BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification	Rulemaking 18-12-006 (Filed December 13, 2018)

ELECTRIC VEHICLE-GRID INTEGRATION PILOT PROGRAM ("POWER YOUR DRIVE") NINTH SEMI-ANNUAL REPORT OF SAN DIEGO GAS & ELECTRIC COMPANY (U902-E)

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October 14, 2020

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Pursuant to Decision ("D.") 16-01-045 (the "Decision"),[1] and Commission Rules 1.8, 1.9(d) and 1.10(c), San Diego Gas & Electric Company ("SDG&E") submits this Electric Vehicle-Grid Integration ("VGI") Pilot Program ("Power Your Drive") Ninth Semi-Annual Report. This report, Attachment A hereto, is also posted on SDG&E's website as indicated in the Notice of Availability filed concurrently herewith.

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[1] See, Decision, p. 139; finding of fact ("FOF") 80, p. 173, ordering paragraph ("OP") 3.k, p. 183:

> We will also require SDG&E to file in R.13-11-007, or in a successor proceeding, semi-annual reports containing the information reported in the quarterly check-in meetings, the data described in Appendix B to Attachment 2 of this decision, and a description of any program changes implemented by SDG&E prior to the date of the report. This reporting requirement will terminate on February 1, 2021. The report shall be posted on SDG&E's website, and a notice of the availability of that report shall be served on the R.13-11-007 and A.14-01-014 service lists [note that the Decision (pp. 156, 161, 183) closed A.14-04-014].

Id., FOF 80, p. 173:

> The alternative program terms shall include the following: SDG&E shall have quarterly check-in meetings with the Commission's Energy Division to provide the staff with updates concerning the information set forth in today's decision; SDG&E shall file semi-annual reports in R.13-11.007, or a successor proceeding, containing the information described in today's decision, and in the manner described in today's decision; and parties may file and serve opening and reply comments on the semi-annual reports in the manner described in today's decision.

Id., OP 3.k., p. 183:

> If SDG&E decides to accept and to implement the 2016 VGI Pilot Program, SDG&E shall comply with all the meeting and reporting requirements as set forth in this decision and in Attachment 2.

Respectfully submitted

/s/ Estela de Llanos

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October 14, 2020

ATTACHMENT A

SDG&E NINTH PYD PILOT SEMI-ANNUAL

REPORT

San Diego Gas & Electric Company

Semi-Annual Report

ELECTRIC VEHICLE-GRID INTEGRATED PILOT PROGRAM (POWER YOUR DRIVE) NINTH SEMI ANNUAL REPORT OF SAN DIEGO GAS & ELECTRIC COMPANY (U902-E) OCTOBER 2020

I. Introduction

San Diego Gas & Electric Company ("SDG&E") established the Power Your Drive ("PYD") Program ("Program"), after it was approved by the California Public Utilities Commission ("CPUC"), as a pilot program in January 2016. The Program is designed to reduce greenhouse gas ("GHG") and other air emissions, increase adoption of electrical vehicles ("EVs") and integrate the charging of electric vehicles with the grid through a day-ahead hourly rate. Power Your Drive sought to satisfy these objectives through the installation of up to 3,500 EV charging stations at apartments, condominiums, and places of work. Chargers were installed at the final site on September 16, 2019.

Under the terms of PYD, SDG&E maintains ownership of the infrastructure to simplify the experience for customers and to ensure the reliability of the charging network. Customers who participate in the Program are charged a nominal one-time participation payment unless the site is within a designated disadvantaged community, in which case, the participation payment is waived. Customers have the option to choose from two Electric Vehicle Service Providers ("EVSP") who have been qualified to provide Electric Vehicle Supply Equipment ("EVSE"). SDG&E coordinates the design, permitting, construction and commissioning of the charging stations. Once drivers begin charging, SDG&E handles the billing, coordinates with the EVSP to provide customer support, and maintains the charging equipment.

PYD sites are either multi-unit dwellings ("MUDs") or workplaces. The CPUC established goals to deploy at least 40% of installations in MUDs and to deploy installations in areas that have higher than average levels of pollution by setting a target of at least 10% of installations in designated Disadvantaged Communities ("DACs").

This is the ninth Semi-Annual Report that SDG&E has issued on the Program, as required by Decision ("D.") 16-01-045 ("Decision"). Data for this report extends from Program inception to July 31, 2020 unless otherwise noted.

II. Executive Summary

Power Your Drive was designed to align the State of California's GHG reduction and transportation electrification policies with both the utility's and its customers' interests. Based on analysis, SDG&E believes that PYD is achieving these goals. Not only does PYD show strong customer interest in the Program and electric vehicles in general, but it also demonstrates that customers are modifying their charging behavior in ways that:

- reduce GHG and other air emissions;
- integrate renewable energy and decrease the need to dispatch conventional peaking generation;
- leverage existing resources and grid assets;
- lower consumer fuel costs and increase the use of electricity as a transportation fuel; and
- increase investments and deployment of infrastructure in disadvantaged communities.

The results show that PYD is consistent with state policies promoting transportation electrification and GHG reductions. SDG&E also found that there is a demand for more chargers in our territory. This remains evident as site hosts often requested more chargers than originally planned and even though the program is complete, there is an extended interest list of customers that would like to participate in the program. Because of this interest, in October 2019, SDG&E filed a modest program extension for an additional 2,000 chargers (with modifications based on lessons learned) to deploy additional ports to satisfy a portion of the existing demand. This application, which is pending at the CPUC, is designed to meet existing market demand until SDG&E receives Commission guidance or approval to provide a more robust light duty vehicle infrastructure program in the future.

The final site was completed as of September 16, 2019 with 254 Site Agreements executed and approximately 3,040 charging ports installed in San Diego and southern Orange County. Of the 254 customers with Site Agreements, 31% are within DACs, far exceeding SDG&E's 10% DAC target, and 39% are located in MUDs.

The innovative hourly dynamic rate ("VGI rate") continues to show success in influencing pricing behavior. SDG&E will monitor how drivers experience the VGI rate and educate customers on how to best utilize the unique benefit the rate provides to them.

The following report details the Program's progression and preliminary results. The data in this report is as of July 31, 2020 unless noted otherwise. Overall trends in customer behavior and Program benefits are consistent with trends documented in previous Semi-Annual Reports through mid-March 2020. After mid-March 2020, program activities and usage results reflect a significant change from previous reports due to the recent impacts of COVID-19.

Figure 1: Power Your Drive Status Dashboard

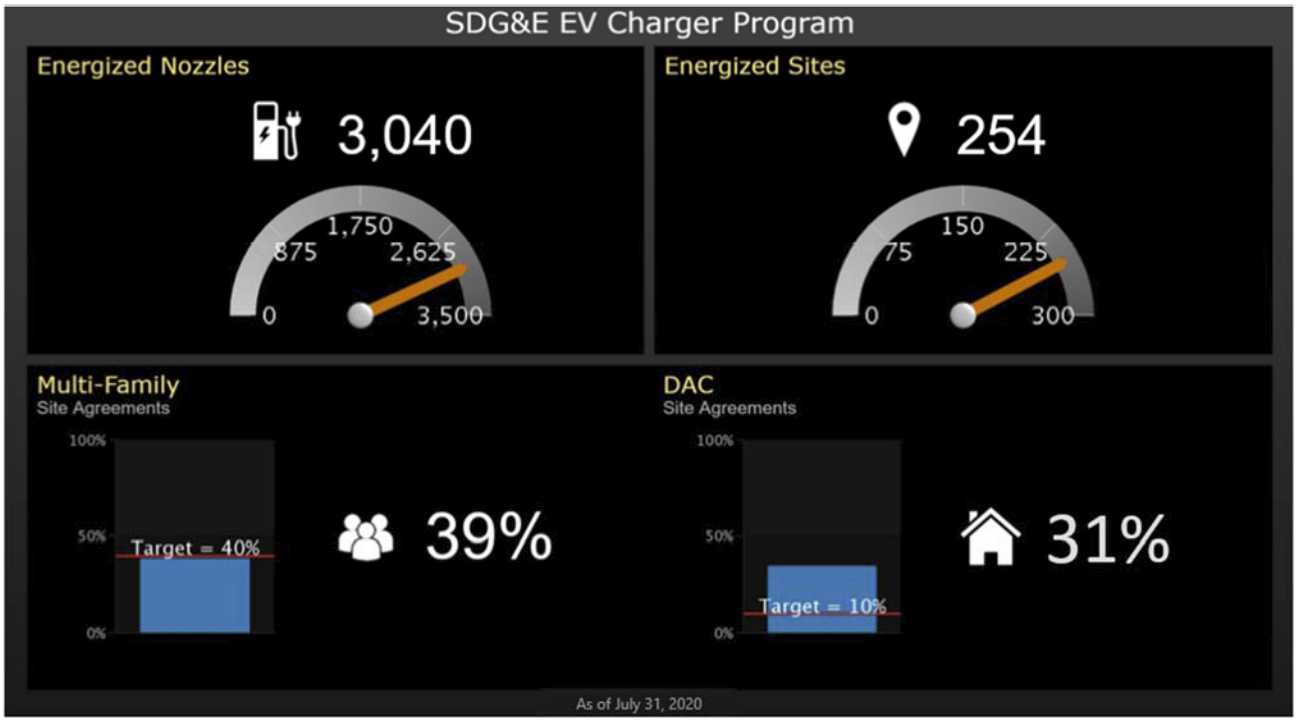


Figure 2: Power Your Drive Cost Summary

Cost Category	*Scaled Decision Assumptions*	*Inception-to-date as of 7/31/2020*	*Variance*
Materials	*$4,792,000*	*$14,000,118*	*($9,208,118)*
Construction	*$28,894,000*	*$27,054,929*	*$1,839,071*
Engineering Design	*$1,004,000*	*$7,442,332*	*($6,438,332)*
Environmental Testing	*$ -*	*$646,799*	*($646,799)*
Internal Labor	*$825,000*	*$2,411,590*	*($1,586,590)*
IT Billing System Upgrade[2]	*$1,564,000*	*$3,325,324*	*($1,761,324)*
Third Party Project Support	*$ -*	*$6,432,784*	*($6,432,784)*
Other	*$943,000*	*$1,519,323*	*($576,323)*
Non-Direct costs (AFUDC, Loaders)	*$3,429,000*	*$6,946,285*	*($3,517,285)*
Contingency	*$3,549,000*	*N/A*	*N/A*
Total	***$45,000,000***	***$69,779,483***	***($24,779,483)***

[2] Excludes IT costs to develop enterprise functionality that served Power Your Drive.

III. Customer Engagement

Since the last report, SDG&E has been focused on ongoing support and outreach. The team remains involved in customer engagement to ensure a positive driver experience, continued understanding of the VGI rate and utilization of the PYD chargers. An important element of SDG&E's outreach campaign is to provide site hosts and drivers with detailed information about the existing Program – educating them on EV basics, the benefits of driving electric, how to use the charging stations, and available rebates and incentives. These efforts deepen the site hosts' and drivers' understanding of how to best take advantage of the Program's features and benefits. The ongoing pandemic has had an impact on SDG&E's customer engagement strategy. All in-person events have been put on hold until further notice. In the meantime, the team has begun development of a self-service PYD site host portal to provide site hosts with tools and collateral to engage their respective drivers.

A. PYD Site Host Engagement

Over the last six months, SDG&E has continued to engage PYD site hosts through virtual events and email communications. In May 2020, SDG&E hosted a Community Workshop to solicit the public's input on SDG&E's proposed "Power Your Drive Extension Program." All PYD current site hosts were invited to participate. SDG&E also reminded all the rate-to-host site hosts that Load Management Plans must be adhered to in order to help achieve the goal of lowering customer bills as well as managing renewables and the grid.

As mentioned above, COVID-19 has caused SDG&E to adapt to challenges and think of creative ways to engage the PYD site hosts. While all in-person events like ride & drives, informational seminars, and outreach booths have been put on hold until further notice, the team has begun development of a new PYD site host portal. The goal of this portal is to provide site hosts with self-service tools and enable them to share relevant information with their respective PYD drivers. Examples of the tools that will be available through the portal include:

- New Driver Enrollment Instructions
- Sample Social Media Posts
- Sample Newsletter Content
- Email Templates
- Virtual Event Information

Portal contents will be updated on a regular basis and will provide the site hosts with the flexibility to engage with their respective organization/multi-unit dwelling as they see fit, driving efficiency and effectiveness.

B. Outreach Efforts

Like the rest of the world, SDG&E's outreach plans were severely impacted by the new procedures created by COVID-19. All in-person events were cancelled as of mid-March 2020 until further notice. SDG&E continues to conduct outreach efforts virtually, participating in

various online events such as the Veloz webinar on May 26, 2020, titled *COVID-19 and Changing Business Models*. During this event, SDG&E spoke about the impacts of COVID-19 on the Clean Transportation programs, including PYD.

SDG&E has been conducting outreach via various email campaigns. One example of this was when a communication was sent to advertise the new Limited EV Purchase Credit to a targeted set of customers including known PYD drivers. Another communication was sent out announcing the go-live of 88 Electrify Local Highways public chargers at four Park and Ride lots in SDG&E's service territory and summarizing other Clean Transportation programs including PYD.

IV. Reporting Requirements

This section provides requisite data points as defined and approved in AL 2876-E. A summary of this data can be found in Appendix A of this report.

A. Customer Interest

The Program has continued to receive significant customer interest, even though enrollment has closed. As part of Program closeout activities and in preparation for the PYD Extension Program filing, the preliminary interest that was collected in the Original Interest List was reviewed and refined to determine how much of the expressed interest could be considered for future programs. This review created the Refined Interest List for customers who are potential fits for the PYD Extension Program.

While SDG&E installed chargers at 254 sites, the Refined Interest List reflects potential demand for an additional 470 sites that was expressed during and after the PYD enrollment period. Of this group, 234 (50%) are multifamily sites and 236 (50%) are workplace locations. The graph below describes the breakdown of expected site type on the Refined Interest List.

Figure 3: Refined Interest List Site Distribution

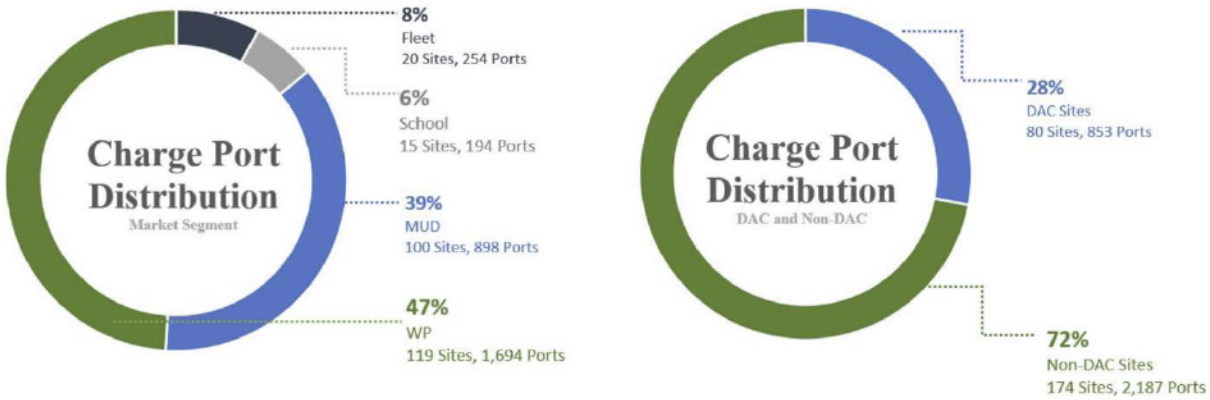
The Refined Interest List will continue to update based on new information from site requestors and ongoing data curation.

B. Installations

As of July 31, 2020, SDG&E completed and energized installations at 254 sites, which includes 3,040 charging ports.

The graphs below detail the port distribution across different market segments of the ports installed under the Program.

Figure 4: Contracted Site Distribution

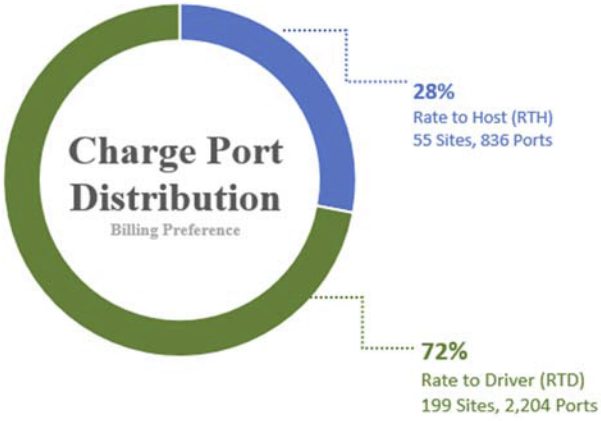


C. Billing Option Preferences

SDG&E tracks the billing options that customers may select as part of the Program. The billing option metric shows the billing option selected by the customer, broken down by workplace, multifamily dwellings, and disadvantaged communities. There are two billing options available within the Program: Rate-to-Driver, where the EV driver receives the rate directly, which is billed to the EV driver's residential bill/account; and Rate-to-Host, where the site host receives the rate, which is billed to the site host's commercial bill/account. Both options refer to separately metered service which is not co-mingled with another load such as building load. Selection of the Rate-to-Host option requires customer submission of a load management plan.

Out of the 55 contracted site hosts that have selected Rate-to-Host as a billing preference 31 have selected a load management plan of powering down or shutting off charging during high priced intervals, 7 sites have elected to use facility management to only allow charging during certain time periods, 15 sites have elected to send alert emails to drivers on high priced days, and 2 sites have elected to not have any action taken.

Figure 5: Billing Preference for Sites with Signed Agreements



D. Timing Patterns of EV Charging

In previous semi-annual reports, the charging patterns captured by the usage data were an important indicator of the overall effectiveness of the Program at encouraging EV charging during periods of lower grid utilization. In this Report, consumption patterns reflect the impact of COVID-19 precautions taken at the State and local levels (e.g., the stay at home order issued mid-March). Timing pattern graphs from previous semi-annual reports are shown below to illustrate the impact of COVID-19 stay at home orders on EV charging demand.

Figure 6: EV Workplace Charging May 2018 through October 2018

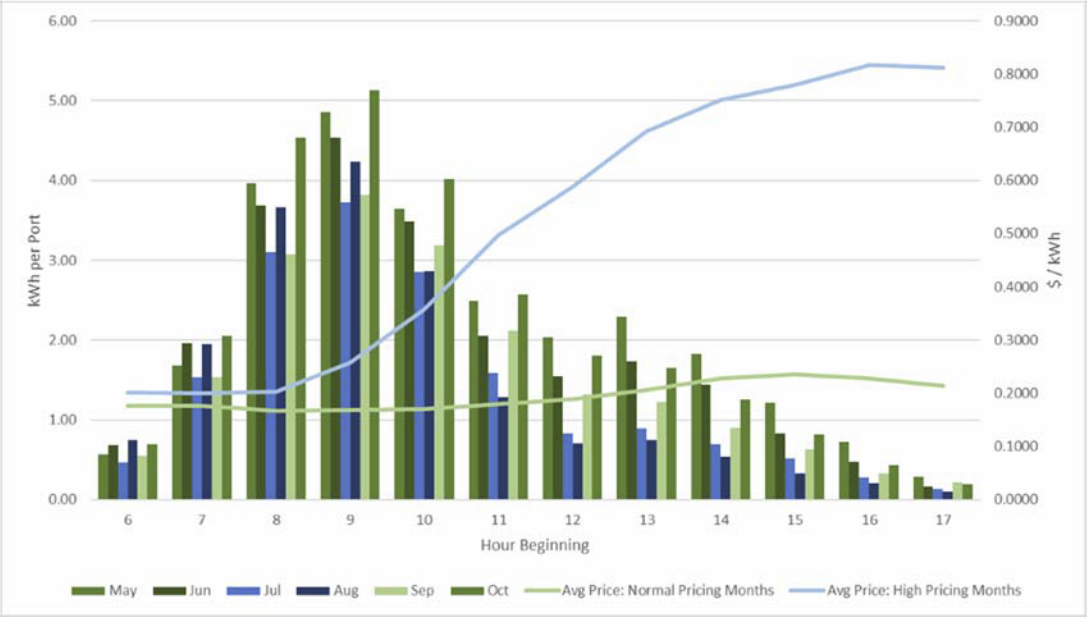
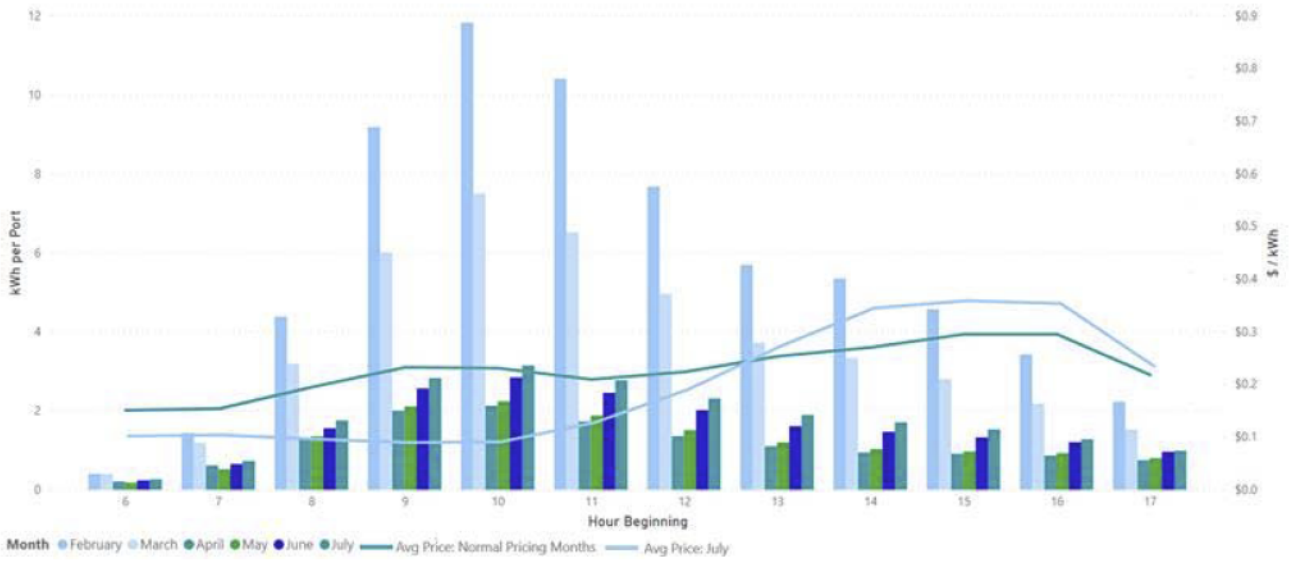


Figure 7: EV Workplace Charging March 2019 through July 2019

Fig. 8: EV Workplace Charging February 2020 through July 2020

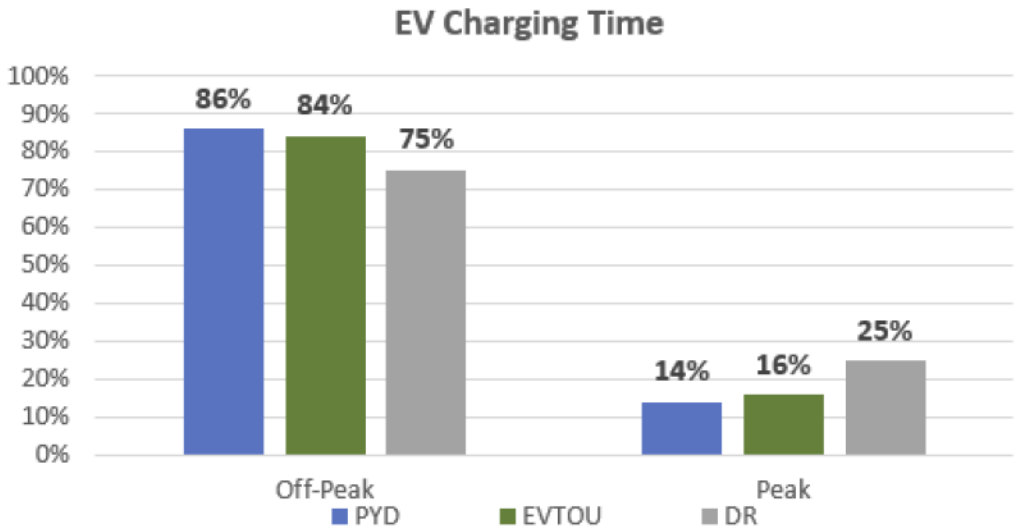


Consumption per driver at workplace sites dropped steeply from a per driver consumption of nearly 60 kWh in February 2020 to a little over 10 kWh per driver in April, a 78% drop in average monthly consumption. Average hourly consumption during the period from 6 am to 5 pm in April dropped nearly 80% of hourly consumption compared to February during the same hours.

EV Charging: Comparison with Time of Use Periods

One method to display the timing patterns of EV charging is to compare the percent of EV load that occurs during SDG&E's peak pricing hours of 4pm to 9 pm The chart below illustrates load shifting to off-peak hours. The VGI rate ("PYD") appears to be effective at incentivizing charging outside of SDG&E's peak. DR is for the tiered residential rate, and EV TOU rate is for sub-metered EV usage.

Figure 9: Percent of load occurring during Off-Peak and Peak hours



E. Usage Rates

SDG&E began receiving usage data from the first site on June 29, 2017. As of July 31, 2020, 254 sites have been energized and a total of 4,112 EV drivers are enrolled in the Program. Usage volume for the reporting period comprised nearly 400,000 unique charging sessions and over 3.5 million kWh delivered. Site utilization summarized by quartile is in Appendix A of this report.

F. Spend

The table below shows the costs of both the construction and full Program costs per site and per port. It also compares the estimates from the original filing to the actual costs of the Program. As shown in the table in the Executive Summary, the actual costs of the Program exceeded both the filing assumptions and the project estimates post Decision by approximately $25 million.

Figure 10: Power Your Drive Costs by Site and Port[3]

Average Estimated Costs	*Original Filing Assumptions (Direct)*	*Inception-to-date as of 7/31/2020 (Direct)*	*Inception-to-date as of 7/31/2020 (Fully Loaded)*
Construction Cost per Site *(Design, Construction, Materials)*	***$99K – $109K*** *(10 ports/site up to 550 sites)*	***$191K*** *($48m for 254 sites)*	***$200K*** *($51m for 254 sites)*
Construction Cost per Port *(Design, Construction, Materials)*	***$9.9K - $10.9K*** *($54M for up to 5,550 ports)*	***$16K*** *($48M for 3,040 ports energized)*	***$16.8K*** *($51M for 3,040 ports energized)*
Program Cost per Site	***$116K - $128K*** *($64M up to 550 sites)*	***$247K*** *($63M for 254 sites)*	***$275K*** *($70M for 254 sites)*
Program Cost per Port	***$11.6K - $12.8K*** *($64M for up to 5,500 ports)*	***$20.7K*** *($63M for 3,040 ports energized)*	***$23K*** *($70M for 3,040 ports energized)*

[3] Detailed descriptions of cost drivers and differences from filing assumptions were described in the sixth semi-annual report. Further findings and conclusions will be provided in the upcoming final research report.

V. Supplemental Data Collection & Monitoring

This section presents the most recent data for the Power Your Drive supplemental metrics designed to aid in the evaluation of the overall Program performance. The data that is presented in this section is summarized in Appendix A of this report.

A. Programmatic Changes

SDG&E continues to review and refine PYD site information throughout the Program close out and post construction processes. Site information is subject to change as part of this ongoing effort to maintain high quality data for reporting and to serve maintenance activities. For example, site addresses have been reviewed and DAC status or site type has been adjusted to reflect the most accurate information.

B. Fuel Cost Savings Estimate

This section provides estimates of fuel cost savings achieved by the displacement of gasoline in favor of electric charging at PYD sites, grouped by Rate-to-Driver and Rate-to-Host billing options. The estimation method is based on the total cost of the electricity usage at PYD sites from Program data, compared to the estimated total cost of fuel consumption by equivalent Internal Combustion Engines ("ICE") vehicles required to travel equivalent distance. The estimated savings also reflect current market conditions in the relative fuel efficiency of EVs compared to ICE vehicles and the average price of gasoline.

Figure 11: Estimated Fuel Cost Savings

	Rate-to-Driver	Rate-to-Host
Usage (kWh)	1,871,088	1,847,271
Average $/kWh	$0.17	$0.22
Total Cost	$319,562	$411,906
Approx. Gas Equivalent (Gallons)[4]	225,432	222,563
Average $/gal[5]	$3.58	$3.58
Total Cost	$807,048	$796,775
Estimated Savings	$487,486	$384,868
Average Savings per kWh	$0.26	$0.21

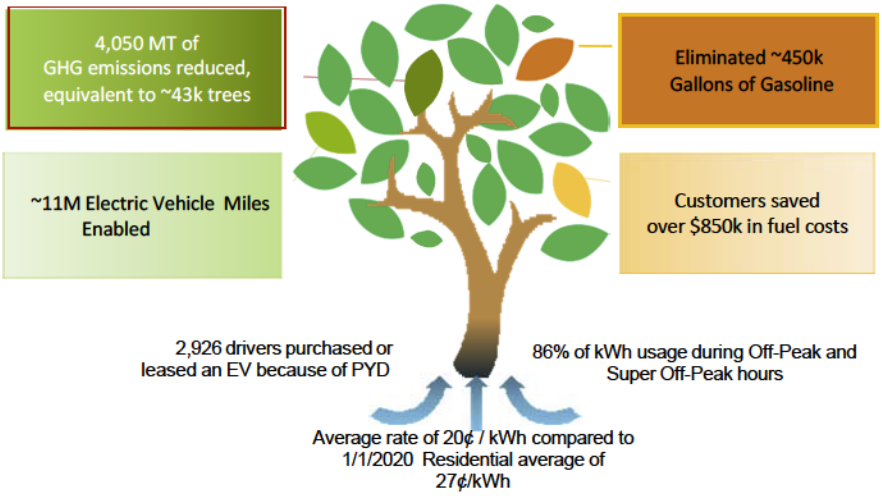
[4] Calculated using EPA average 24.9 MPG ICE vehicle and 3 mi/kWh EV

[5] San Diego August 2019-July 2020 average

C. Power Your Drive Data Trends

The following graphic shows the measurable trends and correlations that have been identified to date in the Program based on data collected as of July 31, 2020.

Figure 12: Summary of Program Benefits



To assess incremental EV adoption due to the presence of PYD ports, SDG&E calculated the number of drivers that have charged in the Program 90-days after the commissioning of a site. SDG&E assumes that drivers who charge prior to the 90-day window were likely already on the path to acquire an EV regardless of the presence of PYD ports. Applying this method, 2,926 of the 4,112 drivers purchased EVs due to the presence of PYD ports. This represents about 71% of all drivers registered and about 1 new EV added for every port installed under the Program. SDG&E constantly seeks to refine and calibrate program metrics to accurately reflect progress over time. Recent data validation to make the PYD incremental driver methodology more consistent with other program metrics resulted in an increase to incremental driver count.

Regarding emissions benefits, the Program has enabled over 11 million miles[6] to zero emission miles. This represents about 4,050 metric tons of GHG emissions reduced[7], the equivalent to 43,407 trees[8].

Alignment with Renewables

While SDG&E's overall renewable portfolio is ~45% renewable[9], PYD has a significantly better load profile compared to SDG&E's overall load profile. PYD is 70% renewable when comparing energy procurement and generation to usage from January 1, 2019 through July 31, 2020. This does not use the same process to calculate as the Power Content Label but provides a similar benchmark of SDG&E's alignment with renewables. Workplace

[6] Calculated using EPA average 24.9 MPG ICE vehicle and 3 mi/kWh EV
[7] Chapter 8 – Prepared Direct Testimony of J.C. Martin: Air Quality Impacts and Cost Effectiveness
[8] EPA GHG Equivalencies Calculator
[9] SDG&E 2018 Power Content Label

usage is 72% renewable and MUD usage is 63% renewable. This difference is primarily due to the timing of usage at workplaces aligning with the high volume of renewables available. Secondarily, the VGI rate has higher pricing during hours with less renewable generation; since it appears that drivers are shifting their load away from these higher prices, they are aligning their consumption with lower cost hours that have more renewables.

Monthly Load Patterns

The load patterns for workplaces and MUD sites have expectedly different shapes. At workplaces, holidays and weekends show almost no load, with the beginning of the week showing increased demand. In February (pre-COVID), the increased charging at the beginning of the week may be due to some drivers that rely solely on workplace charging.

Figure 13: Workplace Load in February 2020

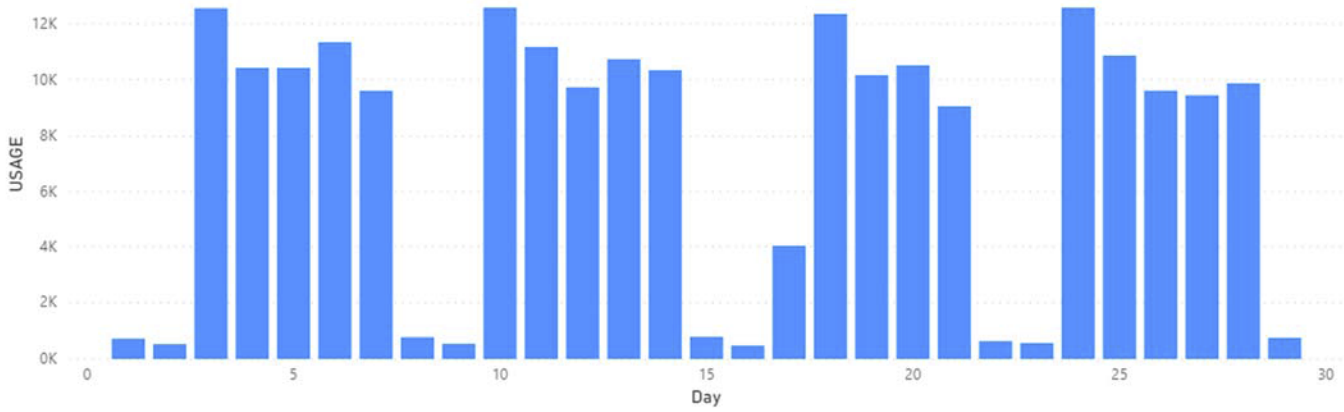
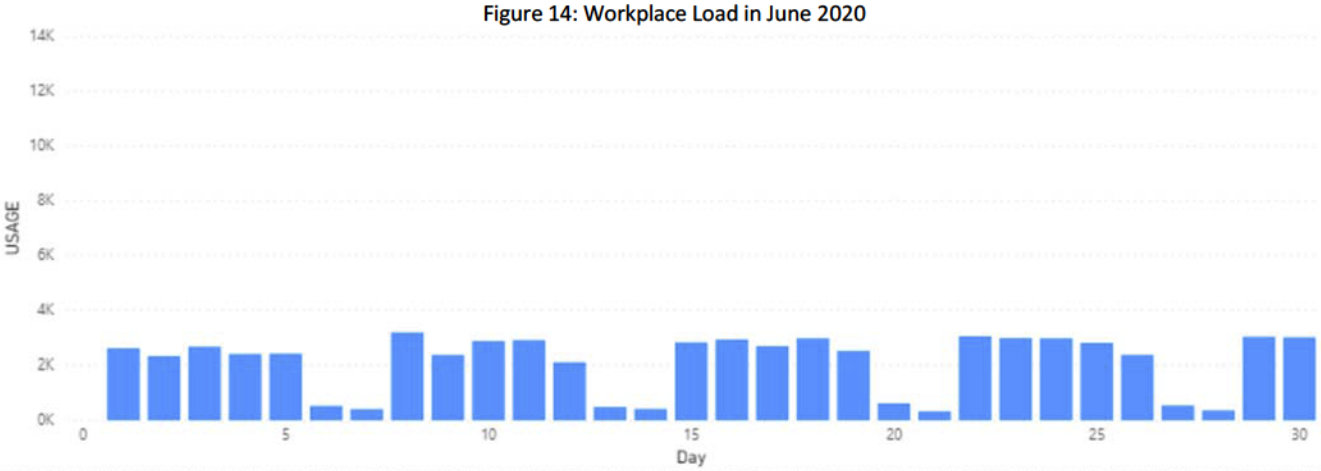


Figure 14: Workplace Load in June 2020



The dramatic difference in workplace load patterns between February (pre-COVID) and June (post-COVID) highlight the impact of stay at home orders. Many employees in the San Diego region continue to work from home through June, reducing opportunities to use workplace charging facilities.

At MUD sites, load is typically relatively stable throughout the week with occasional spikes. The regional response to COVID-19 caused average daily consumption to drop 23% from February to June.

Figure 15: MUD Load in February 2020

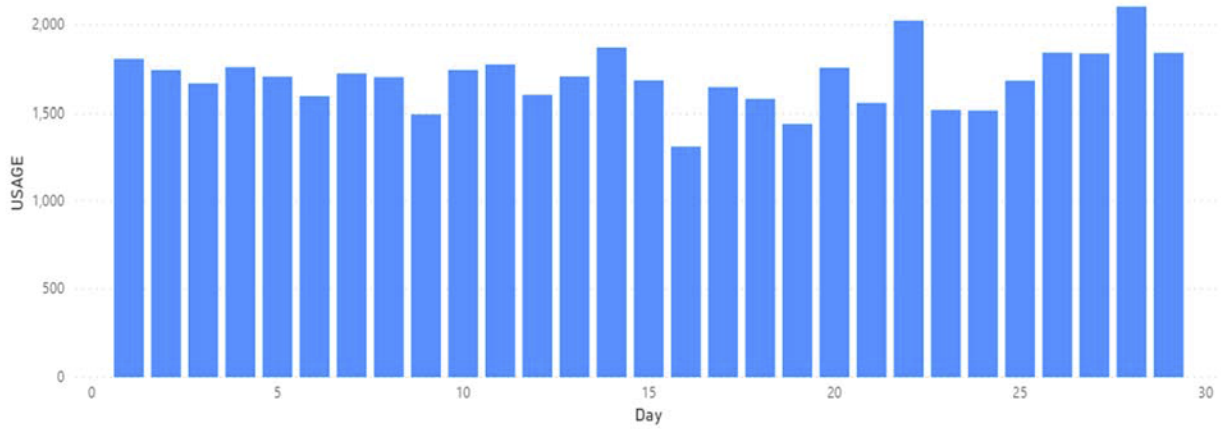
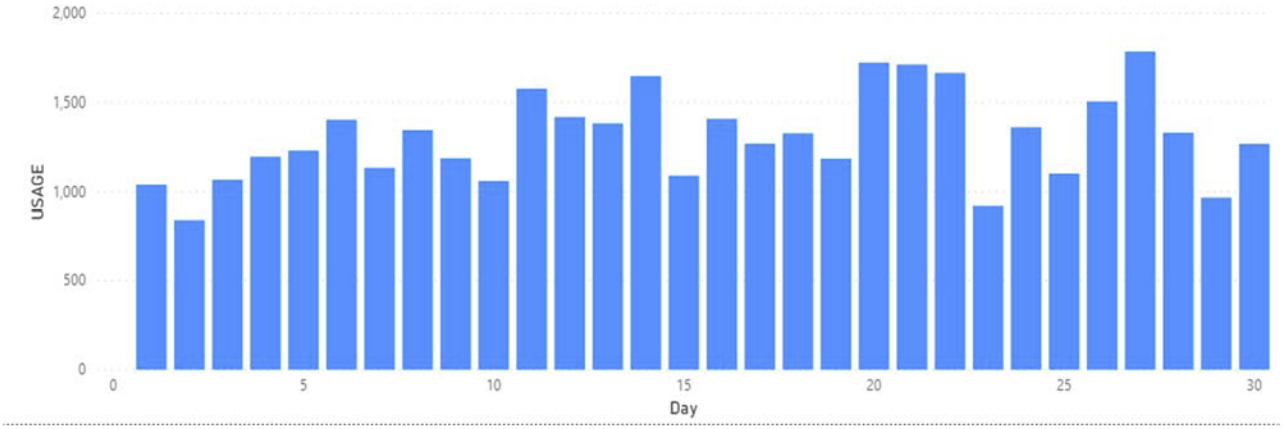


Figure 16: MUD Load in June 2020



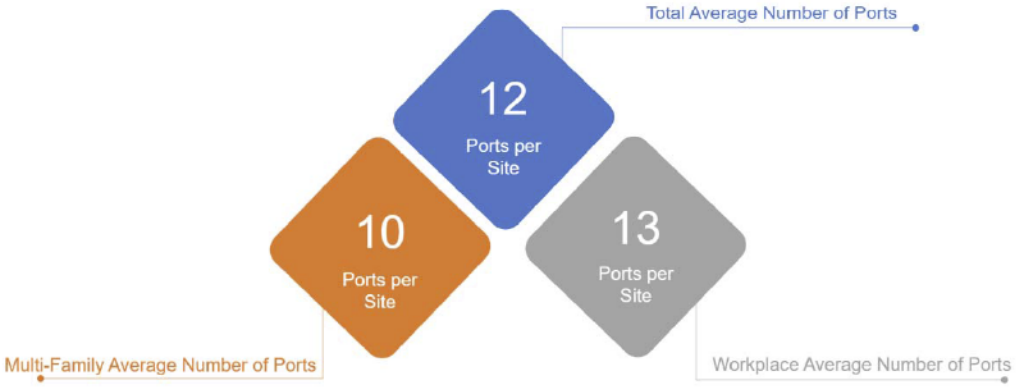
Total vehicle miles traveled (VMT) fell, likely due to reduced travel in accordance with COVID-19 precautions (e.g., recommendations to reduce social activity), reduced commutes from remote working trends, and increased unemployment levels. SANDAG reported that from mid-May through early June, weekday freeway VMT were 30% lower than levels a year ago.[10]

[10] 2020-08, SANDAG, "An Update on Freeway Travel Since the COVID-19 Orders Began: Four Months of Statistics", https://www.sandag.org/uploads/publicationid/publicationid_4700_27888.pdf

Number of Charging Ports

When SDG&E filed the application for PYD, it assumed an average of 10 charger ports per installation across all projects. However, the average number of charger ports was 12 ports per site (10 ports for multifamily sites and 13 for workplace sites). Many of the costs to deploy a site are related to the characteristics of the site rather than the port count, however having more ports allows for a lower cost per port.

Figure 17: Average number of ports per site type



VI. Summary and Conclusion

The Program has transitioned from site deployment to maintenance and operation of the existing charging infrastructure, and SDG&E continues to focus on engaging with site hosts and drivers and increasing charger utilization. One of the significant accomplishments of the Program has been to deploy highly visible charging stations to reduce barriers to EV adoption. SDG&E has experienced increases in utilization and unique EV drivers in a relatively short period of time and expects increases to continue.

SDG&E energized over 250 sites and over 3,000 ports, all utilizing the VGI rate, the first of its kind for a utility EV charging program. Customers are utilizing these chargers and data shows that they are charging at optimal times.

Overall, the presence of these chargers continues to influence EV adoption, as electric vehicles are being purchased due to the Program. The hourly rate shows that customers are modifying charging behavior to incorporate pricing incentives and higher renewables. Additionally, there was more customer interest in the Program than SDG&E could accommodate. Customers continue to reach out to SDG&E asking if they can be part of the Program. The program extension filed by SDG&E, in October 2019 for an additional 2,000 chargers (with modifications based on lessons learned), is pending at the CPUC, and would satisfy a portion of the existing demand.

Appendix A: Semi-Annual Report Summary

Reporting Requirement	Update	
1) Interest in EV site installations at MUDs and workplaces[11] *[Interest List: Number of host sites by]*	MUDs not in DACs	152
	MUDs in DAC among sites in review [12]	82
	WP not in DAC	154
	WP in DAC among sites in review [13]	82
2) Number of EV Site installations that were approved, or that are in the pipeline for deployment	Reviewed by SDG&E, but needed signed contracts	0
	Site Host Agreements Executed	254
	Installations in progress	0
3) Site selection criteria used in selecting the sites that will host the EV site installations *[within MUD, WP & DAC segments]*	» Interest list sign up via https://www.sdge.com/residential/electric-vehicles/power-your-drive/interest-list or ev@sdge.com » Customer submits application » Date of indicated interest (first-in-line-priority) » Current and expected volume of EV drivers » Number of installations desired » Type of installation (workplace, multi-unit) » Disadvantaged Community status » Customer's goals align with Power Your Drive criteria (i.e. no public charging, willingness to use VGI rate, etc.) » Nearby transformer available capacity » Distance between transformer and new service point	

[11] Site count reflects the Refined Interest List
[12] Total number of MUD sites in review: 234
[13] Total number of WP in review: 236

	» Site conditions related to construction feasibility and cost (i.e., trenching surface, EVSE mounting surface, condition of facility) » Americans with Disabilities Act (ADA) requirements » If leasing, term and conditions of lease » Land and property ownership » Signature of site agreement required to proceed to engineering of site		
4) Number of EV site installations	254 (installed and energized)		
5) Rate *[billing]* option that the site host have chosen *[number of Hosts by option, number of drivers]*	Site Host Agreements Signed	Rate-to-Driver	199
		Rate-to-Host	55
6) How the Rate-to-Host option *[load management plan]* is being implemented by the site *[number of host sites per load management plan type; categories of load management plan types will expand as they are reviewed and approved]*	Powering Down/off	31	
	No election	2	
	Facility Mgmt	7	
	Other (i.e. email to drivers)	15	

7) Usage *[facility utilization]* rates at EV site installations and charging stations *[frequency per quartile of drivers / charging sessions volume and kWh sold per facility]*	Quartile	Volume		kWh Sold	
	25%	143 Drivers / 8,492 Sessions		53,164	
	50%	370 Drivers / 42,577 Sessions		310,922	
	75%	703 Drivers / 76,930 Sessions		701,543	
	100%	2,896 Drivers / 252,111 Sessions		2,644,525	
	Total	4,112 Drivers / 380,110 Sessions		3,710,155	
8) Timing patterns of EV charging and the degree to which these times correlate to VGI rate categories *[kWh consumed by price range: min, average, max]* Times are based on EV-TOU rate	Time	kWh	Min $/kWh	Avg $/kWh	Max $/kWh
	Summer Peak	156,335	0.1244	0.2522	1.7338
	Summer Off-Peak	1,398,844	0.1187	0.2219	1.7017
	Summer Super-Off Peak	275,033	0.1142	0.1734	1.7338
	Winter Peak	155,020	0.1243	0.2104	0.9067
	Winter Off-Peak	1,475,411	0.1220	0.1958	0.8366
	Winter Super Off-Peak	257,083	0.1224	0.1736	0.9067
	Totals	3,717,726			
	Single Event	194,579			
	Dual Event	7,059			
9) The amount of the CPUC allocated budget for the Program spent	Spend since January 31, 2020	$(473,570)			
	Spend to Date as of July 31,	$69,779,483			

during the last reporting period and the cumulative amount spent	2020	
10) Observable trends or correlations between the number of EV site installations deployed compared to EV charging use and growth in the number of EVs	Discussion of observable trends included in the body of the report.	
Decision, Attachment 2, Appendix B – Combined with the Quarterly Report for the Semi-Annual Report (served to R.13-11-007 and A.14-01-014 service lists)		
A) Estimates of fuel savings through the use of the VGI facility, under both the VGI Rate-to-Driver and VGI Rate-to-Host pricing plans	Rate-to-Host	$384,868
	Rate-to-Driver	$487,486
B) Deployment of VGI Facilities *[number of]* within Disadvantaged Communities (DAC), including EV Car-sharing deployment	DAC - Workplace	56 sites
	DAC - MUD	24 sites

C) Status of Program Implementation to date	Embedded in this report
D) Comparing the installations of non-utility EVSE to VGI EVSE	This is outside the scope of the VGI Pilot Program, which is not responsible for tracking the installation of charging stations by others outside of the VGI Pilot Program. Furthermore, there was no funding in Decision 16-01-045 to perform this type of analysis. There are public sources of this information regarding the deployment of public (not private) charging stations (e.g. PlugShare).
E) Surveys of customer and driver decisions to adopt PEVs	Provided in prior PAC presentation
F) Rate of achievement of supplier diversity and workforce objectives	40.1%
G) Description of any programmatic changes implemented by SDG&E prior to the date of the report	Programmatic changes are included in the body of the report (See Section VII B)

Appendix B: Program Advisory Council Company/Organizational Representation

Advanced Energy Economy
AeroVironment, Inc.
Black & Veatch
California Apartment Association
California Energy Commission
California Governor's Office of Business and Economic Development
California PEV
Collaborative Center for Sustainable Energy
ChargePoint
City of Chula Vista
Clean Fuel Connection
Collins Group, Inc.
CPUC Energy Division
CPUC Office of Ratepayer Advocates (ORA)
Electric Power Research Institute (EPRI)
Environmental Defense Fund
General Motors
Greenlining
Greenlots
HG Fenton Company
Honda Motor Co., Inc.
Hyundai-Kia America Technical Center, Inc. (HATCI)
IBEW Local 569
Intel Corporation
JRP Charge
Kn Grid
National Resources Defense Council (NRDC)
National Strategies
Plug In America
Powertree Services Inc.
Proterra
Recargo
RWE
San Diego Association of Governments (SANDAG)
San Diego Green Building Council
San Diego Unified School District
Shell
Siemens Digital Grid
Southern California Edison
Strategy Integration, LLC & The Energy Collaborative
The Utility Reform Network (TURN)
Utility Consumers' Action Network (UCAN)
Vote Solar

Appendix C: Circuit Taxonomy

Operational Definitions for Circuit Taxonomy

Circuit Attributes	Count
Total SDG&E Circuits	1,040
Circuits with Attributes	860
Circuits without Attributes	180*
**4kV circuits not included in distribution*	

Circuit Type	Count
Residential (R)	196
Mixed (M)	451
Commercial & Industrial (C&I)	213
Circuit Type is classified as Residential, Mixed, or Commercial & Industrial if 70% of the total consumption on that circuit is from that class.	

Summer Week Day Peak Hour	Count
11:00-14:59	203
15:00-19:59	185
18:00-18:59	168
20:00-21:59	298
**6 Circuits (0.7% of population) with summer weekday peak hours between 22:00 and 10:59 are not included.*	

Load Factor	Count
(H) High = > 46.0%	443
(L) Low = < 45.99%	417
(Average Hourly kWh / Peak kw)	

Solar Penetration	Count
(H) High = > 4.0%	426
(L) = < 3.99%	434
(Solar Capacity / Circuit Capacity)	

Note: circuit profile will remain unchanged throughout the 3-year sign-up period.

VGI Pilot - Circuit Sampling Distribution

As of 7/31/2019		Circuit Peaking Hours							
		Hours 11 thru 14[1]		Hours 15 thru 17		Hours 18 thru 19		Hours 20 thru 21	
Circuit Type	Solar Penetration	High Load Factor	Low Load Factor	High Load Factor	Low Load Factor	High Load Factor	Low Load Factor	High Load Factor	Low Load Factor
Residential Dominant	High Solar Penetration	1 0 0	2 0 0	3 0 0	4 1 1	5 1 0	6 33 15	7 21 8	8 101 28
	Low Solar Penetration	9 0 0	10 2 0	11 0 0	12 2 0	13 1 0	14 5 2	15 10 4	16 18 4
Res. and C&I Mixed	High Solar Penetration	17 7 3	18 2 0	19 21 8	20 22 10	21 30 13	22 61 11	23 41 11	24 62 21
	Low Solar Penetration	25 45 17	26 19 7	27 56 13	28 14 5	29 18 5	30 13 2	31 38 8	32 2 0
Commercial & Industrial Dominant	High Solar Penetration	33 9 3	34 6 2	35 8 1	36 3 0	37 0 0	38 1 0	39 2 1	40 0 0
	Low Solar Penetration	41 57 14	42 56 18	43 44 13	44 14 3	45 3 2	46 2 1	47 3 0	48 0 0

Distribution Cell #

SDG&E Circuit Count
In-Service
Sites

[1] 6 Circuits (0.7% of sample set) with SWD_Pk_Hr between 22:00 and 10:59 are not included in this record count

Circuits to Full
- Equally Represented
- Under Represented
- Over Represented

Note: The VGI sampling chart does not include newly added circuits