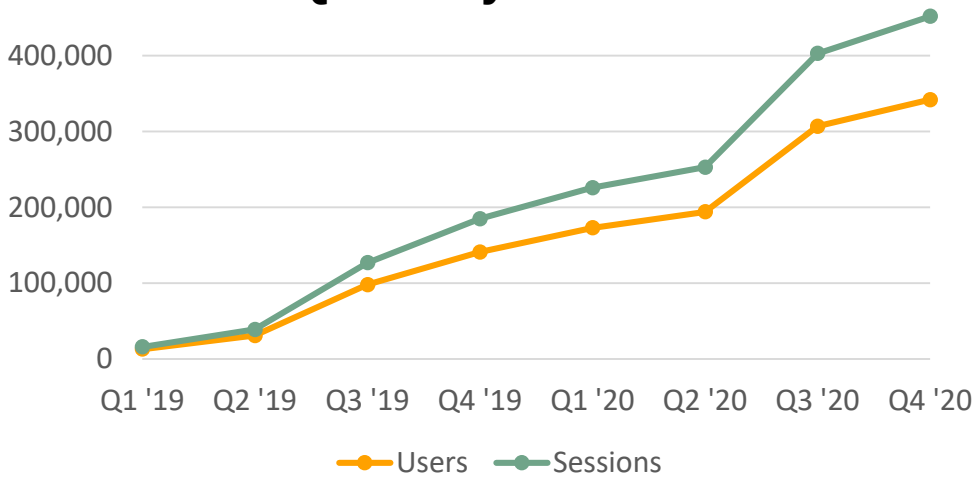
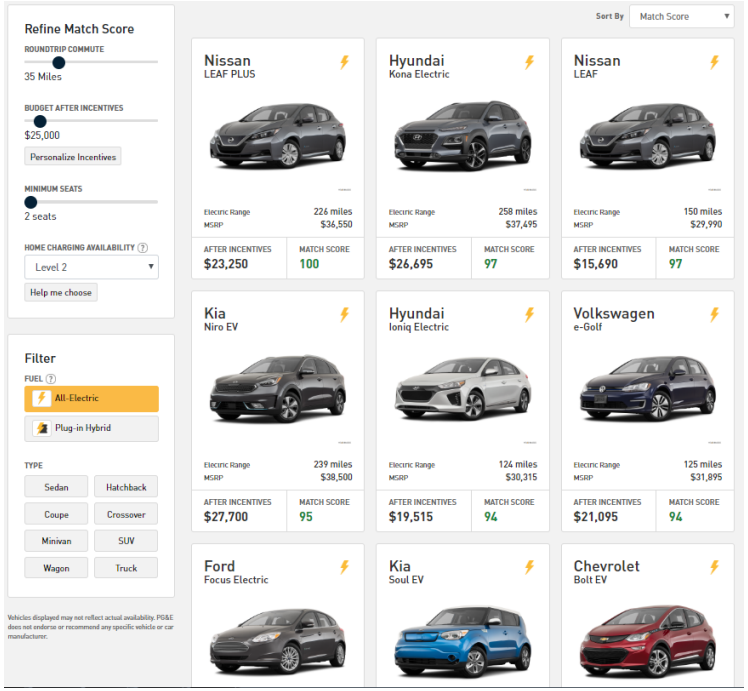
EV Savings Calculator ev.pge.com

PG&E tool	ITD unique users	ITD total sessions
EV Savings Calculator	342,000	452,000

Quarterly Traffic



67 EVs and growing



>15,000 total hours of engagement ITD

EV Savings Calculator – KPIs

KPIs launch to-date:

- 48,000 navigated to external incentives from tool
- 8,000 clicked “change rate” button for residential EV rate enrollment
- 2,500 clicked “find dealers”; 750 visited dealer website from tool
  (since feature launched 5/1/2020)
- Net Promoter Score of 33 with 614 responses

Source: https://www.retently.com/blog/good-net-promoter-score/

Program Advisory Council Discussion (EVCN Phase 2 Focused)

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PAC Discussion

Discussion: Matching a proposed EVCN Phase II to market needs

1. What needs do you see in the market?

2. What are the most important ways in which you foresee our program can meet them?

Questions

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Appendix

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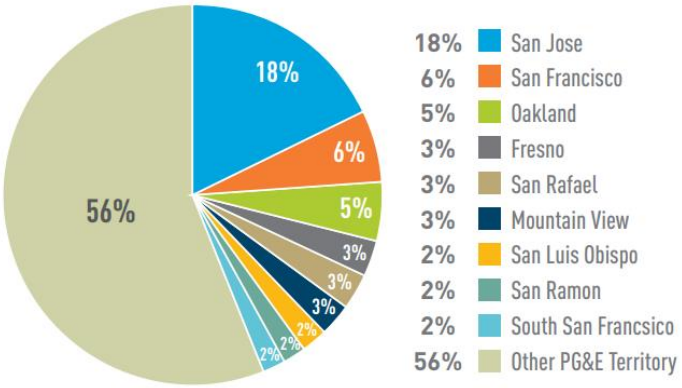
Site and port distribution across PG&E's service area is broad

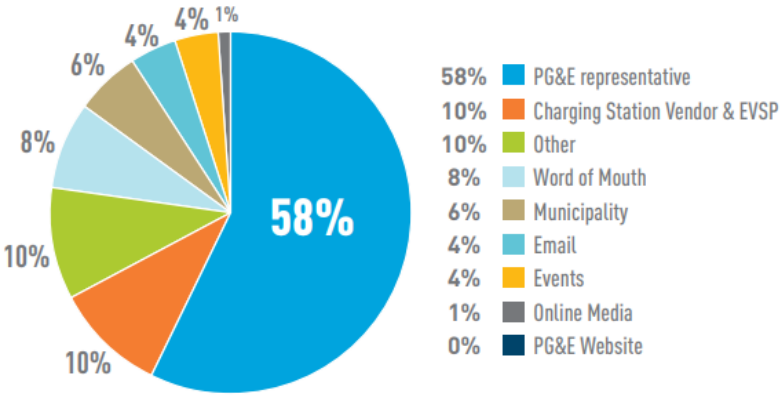
While there are multiple sites in some top cities, EVCN had success offering infrastructure to customers over a broad geography and across 68 cities

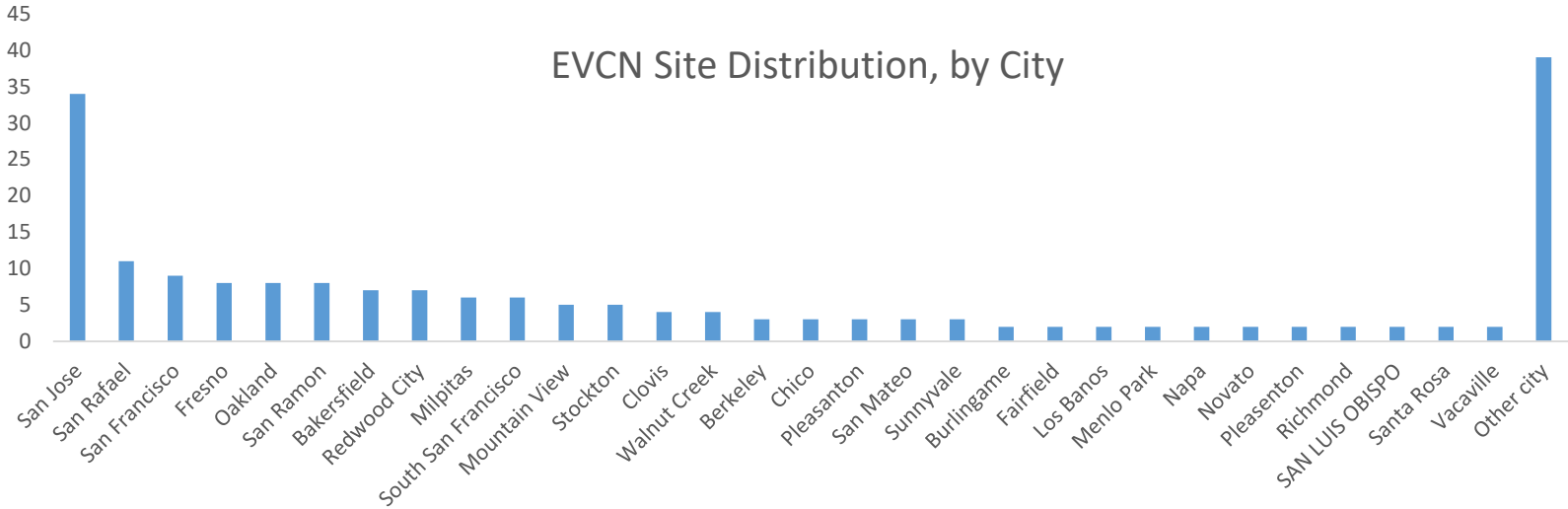
EVCN applicants by geography through Q2 2019



*56% represents 134 additional cities

EVCN Program applicant source though Q2 2019





Note: Data as of Sep 30, 2020; Other City represents an additional 38 cities