Decision **PROPOSED DECISION OF ALJ GOLDBERG** **(Mailed 10/4/2019)**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application for Approval of Pacific Gas and Electric Company's (U39-E) Electric Vehicle Charging Pilots for Schools and Parks Pursuant to Assembly Bills 1082 and 1083.	Application 18-07-020
And Related Matters.	Application 18-07-022 Application 18-07-023 Application 18-07-025

DECISION ON THE TRANSPORTATION ELECTRIFICATION PILOTS FOR SCHOOLS AND PARKS PURSUANT TO ASSEMBLY BILLS 1082 AND 1083

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DECISION ON THE TRANSPORTATION ELECTRIFICATION PILOTS FOR SCHOOLS AND PARKS PURSUANT TO ASSUMBLY BILLS 1082 AND 1083

Summary

Today's decision approves eight electric vehicle charging pilots proposed by four of California's electric investor owned utilities. The approval and implementation of these pilots continues the California Public Utilities Commission's efforts to meet the clean energy and widespread transportation electrification goals of Senate Bill 350 and Assembly Bills 1082 and 1083. The approved pilots will provide charging infrastructure at city and county parks, state parks and beaches, school facilities, and educational institutions. This decision is another step forward in ensuring California meets its clean air and greenhouse gas reduction goals for 2030 and beyond.

These proceedings are closed.

1. Background

Assembly Bills (AB) 1082 and 1083[1] were enacted to further implementation of the Clean Energy and Pollution Reduction Act of 2015, which requires the California Public Utilities Commission (Commission), in consultation with the California Energy Commission (CEC) and the California Air Resources Board (CARB), to direct California's electrical corporations to file applications for programs and investments aimed to accelerate widespread

[1] AB 1082 and AB 1083 were enrolled into state law as Chapters 637 and 638 of the Statutes of 2017.

transportation electrification[2] to reduce dependence on petroleum, meet air quality standards, achieve the goals set forth in the Charge Ahead California Initiative, and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.[3]

AB 1082 authorizes each of the electric utilities subject to Commission jurisdiction to file an application to propose a pilot for the installation of electric vehicle charging stations at school facilities and other educational institutions. The legislation envisions that these charging stations could provide support for electrified school buses. The participating school or educational facility shall have the authority to establish guidelines for the use of charging stations installed through the pilot.[4]

AB 1083 authorizes each of the electric utilities subject to Commission jurisdiction to file an application to propose a pilot for the installation of electric vehicle charging stations at state parks and beaches. Additionally, AB 1083 requires that the utilities consult with the Department of Parks and Recreation (Parks), the Commission, CEC, and CARB if they file an application. Consistent with the legislation, Parks shall determine which parks or beaches are suitable locations for electric vehicle (EV) charging.[5]

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[2] Pub. Util. Code § 237.5 defines "Transportation Electrification" as the use of electricity from external sources of electrical power, including the electrical grid, for all or part of vehicles, vessel, trains, boats, or other equipment that are the mobile sources of air pollution and greenhouse gases and the related program and charging and propulsion infrastructure investment to enable and encourage this use of electricity.

[3] AB 1083 *available at* https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1083.

[4] *See* Rulemaking (R.) 13-11-007 for January 24, 2018 Assigned Commissioner Ruling.

[5] January 24, 2018 ACR.

On January 24, 2018 the assigned Commissioner issued an Assigned Commissioner Ruling (ACR) providing guidance to California's six electric utilities under Commission jurisdiction on what should be included in their respective AB 1082 and AB 1083 proposals. In response to AB 1082 and 1083[6] and the January 24, 2018 Assigned Commissioner's Ruling (ACR)[7] four of California's electric investor owned utilities (IOUs) filed separate applications on July 30, 2018, requesting authority to implement transportation electrification pilots at educational institutions, state parks, and public beaches. Applications were filed by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Liberty Utilities (Liberty).

1.1. Procedural Background

After the four applications were filed, a round of protests and responses were filed by intervenors and the utilities addressing the different aspects of each utility proposal. A prehearing conference was held on October 3, 2018 for all four applications. Subsequently, the assigned Commissioner Scoping Memo and Ruling (Scoping Ruling) was issued on December 19, 2018. In addition to defining the scope and setting the procedural schedule, the Scoping Ruling consolidated the four applications given the related questions of law, fact and policy the applications have. In lieu of evidentiary hearings, a technical workshop was held on December 6, 2018, after which a common briefing outline was served on parties on December 21, 2018.

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[6] AB 1082 and 1083 were enrolled into state law as Chapters 637 and 638 of the Statutes of 2017.

[7] January 24, 2018 ACR.

Pursuant to the schedule set in the Scoping Ruling, concurrent opening briefs were filed on January 25, 2019 and concurrent reply briefs were filed on February 8, 2019. Opening briefs were filed on behalf of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), Liberty Utilities (Liberty), the Public Advocates Office (Cal Advocates), The Utility Reform Network (TURN), Tesla, Inc. (Tesla), ChargePoint, Inc. (ChargePoint), and the "Joint Parties" (Natural Resources Defense Council (NRDC), Sierra Club, the Coalition of Utility Employees, Greenlots, Siemens, EmotorWerks,[8] Union of Concerned Scientists, and Plug In America), and Tesla. Reply briefs were filed by SCE, SDG&E, Liberty, Cal Advocates, ChargePoint, the Joint Parties, and Tesla.[9] This proceeding was submitted on February 22, 2019 with the filing of reply briefs.[10]

2. Pilot Program Criteria

The January 24, 2018 ACR provided specific guidelines to the utilities as they developed proposals pursuant to AB 1082 and AB 1083. Among other things, the ACR directed:

- **Assessment:** As part of the assessment, the utilities should collect data on school and park facilities, to the extent possible, to understand current charging behavior and demand for charging at school and park facilities.

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[8] On September 3, 2019 EMotorWerks filed a Notice of Party Name Change from EMotorWerks to Enel X North America, Inc.

[9] ChargePoint Reply Brief at Footnote 1: ChargePoint's Opening and Reply briefs only address the AB 1082 and 1083 Applications of PG&E, SCE, and SDG&E. ChargePoint does not take a position on Liberty's application.

[10] *See* Email Ruling Granting Motion for Extension of Time to File Reply Briefs (February 1, 2019).

- **Coordination:** For pilots submitted pursuant to AB 1082, the utility should consult with the California Department of Education prior to submitting its application to understand the needs at school facilities under their jurisdiction. For pilots submitted pursuant to AB 1083, the utility should consult with Parks, the Commission, CEC, and CARB.
- **Scope and Budget:** Each pilot may have a duration of up to two years with a maximum budget of $10 million per pilot.[11]
- **Cost Recovery:** The utility should propose an appropriate method for cost recovery of capital costs and expenses associated with its proposal.
- **Disadvantaged Communities:** The utility should identify its strategy for supporting disadvantaged communities (DACs), including its strategy to prioritize sites located in DACs as required by Public Utilities Code Sections (Pub. Util. Code §§) 740.13(h) and 740.14(e).[12]
- **Pilot Outreach:** The utility should describe its plan to engage stakeholders and identify potential sites for charging infrastructure.
- **Rates and Load Impacts:** Pursuant to §740.13(g) and §740.14(d), the utility should state which time-variant electric rates could apply to the potential pilots. The utility should describe what additional requirements may be necessary for site hosts to manage charging load, given that AB 1082 and AB 1083 do not require site hosts to pass on the utility rate directly to drivers.

In addition to the guidance above, the ACR required the utilities to include a project summary, description of the charging equipment, data collection, labor and safety requirements in their respective applications. The Scoping Ruling

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[11] January 24, 2018 ACR at 4: Although the statues do not place a limit on pilot budgets, we suggest a budget for each pilot's direct cost not to exceed $10 million, unless the utility provides clear evidence as to why a larger budget is necessary.

[12] Unless otherwise stated, all code section references are to the Public Utilities Code.

incorporated the ACR directives into the scope of this proceeding.[13] The common briefing outline captured the above pilot characteristics and asked parties to identify which proposals lacked regulatory standards.

Two nuances we highlight prior to discussing the specific pilot proposals are AB 1082 and AB 1083's DAC language and cost prohibition to Parks. Pursuant to §740.13(h) and §740.14(e), "DACs" means communities identified by the California Environmental Protection Agency pursuant to the Greenhouse Gas Reduction Funding Investment Plan and Communities Revitalization Act (Chapter 4.1 (commencing with Section 39710) of Part 2 of Division 26 of the Health and Safety Code) (the program developed by the California Environmental Protection Agency (CalEPA) as CalEnviroScreen). Pursuant to §740.14(f), except for costs incurred in determining park and beach suitability, Parks shall not be required to incur any costs or liability related to the installation, use, or maintenance of the charging stations for the pilot program's duration.

3. PG&E's Proposed Pilots

PG&E requests authority to implement its EV Charge Schools pilot pursuant to AB 1082 and its EV Charge Parks pilot pursuant to AB 1083. PG&E's EV Charge Schools will provide Level 2 (L2) charging infrastructure for personal vehicles, in addition to hosting EV educational events and designing EV specific curriculum.[14] The PG&E EV Charge Parks pilot will provide charging infrastructure at sites managed by the California Department of Parks and Recreation, in the form of L2 charging infrastructure for State Parks' fleet

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[13] *See generally,* December 19, 2018 Scoping Ruling.

[14] A.18-07-020 at 3.

vehicles and L2 and direct current fast chargers (DCFC) for state park visitors.[15] EV Charge Parks includes a media campaign advertising EV charging availability at state parks and beaches in PG&E's service territory.[16]

We discuss the more specific pilot details and whether they align with the goals of AB 1082 and 1083 below.

3.1. EV Charge Schools

Under the EV Charge Schools pilot, PG&E will install L2 chargers at 22 campuses of public schools, likely targeting installations in Alameda, Fresno and San Joaquin counties.[17] Alameda, Fresno and San Joaquin counties are the top three (of five) counties in PG&E's service territory with a high percentage of their populations living in disadvantaged communities (DAC).[18] PG&E bases this assessment on the CalEnviroScreen 3.0 analysis and significant need for workplace and public L2 charging access identified in the CEC's EV Infrastructure Projection Tool (EVI-Pro).[19] PG&E proposes to select sites and schools based on EV deployment and forecast utilization criteria similar to the criteria used in PG&E's approved EV Charge Network (EVCN) Program.[20] PG&E believes the pilot's size is responsive to the legislative directives in

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[15] A.18-07-020 at 3.

[16] Exhibit PGE-1 at 3 to 6.

[17] Exhibit PGE-1 at 2-1.

[18] Exhibit PGE-1 at 2-1.

[19] Exhibit PGE-1 at 2-2.

[20] Exhibit PGE-1 at 2-2; referencing Commission Decision (D.) 16-12-065.

AB 1082, and also small enough so that lessons learned can be documented to inform future TE programs.[21]

As proposed, each campus participating in the pilot will have the option of installing either four or six L2 charging ports, resulting in approximately 88-132 L2 EV charging ports installed through the EV Charge School pilot program.[22] Each L2 charger will have a capacity of 7.2 kilowatts (kW), and is intended to support light-duty vehicles "which could include the personal vehicles of school employees, parents, students, and other community members, or light-duty school fleet vehicles."[23] Pursuant to AB 1082, PG&E describes that, schools participating in the EV Charge Schools pilot will establish guidelines for when and how the chargers are used.[24] PG&E would build, own, operate and maintain the EV service connection and EV supply infrastructure for all of the participating campuses.[25] For the electric vehicle supply equipment (EVSE or L2 charger) the utility would offer participants two options:

1. PG&E Ownership: PG&E owns, operates, and maintains the EVSE and associated network installed. Under this option, the participating school would incur a participation payment. EVSE

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[21] Exhibit PGE-1 at 2-10.

[22] Exhibit PGE-1 at 2-2.

[23] Exhibit PGE-1 at 2-12.

[24] Exhibit PGE-1 at 2-12, referencing AB 1082 § 2(c): "A school district, county office of education, private school, or other educational institution choosing to participate in the program shall have the authority to establish guidelines for use of the charging stations installed pursuant to the approved program, which may include use by faculty, students, and parents, before, during, and after school hours as those times that the school facilities or other educational institutions are operated for purposes of providing education or school-related activities, including, but not limited to, parent-teacher conferences, clubs, theater, and athletic events, and by any other persons present for those activities and events."

[25] Exhibit PGE-1 at 2-2.

vendors already qualified under the EVCN Program will be used for the EV Charge School pilot.[26]

2. Site-Host Ownership: The participating school owns, operates, and maintains the EVSE and associated network. The school receives a rebate for the charger purchase. EVSE vendors already qualified under the EVCN Program will be used for the EV Charge School pilot.[27]

PG&E explains the two ownership options are designed to alleviate some of the budget constrains schools, particularly those in DACs, face with investing beyond day-to-day operational costs.[28] By offering a utility-ownership option, the participating school can avoid the upfront capital costs needed to purchase, and install the charger, as well as ongoing maintenance and operational costs. This option may increase the uptake of chargers at schools. PG&E highlights that a school ownership option with a rebate could also reduce the financial hurdles of installing EVSE and increase the uptake of EV chargers at education facilities.[29]

PG&E opines that by leveraging the EV deployment and forecast utilization criteria similar to those approved in PG&E's EVCN program it will reduce costs and streamline implementation of the EV Charge Schools.[30] In particular, PG&E plans on using EVSE vendors prequalified and approved under EVCN in EV Charge Schools.[31] PG&E notes that by using pre-qualified vendors, it will reduce overall costs and provide for a more streamlined implementation

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[26] Exhibit PGE-1 at 2-2.

[27] Exhibit PGE-1 at 2-2.

[28] Exhibit PGE-1 at 2-2.

[29] Exhibit PGE-1 at 2-2 to 2-3.

[30] Exhibit PGE-1 at 2-5 to 2-7.

[31] Exhibit PGE-1 at 2-6.

of EV Charge Schools.[32] PG&E also plans on building from the lessons learned in EVCN, and plans to work closely with the County Office of Education in San Joaquin, Fresno, and Alameda Counties to implement EV Charge Schools.[33]

PG&E expects to leverage the same commercial time-of-use (TOU) rate plans and pricing offered through EVCN.[34] Customers participating in the EV Charge Schools pilot will be eligible to enroll in Schedule A-6 or A-10, which are both TOU rate plans offered to existing commercial customers, or participants may enroll in future rates for which they may be eligible.[35] PG&E testifies it plans to offer each school participating in EV Charge Schools two pricing options currently offered in EVCN:[36]

1. Pass-Through Pricing: In this option, the school will pass the TOU rate directly to the driver. The TOU signal will act as the main mechanism for load management at the site.
2. Custom Pricing: In this option, the school creates its own pricing structure, such as free charging or flat-rate charging. Schools that adopt this option will be required to implement a Load Management Plan that was developed under EVCN, in which schools will be requested to shift the amount of EV charging at their site on certain occasions to support the grid. Sometimes PG&E will ask schools to increase EV charging at their site, such as when there is significant generation of renewable energy like solar. Other times, PG&E will ask schools to decrease EV charging at their site, such as times when there is high demand for electricity.

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[32] Exhibit PGE-1 at 2-6.

[33] Exhibit PGE-1 at 2-7.

[34] Exhibit PGE-1 at 2-12.

[35] Exhibit PGE-1 at 2-12.

[36] Exhibit PGE-1 at 2-12 to 2-13.

PG&E proposes to offer an educational component, including clean transportation related curricula and on-campus EV events to increase understanding and awareness of EVs among students and members of the school communities.[37]

PG&E requests $4.66 million in capital and $1.10 million in expense for a total cost of $5.76 million for the approximately two-year deployment of EV Charge Schools pilot and the ongoing costs necessary to support and maintain the program investments placed in service through 2023.[38] PG&E notes that if demand for EV Charge Schools is less than the estimated costs and resulting revenue requirements during the two-year pilot period, PG&E may file a Tier 1 Advice Letter (AL) to extend the program deployment length to utilize any remaining funds.[39]

3.2. EV Charge Parks

PG&E states that it designed the EV Charge Parks pilot in coordination with the State Parks to facilitate EV charging in state parks and leveraging PG&E's existing resources and expertise developed under the EVCN Program.[40]

For State Park fleet and employee vehicles, PG&E proposes to install four L2 charging ports and lay conduit and build additional electric capacity to facilitate easier installation for up to 10 L2 charging ports in the future.[41] PG&E explains the conduit and additional electric capacity will enable State Parks to

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[37] Exhibit PGE-1 at 2-3.

[38] Exhibit PGE-1 at 2-7.

[39] Exhibit PGE-1 at 2-10.

[40] Exhibit PGE-1 at 3-1.

[41] Exhibit PGE-1 at 3-2.

charge the EVs it has in its fleet today, and support the expansion of such a fleet in the future.[42] PG&E notes when fleet vehicles are not charging, State Parks employees could use these chargers to charge their own EVs.[43] PG&E requires that chargers installed for fleet vehicles / employees be separately metered and charged TOU rates with the State Parks as the customer of record.

For State Parks visitors, PG&E plans to configure sites based on the needs of State Parks with a combination of L2 and DCFC.[44] PG&E assumed two standard site designs[45]:

1. L2 Only: the first site design includes four L2 charging ports. For cost estimation purposes, PG&E assumed installing EV charging infrastructure under this configuration at three State Parks locations.
2. L2 and DCFC: the second site design includes two L2 charging ports and one DCFC. For cost estimation purposes, PG&E assumed installing EV charging infrastructure under this configuration at two State Parks locations.

For charging infrastructure used by park visitors, PG&E will contract with a third party to maintain and operate the chargers.[46] The third party will be the customer of record and responsible for paying the cost of the electricity used by the EVSE.[47] PG&E requires that the EVSE be separately metered on a TOU rate, but highlights that the third party can collect revenue from the chargers by

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[42] Exhibit PGE-1 at 3-2.

[43] Exhibit PGE-1 at 3-2.

[44] Exhibit PGE-1 at 3-3.

[45] Exhibit PGE-1 at 3-3.

[46] Exhibit PGE-1 at 3-3.

[47] Exhibit PGE-1 at 3-3.

passing through the cost of the electricity to users with an additional adder.[48] PG&E notes that this adder will be developed in coordination with the utility and State Parks.[49]

PG&E expects to offer off-grid charging to sites where upgrading the existing electric infrastructure would be cost prohibitive given the distance from electric infrastructure with sufficient capacity to support charging.[50] In this instances, PG&E will provide either L2 or DCFC capabilities off-grid to enable EV charging without the necessary electric infrastructure upgrades.[51] PG&E assumed it will provide off-grid charging infrastructure at approximately 5 park sites.[52]

As for ownership, PG&E proposes to build, own, operate and maintain the EV service connection, the EV supply infrastructure, and the EVSE and associated network for all sites to ensure that State Parks incurs no costs or liability for the duration of the pilot.[53] For off-grid charging sites, PG&E proposes to procure, own, and operate the charging infrastructure for the life of the assets.[54]

PG&E proposes to install educational signage near the chargers to raise awareness about the environmental benefits of EVs.[55] PG&E notes the signage

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[48] Exhibit PGE-1 at 3-3 to 3-4.

[49] Exhibit PGE-1 at 3-3 to 3-4.

[50] Exhibit PGE-1 at 3-5.

[51] Exhibit PGE-1 at 3-5.

[52] Exhibit PGE-1 at 3-5.

[53] Exhibit PGE-1 at 3-5 to 3-6.

[54] Exhibit PGE-1 at 3-6.

[55] Exhibit PGE-1 at 3-6.

would be approved by State Parks prior to installation.[56] PG&E additionally proposes a wider media campaign in conjunction with the EV Charge Parks Pilot aimed at (1) raising awareness about the availability to charge at state parks and (2) increasing awareness more broadly about the availability of EV charging at many locations across the state, in an effort to reduce range anxiety and facilitate EV adoption.[57]

PG&E requests $4.21 million in capital, and $1.33 million in expense for a total cost of $5.54 million for the approximately 2-year deployment of the EV Charge Parks pilot and the ongoing costs necessary to support and maintain the program investments placed in service through 2023.[58] PG&E notes that if demand for EV Charge Parks is less than the estimated costs and resulting revenue requirements during the two-year pilot period, PG&E may file a Tier 1 AL to extend the program deployment length to utilize any remaining funds.[59]

3.3. Cost Recovery

PG&E requests authority to record costs associated with the EV Charge Schools and EV Charge Parks pilots through two new balancing subaccounts under the existing Transportation Electrification Balancing Account (TEBA).[60] PG&E explains the subaccounts would be one-way balancing accounts, to be in effect over the term of the pilots, and record capital and expense revenue requirements associated with actual costs up to the level of the authorized

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[56] Exhibit PGE-1 at 3-6.

[57] Exhibit PGE-1 at 3-6.

[58] Exhibit PGE-1 at 3-9.

[59] Exhibit PGE-1 at 3-12.

[60] Exhibit PGE-1 at 4-1 and 4-10.

forecast.[61] PG&E testifies the EV Charge Parks and EV Charge Schools subaccounts will compare the forecast revenue requirement included in rates to the actual revenue requirement based on actual costs incurred.[62] The balance in the subaccounts will be transferred to Distribution Revenue Adjustment Mechanism (DRAM) if the actual costs for the pilots are at or below the authorized revenue requirement.[63]

PG&E requests cost recovery for both pilots through distribution rates.[64]

4. SCE's Proposed Pilots

SCE's pilot programs aim to increase accessibility to EV charging stations at schools, state parks and beaches, to help California achieve its GHG reduction goals and facilitate TE.[65] We discuss the more specific pilot details and whether they align with the goals of AB 1082 and 1083 below.

4.1. AB 1082 Pilot

Pursuant to AB 1082, SCE requests authority to install make-ready[66] infrastructure at approximately 40 K-12 school facilities and provide

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[61] Exhibit PGE-1 at 4-11.

[62] Exhibit PGE-1 at 4-11.

[63] Exhibit PGE-1 at 4-11.

[64] Exhibit PGE-1 at 4-10.

[65] A.18-07-022 at 3.

[66] Exhibit SCE-1 at 16: *Similar to SCE's Charge Ready Pilot and Charge Ready 2, a "make-ready" installation comprises both "in-front-of-the-meter" as well as "behind-the-meter" infrastructure. The "in-front-of-meter" portion of these installations will include, as needed, a separately-metered circuit together with utility transformer upgrades, service drop, panel, trenching, wiring conduit, step-down transformers, and other equipment. Additional "behind-the-meter" infrastructure may include, but is not limited to, electrical panels, conduit, and wires as well as the civil construction work in compliance with various regulations including the California Building Code's accessibility requirements for public and common use, and the Americans with Disabilities Act.*

approximately 250 L1 and L2 charging ports for light-duty EVs.[67] SCE additionally requests authority to implement an EV education program specifically tailored to meet the needs to K-12 schools.[68]

For the AB 1082 Pilot, SCE proposes to offer participants two ownership options, a utility ownership option and a customer ownership option.

- **SCE Ownership:** SCE will own, operate, and maintain the EVSE. The participating site host will be required to meet the needs for make-ready deployment (e.g., easement), complete relevant participation payments, and pay for all the electricity charges.[69]
- **Site-Host Ownership:** The site hosts would not be obligated to purchase or maintain the charging stations themselves. SCE proposes to offer site hosts a rebate to cover part of the costs of either L1 or L2 charging stations.[70] SCE suggests that the rebate amount would be determined based on market costs for each type of charging station, but plans to provide a rebate amount of up to $2,000 per charge port for L1 or L2 charging stations owned by customers.[71] SCE explains that rebates will not exceed 100 percent of the total cost of the charging station and installation.[72] SCE also plans to offer customers an option to manage and pay for the installation of the customer-side infrastructure and use qualified, state-licensed labor, for which the utility will provide a rebate of up to 80 percent of the installation cost.[73]

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[67] Exhibit SCE-1 at 2.

[68] Exhibit SCE-1 at 15.

[69] Exhibit SCE-1 at 16.

[70] Exhibit SCE-1 at 16.

[71] Exhibit SCE-1 at 16.

[72] Exhibit SCE-1 at 16.

[73] Exhibit SCE-1 at 17.

SCE anticipates nearly 6,000 schools will be eligible to participate in the AB 1082 Pilot.[74] Participating sites must provide SCE with the rights-of-way across public or private property and obtain any necessary permits needed to complete the project in a manner satisfactory to SCE, unless the customer elects the customer ownership model.[75] SCE plans on prioritizing sites that are (a) in a high vehicle population area and would therefore have a higher need for chargers; (b) are within DACs; and (c) have access to appropriate electrical infrastructure in order to meet port targets within the approved budget of the Pilot.[76] SCE testifies that participating sites would have the authority to establish guidelines for use of the charging stations installed pursuant to the approved pilot program.[77]

SCE proposes requiring that participating customers have an Edison SmartConnect meter or interval data recorder (IDR) meter dedicated to registering site loads, so that all site load is metered separately from any other load served at the premises.[78] SCE would also require the customer of record (e.g., site host, EVSP) to take service on one of SCE's time-differentiated rates.[79] While SCE expects to encourage participating customers to pass SCE's TOU rate directly to drivers, the customer of record would have flexibility to set pricing and parking restrictions for drivers charging at their site.[80] However, SCE would

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[74] Exhibit SCE-1 at 18.

[75] Exhibit SCE-1 at 18.

[76] Exhibit SCE-1 at 19.

[77] Exhibit SCE-1 at 18.

[78] Exhibit SCE-1 at 18 to 19.

[79] Exhibit SCE-1 at 19.

[80] Exhibit SCE-1 at 19.

require all site hosts to identify the prices passed on to the customers.[81] SCE recommends requiring participating customers to participate in a demand response program.[82]

To promote competition and customer choice, SCE proposes to offer a broad range of qualified charging station models and network service providers from multiple suppliers as part of the AB 1082 Pilot.[83] SCE proposes to issue a Request for Information (RFI) to identify technically capable and financially viable third-party suppliers, including qualified Women Minority Disabled Veteran Business Enterprise (WMDVBE) suppliers, to cover the provision, installation, operation, networking and maintenance of the charging stations.[84]

As for the marketing, education and outreach (ME&O) component of the AB 1082 Pilot, SCE plans to deploy a K-12 Campus EV Awareness Campaign aimed at empowering administration, faculty, students, and parents to become EV ambassadors in their communities.[85] SCE plans to provide: (1) grade-level specific material to increase awareness of EVs, their societal benefits, the benefits of fueling from the grid, the economics of EV ownership, and repair and maintenance skills; (2) a faculty education program leveraging calls to action, signage, new web content, and the launch of an educator EV proponent network; and (3) an EV economic education program to promote online self-service tools to help educators estimate the total cost of EV ownership, access lower-income

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[81] Exhibit SCE-1 at 19.

[82] Exhibit SCE-1 at 19.

[83] Exhibit SCE-1 at 20.

[84] Exhibit SCE-1 at 20.

[85] A.18-07-022 at 8.

resource support and information, and promote of alternatives to new EV purchases, including previously-owned EVs, leases, and ride-sharing.[86]

SCE plans to incorporate lessons learned from Its Charge Ready Pilot program to reduce costs related to the AB 1082 Pilot. SCE plans to leverage site design/feasibility lessons learned and has based its cost estimated for charging infrastructures based on the lessons learned from its existing light-duty public charging infrastructure program (Charge Ready Pilot).[87]

4.2. AB 1083 Pilot

Pursuant to AB 1083, SCE requests authority to provide infrastructure at State parks and beaches. SCE proposes to provide EV charging for Park fleet and employee vehicles, in addition to providing light-duty charging for Park visitors.[88] SCE estimates as many has 120 L2 charging ports and 10 DCFC ports would be installed at 27 Park locations during this pilot.[89] In addition to the infrastructure, SCE proposes to deploy a customer marketing campaign to publicize the availability of EV charging stations and increase awareness more broadly about the availability of EV charging across California.[90] SCE hopes its marketing campaign can reduce range anxiety and facilitate EV adoption.[91]

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[86] A.18-07-022 at 9.

[87] Exhibit SCE-1 at 24 to 25.

[88] Exhibit SCE-1 at 2.

[89] Exhibit SCE-1 at 2 to 3.

[90] Exhibit SCE-1 at 36.

[91] Exhibit SCE-1 at 36.

SCE proposes to install L2 chargers and DCFCs to serve (1) EV charging for Park fleet and employee vehicles and (2) EV charging for Park visitors.[92] SCE estimates that as many as 120 L2 charging ports and 10 DCFC ports could be installed at approximately 27 Park locations throughout the duration of the AB 1083 Pilot.[93]

SCE proposes to build, own, and operate the EVSE for the AB 1083 Pilot.[94] SCE plans to contact with a third-party EVSP to serve as the customer of record for the EV charger.[95] SCE explains that the third-party will be responsible to pay for the electricity associated with the EVSE and could collect revenue from the users of the charging stations.[96] SCE plans to work with each participating site to set reasonable charging rates for Park visitors.[97] EVSE for Park fleets would be billed to the Park directly.[98]

Under their proposal, SCE requires that participating customers provide SCE with the rights-of-way across public or private property and obtain any necessary permits.[99] SCE would also require the customer of record (e.g., site hosts, EVSP) to take service on one of SCE's time-differentiated rates.[100] Similar to the AB 1082 Pilot, the customer of record for the AB 1083 Pilot would have

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[92] Exhibit SCE-1 at 37.

[93] Exhibit SCE-1 at 37.

[94] Exhibit SCE-1 at 37.

[95] Exhibit SCE-1 at 37 to 38.

[96] Exhibit SCE-1 at 38.

[97] Exhibit SCE-1 at 38.

[98] Exhibit SCE-1 at 38.

[99] Exhibit SCE-1 at 39.

[100] Exhibit SCE-1 at 39.

flexibility to set pricing and parking restrictions for drivers charging at the particular state park or beach.[101] While SCE will encourage participating customers to pass SCE's TOU rate through directly to drivers, site hosts/EVSPs may implement their own pricing plans.[102] However, all participating customers would be required to participate in a demand response program.[103] In an effort to ensure that end-use pricing is easy for drivers to understand, and provides an opportunity for drivers to access electricity at a price less costly than gasoline, SCE proposes requiring all participating customers to report prices being passed to drivers.[104] SCE plans to aggregate this information to its TE Advisory Board on a quarterly basis.[105]

To promote competition and customer choice, SCE proposes to offer a broad range of qualified charging station models and network service providers from multiple suppliers as part of the AB 1083 Pilot.[106] SCE proposes to issue a RFI to identify technically capable and financially viable third-party suppliers, including qualified WMDVBE suppliers, to cover the provision, installation, operation, networking and maintenance of the charging stations.[107]

As for the ME&O component of the AB 1083 Pilot, SCE plans to target State Park users, advocates, employees, or those who engage in outdoor activities

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[101] Exhibit SCE-1 at 39.

[102] Exhibit SCE-1 at 39.

[103] Exhibit SCE-1 at 39.

[104] Exhibit SCE-1 at 39 to 40.

[105] Exhibit SCE-1 at 39 to 40.

[106] Exhibit SCE-1 at 41.

[107] Exhibit SCE-1 at 41.

like group outings, hiking, biking, camping or boating.[108] SCE plans on including educational signage near the charging stations.[109] SCE explains that any content or visuals would be approved by the Parks prior to installation.[110] SCE also proposes to deploy a media campaign publicizing the availability of EV charging at select State Parks.[111] SCE explains the objectives of the media campaign are to (1) raise awareness among potential Park visitors about the availability of EV charging at Parks, and encourage them to drive electric on a future visit and (2) increase awareness more broadly about the availability of EV chargers in remote locations.[112] SCE aims to reduce range anxiety and facilitate EV adoption with the deployment of the ME&O component of the AB 1083 Pilot.[113]

4.3. Cost Recovery

For both the AB 1082 and AB 1083 pilots, SCE requests authority to recover no more than $19.77 million in direct capital expenditures and operation and maintenance (O&M) expenses for both pilot programs.[114] SCE proposes to separately record each pilot program's incremental revenue requirements in its existing Charge Ready Program Balancing Account (CRPBA) to provide for the recovery of the AB 1082 and AB 1083 Pilots.[115] To ensure timely recovery, SCE

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[108] Exhibit SCE-1 at 47.

[109] Exhibit SCE-1 at 47.

[110] Exhibit SCE-1 at 47.

[111] Exhibit SCE-1 at 47.

[112] Exhibit SCE-1 at 47 to 48.

[113] Exhibit SCE-1 at 47 to 48.

[114] A.18-07-022 at 11 to 12.

[115] A.18-07-022 at 12.

requests authorization to transfer the revenue requirement recorded in the CRPBA to the distribution sub-account of the Base Revenue Requirement Balancing Account (BRRBA) at the end of each year.[116] SCE explains all revenue requirements associated with expenditures related to AB 1082 and AB 1083 pilots below the cap of $19.77 million (2018$, direct spend) that are recorded in the BRRBA as of year-end will be recovered from customers through distribution rates in the subsequent year.[117] SCE proposes to record AB 1082 and AB 1083 Pilots' costs in subaccounts, reviewed by the Commission in SCE's annual Energy Resource Recovery Account (ERRA) review application.[118] SCE believes the continuing the review of the CRPBA for AB 1082 and AB 1083 Pilots activity in the ERRA Review proceeding will ensure that all entries to the account are stated correctly and are consistent with Commission decisions.[119] SCE proposes that if the AB 1082 and AB 1083 Pilots actual direct capital and O&M expenditures are consistent with the scope and within the cost levels adopted by the Commission, then those expenditures should be deemed to be reasonable and no further after-the-fact reasonableness review should be required.[120]

5. SDG&E's Proposed Pilots

SDG&E aims to build upon its current TE portfolio with its AB 1082 and AB 1083 pilot proposals. As of July 20, 2018, SDG&E had installed 825 charging stations at 76 locations under its Power Your Drive (PYD) program for

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[116] Exhibit SCE-1 at 66.

[117] Exhibit SCE-1 at 66.

[118] A.18-07-022 at 12.

[119] A.18-07-022 at 12.

[120] Exhibit SCE-1 at 54.

workplaces and multi-unit dwellings (MUDs).[121] SDG&E explains PYD currently has 10 schools and two educational administration facilities participating as "workplaces" with an average of 10 charging stations per site.[122] SDG&E testifies its proposed AB 1082 program (School Pilot) will incorporate the utility's lessons learned with the participating schools in PYD.[123] With this in mind, we turn to the more specific pilot details and whether they align with the goals of AB 1082 and 1083 below.

5.1. AB 1082 Pilot

Pursuant to AB 1082, SDG&E proposes to install 184 L2 charging stations and 12 DCFCs at 30 schools and educational institutions for its School Pilot. SDG&E estimates the School Pilot will provide first year reductions of 554 megatons (MT) of CO_2, resulting in a lifetime net CO_2 reduction of 5,864 MT for the vehicles included in the School Pilot.[124] In addition to cleaner air, SDG&E aims to increase grid optimization with the deployment of its School Pilot.[125]

The School Pilot charging infrastructure are aimed at accommodating two different types of drivers: (1) those that leave their cars for a longer period of time (L2 charging); and (2) those who wish to quickly charge their vehicle (DCFC).[126] SDG&E proposes placing charging infrastructure in or adjacent to

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[121] Exhibit SDGE-1 at 6.

[122] Exhibit SDGE-1 at 7.

[123] Exhibit SDGE-1 at 7.

[124] Exhibit SDGE-1 at 18.

[125] Exhibit SDGE-1 at 17.

[126] Exhibit SDGE-1 at 13 to 14.

DAC areas that will be available to staff, students, residents and visitors alike and help extend their electric miles traveled.[127]

SDG&E plans to work with site hosts to determine the best fit for their needs from the pool of sites and the charging station options available within the AB 1082 Pilot (School Pilot).[128] SDG&E explains that site hosts for the School Pilot will self-nominate to participate in the program.[129] A qualified site will be one that is willing to provide the space for the charging stations and equipment, and have existing and future EV drivers utilize the equipment.[130]

SDG&E proposes to install, own, operate and maintain the charging stations for the School Pilot.[131] This ownership model is similar to SDG&E's Electrify Local Highways priority review project.[132] SDG&E believes "turn-key" ownership will facilitate public school participation because it eliminates the need for capital constrained schools and educational facilities that would need public funding to acquire charging stations and infrastructure.[133] SDG&E explains that as the owner of the charging equipment, the utility will provide the same standard of service that it does to all other assets installed in its territory to ensure that the charging stations are safe, reliable, and available for drivers to

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[127] Exhibit SDGE-1 at 17.

[128] Exhibit SDGE-1 at 10.

[129] Exhibit SDGE-1 at 10.

[130] Exhibit SDGE-1 at 10 to 11.

[131] Exhibit SDGE-1 at 11.

[132] Exhibit SDGE-1 at 11, *see generally* D.18-01-024.

[133] Exhibit SDGE-1 at 12.

use.[134] SDG&E suggests that its ownership model will mitigate reliability concerns of customers.[135]

SDG&E plans to use the EV-TOU rate to incentivize drivers to charge at times of the day when the grid is least impacted.[136] SDG&E plans to study charging patterns and share usage data with its Program Advisory Council (PAC) and the Commission.[137] SDG&E's EV TOU rate has 3 TOU periods per day, and offers drivers a predictable per-kilowatt-hour price without demand charges that match the current TOU pricing experience at the customer's home.[138] SDG&E plans to offer drivers a variety of payment options, including credit/debit card, fob, and mobile device payments.[139] Pricing would be displayed on or near the EVSE, or on the vendor-supplied phone app.[140] If approved, SDG&E plans to work with EVSPs via an RFP process to purchase the EVSE and associated network services, and use International Brotherhood of Electric Workers (IBEW)-affiliated contractors and electricians for the installation and maintenance of the charging equipment.[141]

SDG&E plans to have 25 percent of installations within the School Pilot in DACs.[142] SDG&E suggests that DACs often face disproportionate exposure to

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[134] Exhibit SDGE-1 at 12.

[135] Exhibit SDGE-1 at 12.

[136] Exhibit SDGE-1 at 16.

[137] Exhibit SDGE-1 at 13.

[138] Exhibit SDGE-1 at 13.

[139] Exhibit SDGE-1 at 14.

[140] Exhibit SDGE-1 at 14.

[141] Exhibit SDGE-1 at 13.

[142] Exhibit SDGE-1 at 18.

the health and economic impacts of air pollution and climate change.[143] SDG&E suggests that providing increased access to electricity as a transportation fuel in DACs is a top policy priority.[144] Moreover, the School Pilot aims to provide both environmental and economic benefits in DACs, including creating jobs.[145]

SDG&E plans to implement a customer communication plan (i.e. social media campaign, direct email campaign), in partnership with the schools and educational institutions, to inform the region about the availability of charging stations.[146] SDG&E plans to work with each school and educational institution in order to coordinate a grand opening for the charging stations, in an effort to generate awareness through earned media.[147]

5.2. AB 1083 Pilot

Pursuant to AB 1083, SDG&E proposes to provide 74 light duty public chargers and infrastructure at 12 state parks and beaches, and 66 light duty public chargers at 10 city and county park sites for its Parks Pilot.[148] For a more detailed discussion on the city and county park component look to Section 7.1. Similar to the School Pilot, SDG&E proposes to install, own, maintain and operate the charging stations for its Parks Pilot.[149] SDG&E estimates the Parks Pilot will provide 377 MT of CO_2 reductions in the first year of pilot deployment,

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[143] Exhibit SDGE-1 at 18.

[144] Exhibit SDGE-1 at 18.

[145] Exhibit SDGE-1 at 18.

[146] Exhibit SDGE-1 at 21.

[147] Exhibit SDGE-1 at 21.

[148] Exhibit SDGE-1 at 26.

[149] Exhibit SDGE-1 at 26.

with a lifetime net reduction of 3,990 MT for state parks and beaches.[150] Charging infrastructure at city and county parks is estimated to provide a reduction of 352 MT of CO_2 in the first year, resulting in lifetime net CO_2 reductions of 3,734 MT.[151]

SDG&E plans to partner with Parks to implement the Parks Pilot at local state parks and beaches, by providing charging infrastructure to 12 state parks and beach locations.[152] SDG&E explains that State parks and beaches would provide the parking spaces, sign licensing agreements, and provide expertise to streamline design, permitting and installation efforts, thereby helping to reduce the overall pilot cost.[153]

SDG&E asserts that its proposed ownership model will proactively mitigate stranded asset risk because utility ownership of the charging infrastructure ensures that the equipment is reliably operated and maintained.[154] SDG&E believes its proposed ownership ensures that charging facilities will be reliable for drivers, mitigating the risk of insufficient maintenance, supplier bankruptcy, or insufficient funding.[155]

SDG&E plans on offering the EV-TOU rate at public charging sites.[156] SDG&E plans to study the charging patterns, and see how driver behavior

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[150] Exhibit SDGE-1 at 34.

[151] Exhibit SDGE-1 at 34.

[152] Exhibit SDGE-1 at 26.

[153] Exhibit SDGE-1 at 26.

[154] Exhibit SDGE-1 at 31 to 32.

[155] Exhibit SDGE-1 at 31 to 32.

[156] Exhibit SDGE-1 at 27.

charging patterns vary at parks and beach sites.[157] Similar to the Schools Pilot, SDG&E plans to offer a variety of payment options for drivers utilizing charging stations in the Parks Pilot.[158] SDG&E explains that providing customers the option to pay by credit card ensures charging stations are available to infrequent visitors, along with more regular users.[159] SDG&E plans for pricing to be displayed on or near the EVSE, or on the vendor-supplied phone app.[160] SDG&E plans to install a new separately metered electric service installed to feed the charging stations.[161] SDG&E expects that the ESVP will be the customer of record for this new service, and will bill drivers for their charging session energy on the EV-TOU rate.[162]

As part of the Parks Pilot SDG&E proposes working with site hosts to develop and implement a strong communication plan to inform the region about the availability and accessibility to charging stations.[163] SDG&E explains that its communication plan could include a social media campaign, direct e-mail campaign targeted to customers near charging locations, and a direct e-mail campaign by each state park and beach to current staff and visitors.[164] SDG&E

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[157] Exhibit SDGE-1 at 27.

[158] Exhibit SDGE-1 at 30.

[159] Exhibit SDGE-1 at 30.

[160] Exhibit SDGE-1 at 30.

[161] Exhibit SDGE-1 at 31.

[162] Exhibit SDGE-1 at 31.

[163] Exhibit SDGE-1 at 37.

[164] Exhibit SDGE-1 at 37.

plans to work with the Parks to coordinate a grand opening for the charging stations in an effort to generate awareness through non-paid media.[165]

5.3. Cost Recovery

SDG&E estimates the total cost for the School Pilot to be $9.9 million ($9.3 million in capital and $516,194 in O&M).[166] SDG&E requests authority to establish a one-way balancing account (Light-Duty Balancing Account or "LDBA") to record the authorized revenue requirement and costs associated with both the School Pilot and AB 1083 Pilot.[167] SDG&E proposes to recover costs from all electric customers classes through distribution rates.[168] The LDBA would record the revenue requirement, O&M costs, and capital-related costs (i.e. depreciation, taxes and return) in two sub-accounts (1) Schools and (2) State Parks and Beaches.[169] The balance in the LDBA would be addressed in SDG&E's Annual Electric Regulatory Account Update filing in 2022.[170] SDG&E proposes to address the final disposition and closing of the LDBA in a post-2019 General Rate Case (currently estimated to be Test Year 2022).[171]

The total cost of the Parks Pilot is estimated to be $5.1 million at state sites, and, $3.8 million at the city and county sites, for a direct cost of $8.9 million.[172] As discussed above, SDG&E requests authority to record the authorized revenue

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[165] Exhibit SDGE-1 at 37.

[166] Exhibit SDGE-1 at Appendix A, Table A-1.

[167] Exhibit SDGE-4 at 1.

[168] Exhibit SDGE-4 at 1.

[169] Exhibit SDGE-4 at 1.

[170] Exhibit SDGE-4 at 1 to 2.

[171] Exhibit SDGE-4 at 2.

[172] Exhibit SDGE-1 at Appendix A, Table A-2.

requirement and costs associated with both the School Pilot and Parks Pilot in the LDBA.[173] SDG&E proposes to recover costs from all electric customer classes through distribution rates.[174] The balance in the LDBA will be addressed in SDG&E's Annual Electric Regulatory Account Update filing in 2022.[175] SDG&E proposes to address the final disposition and closing of the LDBA in a post-2019 General Rate Case (currently estimated to be Test Year 2022).[176]

6. Liberty's Proposed Pilots

Liberty aims to increase access to available charging at state parks and beaches throughout its service territory with its AB 1082 and AB 1083 pilot programs. Liberty asserts that both proposed pilots are aimed at meeting the growing demand of residents and visitors to the Lake Tahoe region, in addition to the needs of area schools.[177] Liberty designed its pilots to align with the Tahoe-Truckee Plug-In Electric Vehicle Readiness Plan developed by the Tahoe Regional Planning Agency (TRPA Plan).[178] As Liberty highlights, the TRPA Plan's primary goal is to "maximize the share of electric miles traveled in the Tahoe-Truckee Region to achieve sustainability and environmental improvement objectives, especially reducing [GHG] emissions, and criteria air pollutant emissions."[179] Because the Tahoe-Truckee region is a destination for so many non-residents, Liberty has worked to identify sites for its pilots that are near

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[173] Exhibit SDGE-4 at 1.

[174] Exhibit SDGE-4 at 1.

[175] Exhibit SDGE-4 at 1 to 2.

[176] Exhibit SDGE-4 at 2.

[177] Exhibit Liberty-1 at 5.

[178] Exhibit Liberty-1 at 5.

[179] Exhibit Liberty-1 at 5.

town and regional centers, retail centers, beaches, recreational areas, education facilities and large marinas.[180]

We discuss the more specific pilot details and whether they align with the goals of AB 1082 and 1083 below.

6.1. AB 1082 Pilot

Pursuant to AB 1082, Liberty proposes a two-year pilot (AB 1082 Pilot) to provide charging infrastructure for fleet vehicles, parents, teachers, students, and electric school buses.[181] Under the AB 1082 Pilot, Liberty plans to install 56 L2 charging ports and 2 DCFCs located at 17 school facilities in Liberty's service territory.[182]

Liberty has identified 17 sites for EV charging locations, with 15 being at K-12 school sites, the Lake Tahoe Community College (LTCC), and a bus barn for the Lake Tahoe School District (LTUSD).[183] Liberty plans to install one dual pedestal L2 charging station, with two charging ports at 13 K-12 school sites, and two dual pedestal L2 chargers, each with two charging ports, at two K-12 school sites.[184] At the LTCC site, Liberty plans to install two dual pedestal L2 charging stations, each with two charge ports and two DCFCs.[185] For the LTUSD bus barn, Liberty proposes to install eight dual wall-mounted L2 charging stations with a

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[180] Exhibit Liberty-1 at 5 to 6.

[181] Exhibit Liberty-1 at 2.

[182] Exhibit Liberty-1 at 3.

[183] Exhibit Liberty-1 at 2.

[184] Exhibit Liberty-1 at 2.

[185] Exhibit Liberty-1 at 2 to 3.

total of 16 charging ports.[186] The bus barn charging stations are to support new electric school buses, and help Liberty reach its goal to replace 50 percent of LTUSD's current diesel bus fleet with electric school buses.[187]

Liberty proposes a complete utility ownership model in which Liberty will own, operate and maintain the charging stations for the AB 1082 Pilot.[188] Liberty states that the K-12 charging stations and LTCC charging stations are to support parents, students, fleet vehicles, staff and buses.[189] Liberty will also install safety bollards, snow melt and lighting equipment where appropriate.[190]

If approved, the AB 1082 Pilot will result in charging stations installed at every school in Liberty's service territory.[191] Liberty explains that this availability and visibility of chargers is of particular importance because of the level of students from families at or below the poverty line.[192] Liberty explains that over 60 percent of students in LTUSD qualify for the free and reduced cost lunch program.[193] Liberty explains the presence of charging stations at each school will make technology visible and accessible to all students' families, including the substantial percentage of families that are low income.[194]

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[186] Exhibit Liberty-1 at 3.

[187] Exhibit Liberty-1 at 3.

[188] Exhibit Liberty-1 at 2.

[189] Exhibit Liberty-1 at 3.

[190] Exhibit Liberty-1 at 3.

[191] Exhibit Liberty-1 at 7.

[192] Exhibit Liberty-1 at 7.

[193] Exhibit Liberty-1 at 7.

[194] Exhibit Liberty-1 at 7 to 8.

Liberty estimates the AB 1082 Pilot will cost $3.861 million.[195] Liberty includes charging equipment hardware and software, transformers, permitting, project management, marketing, provisions for the Division of the State Architect, electrical work, trenching and contingency.[196] Liberty plans to develop an RFP for procurement of the charging station hardware and software, and for the required electrical and construction work.[197]

6.2. AB 1083 Pilot

Pursuant to AB 1083, Liberty proposes a two-year pilot (AB 1083 Pilot) to provide charging infrastructure for fleet vehicles, park staff and visitors.[198] Liberty provides it has worked with the Parks to determine the most attractive sites for EV charging stations in Liberty's service territory.[199] These locations include Lake Tahoe Golf Course, Sugar Pine State Park, Kings Beach State Park and Sugar Pine State Park.[200] Under the AB 1083 pilot Liberty will install five dual pedestal charging stations, each with two charging ports at three California park locations.[201]

Liberty estimates the total capital costs of the AB 1083 Pilot to be $0.741 million.[202] Liberty explains this forecast includes the charging equipment hardware and software, transformers, permitting, project management,

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[195] Exhibit Liberty-1 at 3.

[196] Exhibit Liberty-1 at 3.

[197] Exhibit Liberty-1 at 3.

[198] Exhibit Liberty-1 at 3.

[199] Exhibit Liberty-1 at 3 to 4.

[200] Exhibit Liberty-1 at 3 to 4.

[201] Exhibit Liberty-1 at 3 to 4.

[202] Exhibit Liberty-1 at 4.

marketing, provisions for the Division of the State Architect, electrical work, trenching and contingency.[203] Similar to the AB 1082 Pilot, Liberty intends to develop an RFP for procurement of the charging station hardware and software and for the required electrical and construction work.[204]

6.3. Outreach

For both pilots, Liberty proposes to provide information on the new EV charging equipment – as well as EV facts, utility rates, available incentives, and program information, through bill inserts monthly newsletters, website, social media platforms, public presentations, school curriculum, flyers, and at community events.[205] Liberty's outreach proposal includes 30 second videos for Liberty's website and television commercials, paid media placement for radio, television, print and online, and coordination with pilot partners to advertise the availability of charging stations.[206] Liberty estimates its outreach component for the pilots would cost $85,000.[207] In addition to the outreach efforts listed above, this estimate also includes the development of a marketing and communications plan, implementation and management of the program, and ongoing coordination.[208]

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[203] Exhibit Liberty=1 at 4.

[204] Exhibit Liberty-1 at 4.

[205] Exhibit Liberty-1 at 4.

[206] Exhibit Liberty-1 at 4.

[207] Exhibit Liberty-1 at 4 to 5.

[208] Exhibit Liberty-1 at 4 to 5.

6.4. Cost Recovery

Liberty requests authority to establish the Transportation Electrification Balancing account (TEBA) to record the costs of both the AB 1082 and AB 1083 Pilots.[209] Liberty plans to track each pilot's incremental costs separately in the TEBA.[210] Each month, Liberty will record capital-related revenue requirements, including depreciation, return on rate base, property taxes and income taxes, recorded incremental O&M expenses, and outreach costs.[211] Liberty proposes to seek recovery of the TEBA balance in an appropriate future proceeding, via the advice letter process, or in another process approved by the Commission.[212] Liberty believes a reasonableness review of the TEBA should be limited to confirm that all entries to the account are stated correctly and associated with the AB 1082 and AB 1083 Pilots.[213] If approved, Liberty estimates the average overall increase to customer rates would be approximately 1.1 percent.[214]

7. Recommendations on Proposed Pilots

Undoubtedly, there are common issues of law and fact throughout the four utility pilots. The common briefing outline served on parties aimed to focus parties' analysis on the nuances of each of the utility's application. Here, we address the common nuances and parties overall support for the implementation and deployment of these pilot programs.

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[209] Exhibit Liberty-1 at 10.

[210] Exhibit Liberty-1 at 10.

[211] Exhibit Liberty-1 at 10.

[212] Exhibit Liberty-1 at 10.

[213] Exhibit Liberty-1 at 10.

[214] Exhibit Liberty-1 at 10.

7.1. SDG&E's City and County Component of the Parks Pilot

As part of the Parks Pilot, SDG&E proposed to provide charging infrastructure at 10 DAC-located city and county parks.[215] As it stands, SDG&E has only one state park in its service territory located in a DAC.[216] SDG&E includes city and county parks in its proposal to prioritize DAC sites, and is committed to installing 100 percent of the charging stations for city and county parks, within DACs.[217] SDG&E sets a combined deployment goal (state parks and beaches, and city and county parks) of 50 percent of installations to take place in DACs.[218] SDG&E believes its proposal is authorized by Senate Bill (SB) 350[219] and meets the objectives of AB 1083 because installing charging infrastructure at city and county parks is in the interest of ratepayers and prioritizes sites in DACs.[220]

The common briefing outline for this proceeding asked parties to address whether the utilities should be authorized to implement pilots at city and county parks when AB 1083 only addresses state parks (and beaches). TURN and Cal Advocates had varying arguments on the question.

TURN takes issue with SDG&E's proposal, arguing that the proposal is an apparent attempt by SDG&E to spend as much money as permitted under the

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[215] Exhibit SDGE-1 at 28.

[216] Exhibit SDGE-1 at 28.

[217] Exhibit SDGE-1 at 28.

[218] Exhibit SDGE-1 at 33.

[219] Exhibit SDGE-1 at 28.

[220] Exhibit SDGE-1 at 28.

parameters of the ACR.[221] Although TURN characteristics s SDG&E's attempt at reaching more DACs is laudable, noting that there may be only one state park in a DAC in SDG&E's service territory, TURN does not believe SDG&E's deviation from AB 1083's state specific language justifies unnecessary ratepayer expenditures.[222] Instead, TURN recommends SDG&E focus its efforts to reach more school sites in DACs, to avoid disproportionally and unnecessarily burdening SDG&E's ratepayers.[223] TURN points to SDG&E's relatively small service territory and resulting smaller ratepayer pool to cover the costs for the utility's AB 1083 Pilot.[224] TURN contends the addition of the city and county parks program unnecessarily adds approximately $9 million to the total cost of the pilots.[225]

Cal Advocates addresses SDG&E's city and county parks proposal in a different light than TURN, suggesting that while SDG&E's proposal does not comport with the state park mandate in AB 1083, SDG&E's city and county parks proposal does support the intent of AB 1083's requirement to target residents of DACs.[226] Cal Advocates supports SDG&E's city and county parks proposal, highlighting that if approved, 66 ports or 47 percent of the infrastructure associated with the AB 1083 Pilot will be located in a DAC.[227] Cal Advocates

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[221] TURN Opening Brief at 20.

[222] TURN Opening Brief at 20.

[223] TURN Opening Brief at 20.

[224] TURN Opening Brief at 21.

[225] TURN Opening Brief at 21.

[226] Cal Advocates Opening Brief at 7.

[227] Cal Advocates Opening Brief at 7, citing Exhibit SDGE-1 at 22.

believes SDG&E's AB 1083 Pilot presents an opportunity for testing the feasibility and effectiveness of city and county parks to incent EV adoption.[228]

In addition to the points raised by TURN and Cal Advocates, we look to the arguments raised by SDG&E. While SDG&E acknowledges that AB 1083 does not authorize charging infrastructure in city and county parks, SDG&E points to SB 350 in support of its proposal.[229] SDG&E opines, "SB 350 states that the Commission may approve TE programs that accelerate widespread TE and help reduce GHG emissions."[230] SDG&E argues that the city and county component of its Parks Pilot supports will accelerate TE and help reduce GHG emissions in heavily polluted areas, namely, DACs.[231]

In evaluating the arguments raised by the utility, TURN and Cal Advocates, we look to the scope of the instant proceeding. The first issue identified in the Scoping Ruling is whether the proposed programs meet the requirements of SB 350, in addition to the ACR and AB 1082 and AB 1083.[232] While the city and county parks component of the Parks Pilot does not fit within the specific site directives in AB 1083, we agree with Cal Advocates that SDG&E's proposal supports the intent of the bill to target residents of DACs. Providing charging infrastructure at city and county parks will increase access to charging in DACs, and encourage EV adoption amongst residents. Moreover, we agree that the city and county park component supports SB 350's widespread

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[228] Cal Advocates Opening Brief at 7.

[229] SDG&E Opening Brief at 14.

[230] SDG&E Opening Brief at 14; § 740.12(b).

[231] SDG&E Opening Brief at 14.

[232] Scoping Ruling at 4.

transportation electrification initiative and find that the city and county parks component is within the scope of this proceeding. Our finding does come with a cost, and that is the investment by ratepayers in TE infrastructure. However, positioning 47 percent of the Parks Pilot infrastructure in DACs ensures ratepayers are funding charging infrastructure that will serve residents of the most heavily polluted areas in SDG&E's service territory. We approve SDG&E's Parks Pilot in full and look forward to the data collection to come from these uniquely sited charging stations.

7.2. Utility Ownership of Charging Stations (EVSE)

Question 4, in Section II of the common briefing outline asked parties to address whether utility ownership of the charging infrastructure is necessary to carry out the objectives of AB 1082 and AB 1083. As outlined above, the utilities propose different ownership structures for the associated charging stations for their pilots. While AB 1083 expressly prohibits Parks from incurring costs related to the installation, use or maintenance of charging stations, AB 1083 does not require utility ownership of the charging stations. AB 1082 does not provide the same directive. Under AB 1082, PG&E and SCE offer two EVSE ownership options (1) utility-ownership or (2) site-host ownership, while SDG&E and Liberty only offer utility ownership. Under the site-host ownership option, PG&E and SCE propose offering schools a rebate for the EVSE. Under AB 1083, all four utilities offer utility ownership of the associated EVSE.

7.2.1. AB 1082 Pilots

Cal Advocates, TURN and ChargePoint support offering customers a choice of ownership options for the charging stations associated with the AB 1082 pilot proposals. Cal Advocates explains providing ownership options increases the potential benefits to schools due to increased competition and an

expanded freedom of choice, while potentially reducing programmatic costs to ratepayers and mitigating anti-competitive concerns.[233] Cal Advocates requests the Commission reject SDG&E's and Liberty's proposals for full utility ownership of the EVSE, and instead implement a customer-choice ownership model that gives customers the equal choice between utility-and customer-ownership.[234] TURN does not support utility ownership of charging stations, asserting that utility ownership is costlier and administratively burdensome.[235] TURN opines that the utility ownership model primarily benefits the IOU shareholders because they will earn a rate of return on the capitalized (utility owned) assets.[236] TURN recommends that utility ownership of charging infrastructure be limited to all supporting infrastructure, up to and including, the make-ready stub for these pilot programs and that the charging stations themselves be owned by the site host or a third party.[237] ChargePoint contends the objectives of AB 1082 can be met without utility ownership of charging stations.[238] ChargePoint believes providing site-host and utility-ownership options for the AB 1082 pilots, will result in ratepayer savings because the site-host ownership option will decrease the significant added expense associated with rate basing utility-owned charging stations.[239]

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[233] Cal Advocates Opening Brief at 6.

[234] Cal Advocates Opening Brief at 6.

[235] TURN Opening Brief at 16.

[236] TURN Opening Brief at 16.

[237] TURN Opening Brief at 16.

[238] ChargePoint Opening Brief at 17.

[239] ChargePoint Opening Brief at 9.

While SDG&E believes the availability of utility-ownership under its pilots is critical to ensuring widespread participation from public schools and parks that may not have available funding to own and maintain charging infrastructure, SDG&E is amenable to making utility ownership optional for both proposed pilots.[240] However, SDG&E cautions that there will be cost implications of providing an ownership choice.[241] In its Reply Brief, SDG&E suggests that if a site host decides to own and maintain the EVSE, SDG&E supports offering a rebate for the cost of the charging station to make the choice for site-host ownership as financially equivalent to utility-ownership as possible.[242] However, if instructed to offer utility and site-host ownership, SDG&E may have insufficient funds to execute the pilots.[243] SDG&E explains that if a sufficient amount of direct capital funds is directed to customer rebates under the site-host ownership option, the utility will no longer receive corresponding loaded funds.[244] SDG&E requests the ability to file a Tier 3 advice letter with the Commission's Energy Division to alter its budget and number of forecasted EVSEs deployed, if necessary.[245]

Liberty supports its proposed utility-ownership model, explaining that schools in its service territory cannot afford owning the charging equipment for its AB 1082 Pilot.[246] Moreover, Liberty notes that "it spoke with each school

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[240] SDG&E Reply Brief at 2 to 3.

[241] SDG&E Reply Brief at 6 to 7.

[242] SDG&E Reply Brief at 3.

[243] SDG&E Reply Brief at 7.

[244] SDG&E Reply Brief 6.

[245] SDG&E Reply Brief at 7.

[246] Liberty Reply Brief at 4.

district in its service territory regarding the proposed deployment of charging stations, and not one school expressed a preference to own and operate the charging stations."[247]

In evaluating arguments on whether EVSE ownership is necessary to achieve the objectives of AB 1082, we recognize that each utility's service territory and schools are different. Moreover, we recognize that the overall objective of AB 1082 is to provide charging infrastructure for schools to encourage EV adoption and help California meets its emission reduction goals. We understand Liberty's prospective school sites are not interested or financially able to participate in a site-host ownership option; therefore, Liberty's utility-ownership model will be effective in promoting the objective of AB 1082 and is thus approved. However, we believe SDG&E's service territory presents more opportunity to offer participants a site-host ownership option. We acknowledge SDG&E's amenability to a site-host ownership option and direct the utility to offer both a utility- and site-host ownership option for the charging infrastructure associated with its AB 1082 Pilot. By providing both options to prospective schools, SDG&E still maintains the ability to offer a turn-key solution to charging, in addition to supporting schools that wish to own the charging stations. By giving participants a choice, SDG&E's AB 1082 pilot aligns with the ownership options SCE and PG&E propose. This change supports meeting the objectives of AB 1082 and aims to provide the Commission with data on utility and site-host ownership, and what barriers schools and other educational facilities may face in having charging available on-site. We adopt SDG&E's recommendation that it be authorized to file an advice letter with the

[247] Liberty Reply Brief at 4.

Commission's Energy Division to reallocate funds for potential EVSE rebates and potentially reallocate the number of EVSE it can support under both a utility-and site-host ownership option. We direct SDG&E to file a Tier 3 advice letter with the Commission's Energy Division within 60 days of the date of issuance of this decision to reflect this programmatic change.

7.2.2. Rebates for AB 1082 Pilots

Another objective of AB 1082, is to ensure these pilots do not unfairly compete with nonutility enterprises.[248] TURN and ChargePoint raise concerns that if AB 1082 pilots allow for either site-host or utility-ownership of the EVSE, the program will be structurally biased toward utility ownership if the rebate for site-host ownership does not cover network fees and maintenance costs.[249] To alleviate this concern, ChargePoint proposes customers choosing to own and operate the EVSE themselves, should be offered an equivalent value for each element in the package, including the EVSE, maintenance, and network service fees.[250] ChargePoint contends that without this equivalency (i.e. if the utility-ownership offers more value to customers) the ownership options are unequal and customers will have an unjustified financial incentive to choose utility ownership over the alternative.[251] Without offering a balanced choice to customers, utility-ownership would discriminate against both participants that prefer the site-host ownership option and suppliers seeking to supply those

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[248] § 740.13(e)(3).

[249] Cal Advocates Reply Brief at 4, referencing Turn Opening Brief at 18 and ChargePoint Opening Brief at 9.

[250] ChargePoint Opening Brief at 6.

[251] ChargePoint Opening Brief at 6.

site-host owners.[252] TURN proposes that parity between site-host and utility-ownership options can be built into the pilot designs by offering participants: (1) a utility-owned charger plus operation and maintenance benefits for a designated period of time, less the designated participation payment; or (2) a rebate covering the cost of both the charger and equivalent operation and maintenance benefits provided under the utility-ownership option.[253]

We agree with Cal Advocates, TURN and ChargePoint that as currently structured, utility-ownership of the EVSE for the AB 1082 pilots creates an unequal playing-field for nonutility enterprises. As described in the proposals, the AB 1082 pilots could create an anticompetitive atmosphere that discriminates against both participants that prefer the site-host ownership option as well as suppliers (EVSPs) seeking to supply those site-host owners. Ensuring utilities do not unfairly compete with nonutility enterprises, is an important objective, especially in the nascent EVSE and EVSP markets. To combat this anticompetitive structure, we require PG&E, SCE and SDG&E offer participants choosing site-host ownership a rebate that should be equal to the cost of the charger, maintenance, and network fees for L2 and DCFC only.[254] Prior to implementation, PG&E, SCE and SDG&E are directed to consult with their respective PACs to design their respective site-host ownership rebate amount. Prior to implementation, the utilities are directed to file a Tier 3 advice letter with the Commission's Energy Division to set their respective site-host ownership

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[252] ChargePoint Opening Brief at 6.

[253] TURN Opening Brief at 18.

[254] *See* Section 7.3.3

rebate amount. The advice letter should explicitly list the costs for the EVSE, maintenance and network fees for the site-host ownership option. The advice letter should also detail the terms for how the rebate will be issues, the frequency of recurring payment, how the costs will be tracked, the logistics of distributing the rebate, and the feasibility of scaling this rebate system for a potentially larger program.

7.3. Charging Stations Specifics

Question 3, in Section II of the common briefing outline asked parties whether the proposed pilots enable consumer choice, encourage private investment, avoid stranded costs, and adequately mitigate any unfair competition with nonutility enterprises that might result from the proposed pilots. Many parties addressed the qualifying process for EVSEs under this question. Among other things, parties addressed whether L1 and DCFC is appropriate for the proposed pilots, how to avoid the risk of stranded assets if the EVSE is fixed to one network, and if there should be a minimum charge port required for each charging station.

7.3.1. Qualifying EVSE

ChargePoint suggests in order to enable consumer choice, the Commission should ensure the AB 1082 and AB 1083 pilots allow participating site-hosts to choose their EVSE and services from qualified vendors.[255] ChargePoint notes that L2 and DCFCs are currently available from a variety of qualified suppliers.[256] ChargePoint notes that for off-grid charging stations (PG&E's EV

[255] ChargePoint Opening Brief at 5.

[256] ChargePoint Opening Brief at 5.

Charge Parks Pilot) the number of qualified suppliers may be smaller.[257] ChargePoint believes customers should be offered a selection from qualified products or services, irrespective of whether the site-host or utility owns the charging station.[258] To support customer choice in selecting EVSEs, ChargePoint recommends the Commission ensure each pilot has a simple and straightforward method of qualifying suppliers and EVSE.[259] Because the AB 1082 and AB 1083 proposals are 2-year pilots, ChargePoint recommends utilities not be required to requalify suppliers and equipment that have recently been qualified and tested in other TE programs.[260]

We agree that given the limited duration of these pilots, in addition to the evolving technology for electric vehicle charging infrastructure, the utilities should be allowed to utilize their existing list of pre-qualified suppliers and EVSE approved through their other light-duty transportation electrification programs. Because charging stations are continually being updated and innovated, PG&E, SCE, SDG&E and Liberty should work to issue a uniform Request for Qualifications (RFQ) that establish the same vendor and EVSE qualification requirements. An RFQ is supplier focused, and thus does not present the same barriers as an RFP process.[261] As highlighted by PG&E in comments, the utilities already utilize a common RFQ for their respective

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[257] ChargePoint Opening Brief at 5.

[258] ChargePoint Opening Brief at 5.

[259] ChargePoint Opening Brief at 5 to 6.

[260] ChargePoint Opening Brief at 6.

[261] PG&E Opening Comments at 4.

medium and heavy-duty EV programs.[262] Additionally, in order to promote competition and innovation within these pilots, and to reduce the risk of stranded assets, we direct the utilities to require qualified EVSEs to be equipped to utilize open access standards for communication of data between the EVSE and the back-end network.

7.3.2. Senate Bill 454: Electronic Payment Requirements

SB 454, the EV Charging Station Open Access Act was enacted in 2013 and is currently in effect throughout California. Among other things, SB 454 requires payment at public charging stations be allowed via credit card or mobile technology.[263] Parties ask for clarification on SB 454's payment access standards in relation to how to avoid the risk of stranded assets if the EVSE only accepts one form of payment.

ChargePoint requests the Commission direct the utilities to avoid payment access requirements that exceed or diverge from final, currently applicable standards.[264] Although no formal regulation has been adopted since the enactment of the EV Charging Station Open Access Act, ChargePoint explains CARB is currently considering further actions that may lead to the adoption of new SB 454 regulations.[265] In light of this pending regulation, ChargePoint requests the Commission clarify whether the AB 1082 and AB 1083 pilots should be consistent with current payment standards, and should not anticipate the

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[262] PG&E Opening Comments at 4.

[263] ChargePoint Opening Brief at 7, footnote 10, referencing Health and Safety Code § 44268.2(a)(1).

[264] ChargePoint Opening Brief at 7.

[265] ChargePoint Opening Brief at 7.

outcome of CARB.[266] ChargePoint explains that clarification on this matter is important given that credit card and mobile payment technologies vary widely in cost, fitness for deployment at unattended locations, and risk of obsolescence given the pace of technical advancements and consumer adoption.[267]

Cal Advocates disagrees with this position and supports the Joint Parties' proposal that all EVSEs installed at parks and beaches be required to accept debit and credit card payment.[268] Cal Advocates is of the belief that debit and credit card payment availability will increase customer accessibility to charge at state parks and beaches.[269] Cal Advocates has some concerns over the data collection capabilities of credit card readers, touching upon discussions at SCE's technical workshop in A.18-06-015.[270] Cal Advocates explains that EVSEs with credit card readers are less adept at gathering and providing robust data and demand response event notification compared to other EVSEs that are able to communicate with drivers through proprietary fobs and phone applications.[271] Cal Advocates requests the applicants should further discuss with stakeholders and their respective Program Advisory Councils how to mitigate the impacts of reduced data collection and event notification from implementing debit and credit card readers.[272] Cal Advocates requests the applicants submit a report on

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[266] ChargePoint Opening Brief at 7.

[267] ChargePoint Opening Brief at 7 to 8.

[268] Cal Advocates Reply Brief at 5.

[269] Cal Advocates Reply Brief at 5.

[270] Cal Advocates Reply Brief at 5.

[271] Cal Advocates Reply Brief at 5.

[272] Cal Advocates Reply Brief at 5.

their findings and a Tier 2 advice letter detailing the mitigation measures they plan to implement.[273]

The Joint Parties provide arguments in support of electronic payment capabilities at park and beach locations. To ensure that the greatest number of potential customers have access to these public stations, the Joint Parties explain the utilities should require qualifying EVSE to also include credit card readers and ensure all stations installed through these pilots at state parks and beaches support payment by credit card.[274] The Joint Parties also support industry-accepted technical open communication standards and protocols between the EVSE and EVSP, minimize the risk of stranded assets.[275] In footnote 17 of their reply brief, the Joint Parties recommend open communication protocols like "OCPP or Open ADR" to support interoperability and thus reduce the risk of stranded assets in the future.

We agree with many of the points raised by the Joint Parties, ChargePoint and Cal Advocates on the issue of electronic payment capabilities at park and beach charging. Although no formal regulation has been adopted since the enactment of the EV Charging Station Open Access Act, it is appropriate for the Commission to determine what payment standards the utilities should require the EVSEs utilized for the AB 1082 and AB 1083 pilots to accept. The availability of credit and debit payment at more remote charging locations, such as state parks and beaches, should encourage customers to drive EVs to such destinations. Moreover, the availability of electronic payment should reduce the

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[273] Cal Advocates Reply Brief at 5.

[274] Joint Parties Reply Brief at 6.

[275] Joint Parties Reply Brief at 6.

risk that these charging stations become inoperable as technology and payment standards change in the years to come.

In light of CARB's consideration of SB 454, and in response to parties' comments, we also clarify that the AB 1082 and AB 1083 pilots must be implemented consistent with state law, including SB 454 and any regulations that may be adopted by CARB to implement SB 454 in the future.

7.3.3. L1 and DCFC

Parties discussed the inclusion of L1 and DCFC charging for the AB 1082 and AB 1083 pilots in briefs. As proposed, SCE plans to offer L1 charging for its AB 1082 Pilot, while SDG&E and Liberty propose to install DCFC for their respective AB 1082 pilots. Additionally, SDG&E, PG&E and Liberty propose installing DCFC for their respective AB 1083 pilot programs.

ChargePoint opposes SCE's proposal to include L1 charging stations in its proposed AB 1082 Pilot asserting that L1 charging stations at schools would not maximize overall benefits as required by AB 1082.[276] ChargePoint opines that the relatively small cost differential between L1 and L2 charging stations does not reflect the significant difference in features and functionality between L1 and L2.[277] ChargePoint goes on to explain that L1 charging stations are lower power, thereby requiring significantly more time to charge EVs than L2, are not able to participate in demand response programs, and do not include embedded meters.[278]

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[276] ChargePoint Opening Brief at 27.

[277] ChargePoint Opening Brief at 27.

[278] ChargePoint Opening Brief at 27.

In its reply brief, SCE explains its rationale for offering L1 charging. SCE clarifies it intended to include a broad range of charging station models and network service providers from multiple suppliers as part of its AB 1082 pilot.[279] SCE argues that offering L1 charging supports the goals of AB 1082 in that it will facilitate the installation of EVSE at schools, is less costly, and has lower impacts on the grid than L2 charging.[280] TURN also offers support for including L1 charging in SCE's AB 1082 Pilot, explaining that L1 charging may be useful in schools which are "long dwell-time" locations for faculty, administrators, and students.[281] TURN also notes that many plug-in electric hybrid vehicles owners will be able to meet their daily commute range requirements through L1 charging when parked for 6 to 8 hours.[282]

While ChargePoint raises important network capability issues of L1 chargers, we approve SCE's proposal to offer L1 charging as part of its AB 1082 Pilot for a variety of reasons. First, schools offer a unique venue to test charging amongst a wide pool of users, including students, parents and school staff. Second, while L1 charging is slower than L2, we agree with TURN that L1 charging is appropriate for students and administrators given the length of time they are usually parked. Third, while we understand ChargePoint's position that L1 charging may not maximize the overall benefits of SCE's AB 1082 Pilot, we are interested in testing whether L1 charging is utilized more than L2 or DCFC in schools. In an effort to ensure ratepayers are funding charging infrastructure

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[279] SCE Reply Brief at 15.

[280] SCE Reply Brief at 16.

[281] TURN Opening Brief at 24.

[282] TURN Opening Brief at 24 to 25.

that will be utilized, we approve SCE's proposal to offer L1 charging to school locations, but limit the rebate SCE offers to schools to include only the make-ready infrastructure. This means, if a school elects to own the charging infrastructure under the site-host ownership option, SCE shall offer a rebate for L1 charging that only includes the make-ready infrastructure. Given the potential network capability issues, it is not appropriate for the rebate to include maintenance and network fees for L1 charging.

As for the proposal to offer DCFC, TURN opposes offering fast charging at schools where the targeted users are parked for multiple hours.[283] TURN proposes that a maximum of 3 DCFCs per utility should be sufficient to collect data and will limit the amount of ratepayer investment at the heightened risk of being stranded.[284] TURN explains that a "make-ready" approach helps to mitigate some of the risks inherent with DCFCs as the financial obligation for replacing or upgrading the DCFC should be incurred by the site-host.[285] In its reply brief, SDG&E addresses TURN's arguments against DCFC, explaining the utility is committed to ensuring that DCFCs are well used.[286] Cal Advocates has concerns that including DCFCs at long-dwell locations can cause congestion, queueing issues, and low utilization rates.[287] Cal Advocates recommends the Commission require the applicants to determine site criteria for DCFCs with consultation from their respective PAC and file a Tier 2 advice letter with its

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[283] TURN Opening Brief at 15.

[284] TURN Opening Brief at 15 to 16.

[285] TURN Opening Brief at 15.

[286] SDG&E Reply Brief at 9.

[287] Cal Advocates Reply Brief at 7.

proposed site criteria.[288] ChargePoint supports the inclusion of DCFCs, and believes customers should be offered a selection from qualified products and services irrespective of whether the customer or the utility will own the charging station.[289]

Understanding that DCFCs may not work for each of the proposed pilots, we are interested in seeing if these fast chargers are utilized by visitors and/or employees of schools or parks/beaches. Moreover, we would like to see DCFCs installed in more remote places, though we are cognizant of the costs associated with the high-powered infrastructure. For AB 1083 pilots, we approve the inclusion of DCFCs so long as the sponsoring utility files a single Tier 1 advice letter with the Commission's Energy Division prior to installation to confirm the utilities decision to install DCFC. At a minimum, the advice letter is required to include: (1) a signed from of the site-host(s) requesting and /or approving DCFC; (2) the site-design options presented to the site-host(s); and (3) the reasons the utility recommended DCFC at the particular site(s). For AB 1082 pilots, we approve the installation of DCFCs at community colleges, universities, or other post-secondary educational institutions, as opposed to elementary or high school locations. Because community colleges, universities, or other post-secondary educational institutions can serve full-time and part-time students, the ability to charge quickly may alleviate queuing and/or congestion concerns. Moreover, DCFCs at community colleges, universities, or other post-secondary educational institutions may promote EV adoption amongst students and faculty who are regularly commuting to-and-from community college classes. Similar to the

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[288] Cal Advocates Reply Brief at 7.

[289] ChargePoint Opening Brief at 5.

advice letter filing for the AB 1083 pilots, prior to installation the sponsoring utility must file a single Tier 1 advice letter with the Commission's Energy Division to confirm the utilities decision to install DCFC for the AB 1082 pilots. At a minimum, the advice letter is required to include: (1) a signed from of the site-host(s) requesting and /or approving DCFC; (2) the site-design options presented to the site-host(s); and (3) the reasons the utility recommended DCFC at the particular site(s).

7.3.4. Minimum Pilot-Wide Installation Requirements

The utilities each estimate the number of ports they can install within their respective proposed budgets. Cal Advocates recommends the Commission impose a minimum installation requirement for each pilot to ensure the IOUs maximize ratepayer benefits, while minimizing costs to ratepayers.[290] SCE recommends the Commission reject Cal Advocates' recommendation to adopt program-wide installation requirements, explaining that imposing strict port-deployment quotas as performance accountability measures will create unnecessary operational constraints that could limit the success of the pilots.[291]

As highlighted by Cal Advocates, pilot-wide installation requirements would result in a minimum of 952 installed charging ports, which would expand the number of locations EVs can charge, helping reduce range anxiety, a major barrier to EV adoption.[292] While, we understand SCE's concern of "unnecessary operational constraints" Cal Advocates asserts that the untested nature of EVSE

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[290] Cal Advocates Opening Brief at 10 to 11; Cal Advocates Opening Comments at 3.

[291] SCE Reply Brief at 12.

[292] Cal Advocates Opening Comments at 3; Cal Advocates Opening Brief at 10.

installations at schools, parks, and beaches creates uncertainty in the number of installations possible per pilot budget.[293]

At this time, setting minimum pilot-wide port targets would be arbitrary, given the different estimates and ranges provided by each utility. For example, PG&E's EV Charge Schools pilot estimates a range of port installations, while SCE's AB 1082 Pilot estimates the proposed budget would be able to achieve a maximum of 250 ports. Moreover, since filing of the utilities' AB 1082 and AB 1083 applications in July 2018, the utilities' 2016 Light-Duty Infrastructure programs have identified barriers resulting in fewer port installations within the approved program budgets than what was initially proposed.[294]

However, we agree with Cal Advocates position that the AB 1082/1083 pilots should have a mechanism to ensure the pilots' benefits are maximized. At this time, we direct the utilities to file a Tier 2 advice letter within 6 months of the date of adoption of today's decision that at a minimum: (1) identifies the number of sites the utility performed a site-assessment; (2) identifies the costs to install the charging infrastructure at the sites where the utility performed a site-assessment; (3) includes the number of outstanding site-assessments the utility needs to perform; and (4) a revised pilot-wide port forecast based on the utility's performed site-assessments. Each utility is requested to update their Tier 2 advice letter filing by the end of the first-year of pilot implementation.

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[293] Cal Advocates Opening Brief at 9 to 10.

[294] PG&E's EVCN Q1 2019 Report shows that of the approved 7,500 ports, PG&E has a commitment to install 3,312 ports; SCE's Charge Ready Q1 2019 Report shows 1,321 ports have been in committed against approval for up to 1,500 ports; and SDG&E's PYD Semi-Annual 2019 Report shows 3,040 out of the approved 3,500 ports have been committed.

In the interest of minimizing costs and maximizing overall benefits, we encourage the utilities to install at least 2 ports per site to ensure more than one person can utilize charging at a particular location.

7.4. Disadvantaged Communities

AB 1082 and AB 1083 include the directive that the utilities prioritize pilots in disadvantaged communities.[295] The legislation clarifies that "disadvantaged communities" means communities identified by the California Environmental Protection Agency pursuant to the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act.[296] For AB 1082 pilots, PG&E proposes a 35 percent DAC target, SDG&E proposes a 25 percent minimum target, and SCE states they will "prioritize" schools located in or near DACS.[297] We address the utilities' different DAC targets, whether or not these targets should be aspirational or binding, and what qualifies as a "disadvantaged community" below.

Cal Advocates recommend that the Commission adopts binding DAC and low-income goals to ensure that these underserved communities will benefit from the AB 1082 and AB 1083 pilots.[298] Cal Advocates explains that without binding requirements, the utilities' pilots could potentially disregard the requirements in AB 1082 and AB 1083 if they faced challenges installing in DAC and low-income sites.[299] Similarly, TURN recommends the utilities prioritize

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[295] § 740.13(h) and § 740.14(e).

[296] § 740.13(h) and § 740.14(e).

[297] SCE Opening Brief at 5.

[298] Cal Advocates Opening Brief at 3 to 4.

[299] Cal Advocates Opening Brief at 3 to 4.

DACs where residents suffer the most harmful effects of criteria pollutant emissions.[300] For AB 1082 pilots, TURN recommends the utilities commit to installing 35 percent of charging ports in DACs.[301] For AB 1083 pilots, TURN recommends the utilities be required to reserve at least 20 percent of the pilot funding for DACs/low-income sites until the beginning for the second year of pilot implementation.[302]

Given the legislative directive that the utilities prioritize these pilots in DACs, we want these pilots to serve underserved communities where residents suffer the most harmful effects of pollutant emissions. In an effort to encourage the utilities to place these infrastructure programs in DACs, we direct PG&E, SCE and SDG&E to focus 40 percent of their AB 1082 pilots in DACs.[303] These targets are based on the number of sites (*i.e.,* to meet a 40 percent goal means that four out of ten locations must be in DACs).[304] Installing EV charging infrastructure in communities that suffer the most air pollutants will improve air quality in areas where it is needed most. For the AB 1083 pilots, we set a DAC target of 25 percent if the number of selected sites for PG&E and SCE, and maintain SDG&E's proposal to site 50 percent of its combined deployment goal (state parks and beaches, and city and county parks) with in DACs. Although a combined target, we adopt SDG&E's proposal that 100 percent of the city and county parks locations be in DACs. Directing PG&E, SCE and SDG&E to build

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[300] TURN Opening Brief at 12.

[301] TURN Opening Brief at 8.

[302] TURN Opening Brief at 8.

[303] We omit Liberty from this requirement because Liberty does not have educational institutions in a DAC within its service territory.

[304] SDG&E Opening Comments at 6.

charging infrastructure at state parks/beaches in DACs will help eliminate pollutant emissions from internal combustion vehicles that frequent parks and beaches.

These targets are binding during the first year of program implementation. However, at the beginning of the second year of program implementation each of the utilities may request to focus charging infrastructure associated with the AB 1082 and AB 1083 pilots outside of DACs if not enough DAC sites are able to participate in the pilots. To request a focus outside of DACs utilities may file a Tier 2 advice letter at the end of the first-year of program implementation that at a minimum addresses their DAC target progress, including (1) how many sites in DACs have signed-up for the pilots, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

Another issue to discuss is what qualifies as a DAC for these pilots. While the legislation clarifies that "disadvantaged communities" means communities identified by CalEPA pursuant to the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act, SDG&E requests it be allowed to use its service territory definition to define what qualifies as a DAC for its pilot programs. TURN requests DACs be defined consistently for all three utilities using the CalEnviroScreen tool to identify the top 25 percent most impacted communities statewide.[305] The CalEnviroScreen 3.0 tool identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution and other economic and environmental factors.[306] TURN notes the CalEnviroScreen or statewide

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[305] TURN Opening Comments at 8.

[306] TURN Opening Comments at 8, footnote 16.

methodology is consistent with the DAC definition adopted for SCE, PG&E and SDG&E's medium and heavy-duty EV infrastructure programs.[307] TURN notes that EV subsidy programs targeted to DACs administered by other state agencies utilize the statewide definition.[308]

In comments, SDG&E explains that applying the statewide definition reduces the number of eligible DAC census tracts in SDG&E's service territory from 172 to 37, 5 percent of SDG&E's service territory.[309] By applying the statewide DAC definition, SDG&E explains that only 53 potentially eligible schools and 8 city parks are located in the 37 eligible DACs census tracts.[310] SDG&E explains that no state parks or beaches are captured by the statewide DAC definition.[311] SDG&E opines that the statewide definition could hinder the deployment of its pilots and could exclude underserved communities that could benefit from the pilots under SDG&E's service territory definition.[312]

In addition to authorizing it to use its service territory definition, SDG&E requests that parks that are open to the public and located on tribal lands be eligible to participate in the AB 1083 pilots.[313] SDG&E requests the Commission allow for an advice letter filing process similar to the one set-up for DCFCs for the AB 1083 pilots.[314] SDG&E notes they will consult their Program Advisory

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[307] TURN Opening Comments at 8, referencing D.19-08-026 at 40.

[308] TURN Opening Comments at 8.

[309] SDG&E Opening Comments at 7.

[310] SDG&E Opening Comments at 7.

[311] SDG&E Opening Comments at 7.

[312] SDG&E Opening Comments at 7.

[313] SDG&E Opening Comments at 10.

[314] SDG&E Opening Comments at 10.

Council to establish the topics to be addressed in the advice letter to Energy Division.[315]

Although we understand SDG&E's concerns regarding the limitations of a state-wide DAC definition, we believe a consistent DAC definition across all the utilities is in line with the goal of targeting populations most impacted by air pollutants. Accordingly, SDG&E's AB 1082 Pilot is required to target DACs that are in the top 25 percent of the most impacted communities statewide. This is consistent with the methodology the other utilities are required to use for their respective AB 1082 pilot programs. However, if this requirement prevents SDG&E from achieving its 40 percent DAC target for its AB 1082 pilot, SDG&E may request to identify DACs under its service territory definition. SDG&E may file a Tier 2 advice letter with the Commission's Energy Division within the first year of pilot implementation to request this waiver. We request SDG&E include what barriers (i.e. cost, available sites) the utility faced if requesting to use its service territory definition for its AB 1082 Pilot.

However, for the AB 1083 Pilot, we agree with SDG&E that applying the statewide definition may hinder the utility from reaching its 50 percent DAC target, as only one State Park is captured under the statewide definition. We therefore authorize SDG&E to define eligible DAC locations for its AB 1083 pilot utilizing the top quartile of its service territory rather than the statewide methodology. The finding that SDG&E is permitted to use its service territory-specific definition to identify DACs is unique to these programs, which are pilots that target specific sectors. In our most recent transportation electrification decision, D.19-08-026 (SDG&E's MD/HD decision) we found the

[315] SDG&E Opening Comments at 11.

service territory-specific definition of DAC inappropriate for SDG&E. The reason we depart from that definition here is merely because the segments we are electrifying in the AB 1082 and AB 1083 applications are narrow and high priority. As such, we do not wish to be overly restrictive for these pilot programs. However, we emphasize that this exception is being made for SDG&E's Schools and Parks pilots only. Because the DAC targets are binding during the first year of program implementation, we expect SDG&E to be able to meet its prescribed targets given the flexibility to use its service territory definition.

In an effort to capture the unique make-up of each of the utility's service territory, and allow for the equitable treatment of tribal lands, PG&E, SCE, SDG&E and Liberty are authorized to include trial lands/communities as potential sites for both the AB 1082 and AB 1083 pilot programs. Prior to deploying EVSE in tribal communities, PG&E, SCE, SDG&E and Liberty are directed to work with their respective PACs and file a Tier 1 advice letter with the Commission's Energy Division that at a minimum addresses: (1) how many tribal communities are interested in participating in the AB 1082/1083 pilots; and (2) how many chargers will be deployed in tribal communities for the AB 1082/1083 pilots.

8. Rate Impacts and Cost Allocation Methodology

The chart below depicts the average monthly rate impacts of these pilot programs for non-CARE customers with a 500 kWh per month demand.

Utility	Percent Change	Monthly Bill Impact
PG&E	0.02%	$0.02
SCE	0.03%	$0.03

SDG&E	0.09%	$0.13
Liberty	1.10%	

The Legislature included criteria for recovery of costs for the proposed pilots: (1) the costs to be recovered are consistent with a cost limitation approved by the Commission for the pilot program; (2) the pilot program seeks to minimize overall costs and maximize overall benefits; (3) the pilot program does not unfairly compete with nonutility enterprises as required under § 740.3; (4) the pilot program includes performance accountability measures for the electrical corporation or, for charging equipment installed and maintained by a nonutility enterprise, performance accountability measures for the nonutility enterprise; and (5) the pilot program is in the interests of ratepayers, as defined in § 740.8. Although the proposed pilots are of limited-duration and budgets, we will use the above list of cost recovery criteria when reviewing the utilities' cost recovery filings.

On the issue of how these costs should be recovered by the utilities, PG&E, SCE and SDG&E propose recovering costs through electric customers distribution rates. Liberty's testimony remains silent on this issue. Given the limited-duration of these pilots and relatively small budget, it is reasonable to adopt the utilities' request to recover costs associated with their respective AB 1082 and AB 1083 pilots through electric customers' distribution rates. While this recovery methodology may be appropriate in this instance, larger-scaled versions of these pilots may require a different cost recovery methodology.

The following chart illustrates each of the utilities' approved pilot programs' total authorized budgets and the resulting minimum charge ports.

	# of Charge Ports		# of Sites		Approved Budgets[316]	
UTILITY	**AB 1082 Pilot**	**AB 1083 Pilot**	**AB 1082 Pilot**	**AB 1083 Pilot**	**AB 1082 Pilot**	**AB 1083 Pilot**
PG&E	88-132 L2	40 L2, 3 DCFC	22 Schools	15 parks/ beaches	$5.76	$5.54
SCE	Up to 250 L1/L2	120 L2, 10 DCFC, 15 mobile	40 K-12 Schools	27 parks/ beaches	$9.89	$9.89
SDG&E	184 L2, 12 DCFC	120 L2, 20 DCFC	30 Educational institutions	22 state, city and county parks	$9.9	$8.83
Liberty	28 L2, 2 DCFC	5 L2	17 K-12 Schools, community college, Bus Barn	3 parks/ beaches	$3.903	$0.783

9. Data Gathering Requirements

The Commission will review the results of the AB 1082 and AB 1083 pilots along with information collected from the utilities' already approved transportation electrification infrastructure programs to determine the effectiveness of utility investments in transportation electrification. To facilitate this evaluation, we adopt the same data collection and reporting requirements that D.18-01-024 required for the priority review projects to ensure standardization in reporting.

Given the unique characteristics of siting EV charging infrastructure at schools, parties recommended the utilities conduct program surveys on the school faculty and students to better understand the impact EV chargers have at

[316] Total costs are in "millions".

highly visible locations. In opening comments, TURN suggests the utilities' surveys should measure the success of faculty, parents, and student EV adoption through questions to measure (1) did the installation of EV charging at the school/educational facility impact the decision to purchase or lease an EV, (2) how many mile a day does the EV owner drive, and (3) how often is the schools charging infrastructure used by the driver.[317] We agree with TURN's recommendations to have the utilities conduct surveys to measure the impact EV infrastructure at AB 1082 pilot sites has on accelerating EV adoption. In addition to the data collection and reporting requirements required in D.18-01-024, the utilities are required to perform a survey at each AB 1082 participating site to measure the programs' impact of accelerating EV adoption. To ensure consistency between utility surveys, we ask PG&E, SCE, SDG&E and Liberty to collaborate and design one survey to be utilized by all four utilities. A Tier 2 advice letter illustrating the survey design and questions should be submitted to the Commission's Energy Division within 90 days from the date of adoption of today's decision.

Each utility is required to submit an annual report and a final report for each of their approved projects, and serve this to the service list for this proceeding. The reports should use the report template and data collection template available on the CPUC website (http://www.cpuc.ca.gov/sb350te/) under the "reporting requirements" section of this page.

The templates include:

- A final report template in Microsoft Word format that includes report headings and descriptions of the information that should

[317] TURN Opening Comments at 9.

be included in the report. This reporting information is common across all projects. Additional, project specific information is included as an appendix to this template.

A data reporting template in Microsoft Excel that has several tabs for the utilities to report various quantitative data. The first tab of the file contains instructions on how to complete the files. As requested, the data collection template will be updated to account for the fact that customer-owned EVSE sites may have less available data. Each utility should complete this file and submit it in Excel format along with its annual and final reports.

10. Evaluation

Pub. Util. Code §740.12(c) requires the Commission to review data concerning the current and future electric transportation adoption and charging infrastructure utilization prior to authorizing an electrical corporation to collect new program costs related to transportation in customer rates. The evaluation process should, at a minimum investigate and identify the following:

1. Whether the utilities' AB 1082 and AB 1083 pilots meet the stated purposes of the legislation.
2. Whether the utilities' AB 1082 and AB 1083 pilots meet the stated purposes of accelerating widespread transportation electrification, reducing dependence on petroleum, meet air quality standard, achieve the goals of the Charge Ahead California Initiative, and reduce greenhouse gas emissions.
3. Whether the AB 1082 and AB 1083 pilots maximize benefits and minimize costs.
4. Learning from analysis of data collected during program implementation including:
    a. Infrastructure utilization data;
    b. Number of incremental electric vehicles adopted;

c. Actual costs associated with the electrification of school fleets and park fleets;

d. Actual costs associated with the electrification of various sectors;

e. Actual emissions reductions associated with AB 1082 and AB 1083 pilots; and

f. Quantifiable impact assessment on grid impacts associated with the AB 1082 and AB 1083 pilots.

D.18-01-024, D.18-05-040, and D.18-09-034 directed the utilities to collectively fund a budget equal to four percent of their total approved project budgets from all ratepayers, to conduct an RFP to hire an evaluator that will review the results of the priority review projects approved in those decisions. The decisions further directed PG&E, SDG&E, and SCE to coordinate evaluation efforts with PacifiCorp, Liberty, and Golden State Water Company (Bear Valley Electric Service Division) to capture economies of scale for purposes of evaluating the utilities' initial transportation electrification programs under SB 350.

In this decision, we direct PG&E, SCE, SDG&E and Liberty to contribute four percent of their total approved pilot budgets to support this evaluation effort, which should build-off of and expand upon the evaluation effort already underway for the transportation electrification programs approved in D.18-01-024, D.18-05-040, and D.18-09-034. The cost of this evaluation is incremental to the pilot budgets approved in this decision. PG&E, SCE, SDG&E and Liberty should work to ensure any lessons learned in their respective transportation electrification programs are incorporated in the AB 1082 and AB 1083 implementation plans.

As directed in D.18-09-034, the PG&E, SCE, SDG&E and Liberty must submit a joint Tier 1 advice letter to the Commission's Energy Division providing a status update on implementation of and data available from the pilots authorized in this decision within two years of the date of this decision. Based on the progress of the projects at that time, the Commission will determine whether one evaluation can capture all of the approved projects' results or whether separate evaluations will be needed due to timing or other differences in the data available from the pilots.

11. Safety Considerations

The Commission's focus on ensuring utilities provide safe and reliable service is an overarching focus in the emerging transportation electrification industry. § 740.8 defines the "interests" of ratepayers to mean: direct benefits that are specific to ratepayers consistent with safer, more reliable or less costly gas or electrical service consistent with § 451. The ACR directed that the AB 1082 and AB 1083 applications include a plan to ensure worker, customer, and driver safety. Additionally, the ACR directed that this safety plan be based on the draft safety checklist developed for the SB 350 standard review and priority review transportation electrification projects and contain any additional safety requirements specific to the proposed pilots. Safety and Enforcement Division (SED) staff issued a data request to better understand how the utilities are addressing these objectives. Based on the responses, SED staff developed a draft Safety Requirements Checklist for the TE programs, available on www.cpuc.ca.gov/sb350te under the "SB 350 TE Reporting Requirements" section of this page.

The Safety Requirements Checklist is intended to consolidate current standards and requirements in one place and to ensure the utility infrastructure

is installed and operated safely and does not adversely affect reliability of electrical service.

No later than 18 months after today's decision is approved, the sponsoring utility for each project must file a Tier 1 advice letter with the Commission's Energy Division describing their compliance efforts. The advice letter must contain an attestation of compliance with these requirements, signed by the Project Manager. Each utility should file a final safety attestation, using the same template developed for the priority and standard review projects, along with their final report for each of the AB 1082 and AB 1083 pilots.

The Commission will review utility compliance with the Safety Requirements Checklist and may conduct inspections or audits to confirm compliance. The sponsoring utility must have all compliance documentation available should the Commission determine an inspection or audit is necessary.

12. Outstanding Procedural Matters

The Commission affirms all rulings made by the assigned Commissioner and the Assigned Administrative Law Judge. All motions not previously ruled on are deemed denied.

13. Categorization and Need for Hearing

In Resolution ALJ 176-3421, the Commission preliminarily categorized this proceeding as ratesetting and preliminarily determined that hearings were necessary. The December 19, 2018 Scoping Ruling confirmed the categorization as ratesetting and determined that hearings were not necessary.

14. Comments on Proposed Decision

The proposed decision of Administrative Law Judge Sasha Goldberg in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3. Opening comments

were filed on October 24, 2019 by PG&E, SCE, SDG&E, Liberty, Cal Advocates, TURN, NRDC, Joint Parties, and ChargePoint. Reply comments were filed on October 29, 2019 by PG&E, SCE, SDG&E, Cal Advocates, Joint Parties, ChargePoint, and Tesla.

In general parties provided comments in support of the decision. Clarifying edits have been made throughout the proposed decision to improve clarity.

Tesla and the Joint Parties raised concerns over the proposed decision's failure to acknowledge and weigh comments and positions of all parties to this proceeding. While not every party's brief is explicitly cited to in this decision, every party to this proceeding provided substantial contribution to the outcome. The Commission acknowledges and appreciates the work of the broad stakeholder participation in this proceeding.

15. Assignment of Proceeding

Clifford Rechtschaffen is the assigned Commissioner and Sasha Goldberg is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. The January 24, 2018 ACR in R.13-11-007 provided specific guidelines to the utilities as they developed proposals pursuant to AB 1082 and AB 1083.

2. "DACs" means communities identified by the California Environmental Protection Agency pursuant to the Greenhouse Gas Reduction Funding Investment Plan and Communities Revitalization Act (Chapter 4.1 (commencing with Section 39710) of Part 2 of Division 26 of the Health and Safety Code).

3. Under the EV Charge Schools pilot, PG&E will install L2 chargers at 22 campuses of public schools, likely targeting installations in Alameda, Fresno and San Joaquin counties.

4. A school ownership option with a rebate could reduce the financial hurdles of installing EVSE and increase the uptake of EV chargers at education facilities.

5. Under the EV Charge Parks pilot, PG&E plans to install four L2 charging ports and lay conduit and build additional electric capacity to facilitate easier installation for up to 10 L2 charging ports in the future.

6. PG&E's EV Charge Schools and EV Charge Parks pilots costs are within the range set by the January 24, 2018 ACR.

7. Under the AB 1082 Pilot, SCE plans to install make-ready infrastructure at approximately 40 K-12 school facilities and provide approximately 250 L1 and L2 charging ports for light-duty EVs.

8. SCE anticipates nearly 6,000 schools will be eligible to participate in the AB 1082 Pilot.

9. Under the AB 1083 Pilot, SCE plans to install 120 L2 charging ports and 10 DCFC ports at 27 park locations.

10. SCE's AB 1082 Pilot and AB 1083 Pilot costs are within the range set by the January 24, 2018 ACR.

11. SDG&E plans to install 184 L2 charging stations and 12 DCFCs at 30 schools and educational institutions for its School Pilot.

12. SDG&E plans to provide 74 light duty public chargers and infrastructure at 12 state parks and beaches, and 66 light duty public chargers at 10 DAC-located city and county park sites for its Parks Pilot.

13. SDG&E has only one state park in its service territory located in a DAC.

14. Providing charging infrastructure at city and county parks will increase access to charging in DACs, and encourage EV adoption amongst residents.

15. Positioning 47 percent of the SDG&E Parks Pilot infrastructure at sites within DACs ensures ratepayers are funding charging infrastructure that will serve residents of the most heavily polluted areas in SDG&E's service territory.

16. By providing both utility- and site-host options to prospective schools, SDG&E still maintains the ability to offer a turn-key solution to charging, in addition to supporting schools that wish to own the charging stations.

17. SDG&E's School and Parks Pilot costs are within the range set by the January 24, 2018 ACR, inclusive of the four percent additional cost for third party evaluations.

18. Liberty plans to install 56 L2 charging ports and 2 DCFCs located at 17 school facilities in Liberty's service territory.

19. As proposed, the AB 1082 Pilot will result in charging stations installed at every school in Liberty's service territory.

20. Liberty proposes a two-year AB 1083 Pilot to provide charging infrastructure for fleet vehicles, park staff and visitors.

21. Liberty's AB 1082 Pilot and AB 1083 Pilot costs are within the range set by the January 24, 2018 ACR.

22. As structured in the pilot applications, the utility-ownership option offers more value to customers than the rebate option because the rebate does not cover all costs. This creates a financial incentive for participants to choose utility ownership.

23. Given the limited duration of these pilots, in addition to the evolving technology for electric vehicle charging infrastructure, the utilities should be allowed to utilize pre-qualified suppliers and EVSE in other light-duty transportation electrification programs.

24. SB 454 requirements at more remote charging locations, such as state parks and beaches, should encourage customers to drive electric vehicles to such destinations.

25. Offering L1 charging supports the goals of AB 1082 in that it will facilitate the installation of EVSE at schools, is less costly, and allows testing whether L1 charging is utilized more than L2 or DCFC in schools. L1 charging can also have lower impacts on the grid than L2 charging, but this depends entirely on the number of total chargers installed and the use of the load management solutions.

26. It is reasonable to authorize the installation of DCFCs at community colleges, universities, or other post-secondary educational institutions, as opposed to elementary or high school locations because community colleges, universities, or other post-secondary educational institutions can serve full-time and part-time students, the ability to charge quickly may alleviate queuing and/or congestion concerns.

27. DCFCs at community colleges, universities, or other post-secondary educational institutions may promote EV adoption amongst students and faculty who are regularly commuting to-and-from community college classes.

28. Prioritizing DAC locations for both the AB 1082 and AB 1083 pilots is reasonable.

29. It is reasonable to allow parks that are open to the public and located on tribal lands to participate in the AB 1082 and AB 1083 pilots.

30. It is reasonable to allocate costs through distribution rates because the pilots are limited in duration and have relatively small budgets. Larger-scaled versions of these pilots may require different cost recovery methodology.

31. It is reasonable to require the utilities to report on their progress towards meeting their respective forecasted port-installation goals, and modify their forecasts as necessary.

32. It is reasonable to require PG&E, SCE and SDG&E to consult with their respective program advisory councils to design their respective site-host ownership rebate amount.

Conclusions of Law

1. PG&E's EV Charge Schools and EV Charge Parks should be approved pursuant to AB 1082 and AB 1083.

2. SCE's AB 1082 Pilot and AB 1083 Pilot should be approved pursuant to AB 1082 and AB 1083.

3. SDG&E's AB 1082 and AB 1083 Pilot should be approved pursuant to Section 7.1 of this decision, and AB 1082 and AB 1083.

4. SDG&E's combined deployment goal (state parks and beaches, and city and county parks) of 50 percent of site installations to take place in DACs is reasonable pursuant to AB 1083.

5. SDG&E should use its statewide definition to define what qualifies as a DAC for its AB 1082 pilot program.

6. SDG&E should use its service-territory definition to define what qualifies as a DAC for its AB 1083 pilot program.

7. Liberty Utilities' AB 1082 Pilot and AB 1083 Pilot should be approved pursuant to AB 1082 and AB 1083.

8. SDG&E should be authorized to file an advice letter with the Commission's Energy Division to reallocate funds for potential EVSE rebates and potentially reallocate the number of EVSE it can support under both a utility-and site-host ownership model.

9. Building charging infrastructure in DACs is reasonable pursuant to AB 1082 and AB 1083.

10. Whether utilities meet their DAC goals are calculated as a percentage of sites installed within a DAC (*i.e.,* a 40 percent DAC goal requires 40 percent of the pilot sites to be within DACs).

11. In prohibiting the Department of Parks and Recreation from being required to incur costs related to the installation, use, or maintenance of the charging stations, AB 1083 does not require utility ownership of the charging stations.

12. Parks that are open to the public and located on tribal lands should be eligible to participate in the AB 1082 pilots and AB 1083 pilots.

13. PG&E, SCE and SDG&E should offer participants choosing site-host ownership a rebate that ensures an equal playing field for non-utility enterprises, including the cost of the charger, maintenance, and network fees.

14. PG&E, SCE, and SDG&E should work with their respective program advisory councils to design their respective site-host ownership rebate amount.

15. The AB 1082 and AB 1083 pilots should be implemented consistent with state law, including SB 454 and any regulations that may be adopted by CARB to implement SB 454.

16. To promote competition and innovation within these pilots, and to reduce the risk of stranded assets, qualifying EVSEs should be equipped to utilize open access standards for communication of data between the EVSE and the back-end network.

17. Offering L1 charging for the AB 1082 Pilot is reasonable.

18. Any qualifying EVSEs should have open access standards for communication of data between the EVSE and the back-end network.

19. To ensure ratepayers are funding charging infrastructure that will be utilized, we approve SCE's proposal to offer L1 charging to school locations.

20. Given the limited duration of these pilots, in addition to the evolving technology for electric vehicle charging infrastructure, the utilities should be allowed to utilize pre-qualified suppliers and EVSE in other light-duty transportation electrification programs.

21. To promote competition and innovation within these pilots, and to reduce the risk of stranded assets, qualifying EVSEs should actively utilize open access standards for communication of data between the EVSE and the back-end network.

22. To minimize costs and maximize overall benefits, the utilities should install at least 2 ports per site to ensure more than one person can utilize charging at a particular location.

23. To encourage the utilities to place these infrastructure programs in DACs, PG&E, SCE and SDG&E should focus 40 percent of their AB 1082 ports in DACs, with the ability to request to reallocate funds for DACs after the first year of the pilots.

24. While cost recovery through distribution rates should be adopted for these limited-duration and relatively small-budget pilots, larger-scaled versions of these pilots may require different cost recovery methodology.

25. The AB 1082 and AB 1083 pilots should have a mechanism to ensure the pilots' benefits are maximized.

26. The utilities should conduct surveys to capture the impact EV infrastructure at AB 1082 pilot sites has on accelerating EV adoption.

27. All motions not previously ruled on should be deemed denied.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company's electric vehicle (EV) Charge Schools and EV Charge Parks pilots are approved with the modifications outlined in Section 7.

2. Pacific Gas and Electric Company may file a Tier 1 Advice Letter at the end of two years of pilot deployment to extend both the electric vehicle (EV) Charge Schools and EV Charge Parks sign-up period to utilize any remaining funds authorized by this decision.

3. Pacific Gas and Electric Company (PG&E) must target 40 percent of the selected sites for the electric vehicle (EV) Charge Schools pilot in disadvantaged communities (DACs). At the end of one year of pilot deployment, PG&E may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address PG&E's progress toward meeting the 40 percent DAC target, including (1) how many sites in DACs have signed-up to participate in EV Charge Schools, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

4. Pacific Gas and Electric Company (PG&E) must target 25 percent of the EV Charge Parks sites in disadvantaged communities (DACs). At the end of one year of pilot deployment, PG&E may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address PG&E's progress toward meeting the 25 percent DAC target, including (1) how many sites in DACs have signed-up to participate in EV Charge Parks, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

5. Prior to implementation, Pacific Gas and Electric Company shall file a Tier 2 Advice Letter with the Commission's Energy Division to establish two one-way balancing subaccounts to record the authorized revenue requirement and incremental implementation costs associated with the electric vehicle (EV) Charge Schools and EV Charge Parks pilots until both pilots are fully implemented and the remaining and ongoing costs can be submitted as part of the base margin in revenue requirement in a future General Rate Case, which will be recovered from electric customers through distribution rates. PG&E shall establish the subaccounts in the existing Transportation Electrification Balancing Account, approved in Advice Letter 5222-E.

6. Southern California Edison Company's Assembly Bill (AB) 1082 and AB 1083 pilots are approved with the modifications outlined in Section 7.

7. Southern California Edison Company (SCE) must target 40 percent of the Assembly Bill (AB) 1082 Pilot sites in disadvantaged communities (DACs). At the end of one year of pilot deployment, SCE may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address SCE's progress toward meeting the 40 percent DAC target, including (1) how many sites in DACs have signed-up to participate in the AB 1082 Pilot, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

8. Southern California Edison Company (SCE) must target 25 percent of the Assembly Bill (AB) 1083 Pilot sites in disadvantaged communities (DACs). At the end of one year of pilot deployment, SCE may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address SCE's progress toward meeting the 25 percent DAC target, including (1) how many sites that serve DACs have signed-up to participate in

the AB 1083 Pilot, (2) what efforts have been made to work with sites that serve DACs, and (3) how many sites are interested but do not serve a DAC.

9. Prior to implementation, Southern California Edison Company (SCE) shall file a Tier 2 Advice Letter with the Commission's Energy Division to establish two one-way balancing subaccounts in the Charge Ready Program Balancing Account to record the revenue requirements associated with incremental implementation costs associated with the Assembly Bill (AB) 1082 Pilot and AB 1083 Pilot until both pilots are fully implemented and the remaining and ongoing costs can be submitted as part of the base margin in revenue requirement in a future General Rate Case, which will be recovered from electric customers through distribution rates. SCE shall establish the subaccounts in the existing Charge Ready Program Balancing Account approved in Advice Letter 3920-E.

10. Southern California Edison Company (SCE) shall transfer the revenue requirement recorded in subaccounts authorized in Ordering Paragraph 9 to the distribution sub-account of the Base Revenue Requirement Balancing Account at the end of each year of the Assembly Bill (AB) 1082 Pilot and AB 1083 Pilot. SCE is authorized to recover costs for these pilot programs from electric customers' distribution rates.

11. San Diego Gas & Electric Company's Assembly Bill (AB) 1082 and AB 1083 pilots are approved with the modifications outlined in Section 7.

12. San Diego Gas & Electric Company (SDG&E) must target 40 percent of the School Pilot in locations that serve disadvantaged communities (DACs). At the end of one year of pilot deployment, SDG&E may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address SDG&E's progress toward meeting the 40 percent DAC target,

including (1) how many sites in DACs have signed-up to participate in the School Pilot, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

13. San Diego Gas & Electric Company (SDG&E) must apply the statewide definition, as defined by the California Environmental Protection Agency's CalEnviroscreen 3.0 tool to identify which top quartile of communities on a statewide basis qualify as disadvantaged communities for its School Pilot. Within the first year of pilot implementation, SDG&E may request to use its service territory definition to identify disadvantaged communities by filing a Tier 2 Advice Letter with the Commission's Energy Division. SDG&E must include what barriers it faced in reaching disadvantaged communities under the statewide definition in the advice letter filing.

14. San Diego Gas & Electric Company (SDG&E) must target 50 percent of the Parks Pilot in locations that serve disadvantaged communities (DACs). At the end of one year of pilot deployment, SDG&E may file a Tier 2 Advice Letter (AL) with the Commission's Energy Division to reallocate funds for DACs. The AL must address SDG&E's progress toward meeting the 50 percent DAC target, including (1) how many sites in DACs have signed-up to participate in the Parks Pilot, (2) what efforts have been made to work with sites in DACs, and (3) how many sites are interested but are not in a DAC.

15. San Diego Gas & Electric Company is authorized to apply its service territory definition to identify which top quartile of communities in its service territory qualify as disadvantaged for its Parks Pilot.

16. Pursuant to Section 7.1 of this decision, San Diego Gas & Electric Company may include city and county parks located in disadvantaged communities as eligible locations for its Parks Pilot.

17. Prior to implementation, San Diego Gas & Electric Company (SDG&E) shall file a Tier 2 Advice Letter with the Commission's Energy Division to establish a one-way balancing account Light-Duty Balancing Account with two subaccounts to record the authorized revenue requirement and incremental implementation costs associated with the Schools Pilot and Parks Pilot until both pilots are fully implemented and the remaining and ongoing costs can be submitted as part of the base margin in revenue requirement in a future General Rate Case, which will be recovered from electric customers through distribution rates.

18. Consistent with Section 7.2.1, San Diego Gas and Electric Company (SDG&E) shall file a Tier 3 Advice Letter with the Commission's Energy Division within 60 days of the date of adoption of this decision to reflect programmatic changes for the approved Assembly Bill 1082 pilot program.

19. Liberty Utilities' Assembly Bill (AB) 1082 and AB 1083 pilots are approved with the modifications outlined in Section 7.

20. Prior to implementation, Liberty Utilities shall file a Tier 2 Advice Letter with the Commission's Energy Division to establish the Transportation Electrification Balancing Account (TEBA) to record the costs of both the Assembly Bill (AB) 1082 Pilot and AB 1083 Pilot. Liberty shall track each pilot's incremental costs separately in the TEBA.

21. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company and Liberty Utilities (*collectively*, the IOUs) shall work with their respective Program Advisory Councils (PACs) to deploy Assembly Bill (AB) 1082and AB 1083 pilots in tribal communities. Prior to implementation, the IOUs shall file a Tier 1 Advice Letter with the Commission's Energy Division that at a minimum address: (1) how many tribal communities

are interested in participating in the pilots; and (2) how many chargers will be deployed in tribal communities in the pilots.

22. The approved Assembly Bill (AB) 1082 and AB 1083 pilots in this decision must be implemented consistent with state law, including Senate Bill (SB) 454, and any regulations that may be adopted by the California Air Resources Board to implement SB 454.

23. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Liberty Utilities are authorized to spend up to the pilot budgets proposed in their respective Assembly Bill (AB) 1082 and AB 1083 applications, provided they demonstrate: (1) the costs to be recovered are consistent with the cost limitation approved in Section 8 of this decision for the pilot program; (2) the respective utility installed the minimum port requirements set in Section 7.3.4.

24. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Liberty Utilities (*collectively,* the IOUs) shall file a Tier 2 Advice Letter with the Commission's Energy Division within six months of the date of adoption of this decision, that at a minimum:
(1) identifies the number of sites the utility performed a site-assessment;
(2) identifies the costs to install the charging infrastructure at the sites where the utility performed a site-assessment; (3) includes the number of outstanding site-assessments the utility needs to perform; and (4) a revised pilot-wide port forecast based on the utility's performed site-assessments. The IOUs must update their respective Tier 2 advice letter filing by the end of the first year of pilot implementation.

25. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Liberty Utilities shall recover approved

costs for their respective Assembly Bill (AB) 1082 and AB 1083 pilots through electric customers' distribution rates.

26. Prior to implementation, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company (*collectively*, the IOUs) shall file a Tier 3 Advice Letter (AL) with the Commission's Energy Division to set their respective site-host ownership rebate amount. At a minimum the AL should include: (1) costs for the electric vehicle service equipment (EVSE) and the associated maintenance and network fees; (2) terms for how the rebate will be issued, including the frequency of the reoccurring payment; (3) how the costs will be tracked; (4) how the rebate will be distributed; and (5) feasibility of scaling this rebate system for a larger program. The IOUs must consult with their respective Program Advisory Councils to design their respective site-host ownership rebate amount.

27. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company (*collectively,* the IOUs) are authorized to include direct current fast chargers (DCFC) for their respective Assembly Bill (AB) 1083 pilots. Prior to installation, the sponsoring IOU shall file a Tier 1 Advice Letter with the Commission's Energy Division to confirm the IOU's decision to install DCFC. At a minimum the advice letter must include: (1) a signed for from the site-host(s) requesting and/or approving DCFC; (2) site-design options presented to the site-host(s); and (3) reasons the utility recommended DCFC at the particular site(s).

28. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Liberty Utilities (collectively, the IOUs) are authorized to include direct current fast chargers (DCFC) for their respective Assembly Bill (AB) 1082 pilots. Prior to installation, the sponsoring IOU shall file a Tier 1 Advice Letter with the

Commission's Energy Division to confirm the IOU's decision to install DCFC. At a minimum the advice letter must include: (1) a signed for from the site-host(s) requesting and/or approving DCFC; (2) site-design options presented to the site-host(s); and (3) reasons the utility recommended DCFC at the particular site(s).

29. No later than eighteen months after the first pilot installation, the sponsoring utility for the respective Assembly Bill (AB) 1082 and AB 1083 pilots must file a Tier 1 Advice Letter (AL) with the Commission's Energy Division describing their compliance efforts with the Safety Requirements Checklist in Section 11 of this decision. The AL must contain an attestation of compliance with the Safety Requirements Checklist, signed by the Project Manager. Each utility must file a final safety attestation, using the same template developed for the priority and standard review projects in Application 17-01-020, et al.

30. No later than two years after the date of adoption of this decision Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Liberty Utilities must submit a joint Tier 1 Advice Letter to the Commission's Energy Division providing a status update on implementation of and data available from the pilots authorized in this decision.

31. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company and Liberty Utilities (collectively, the IOUs) must collaborate and design a survey to measure electric vehicle adoption at participating sites for the approved Assembly Bill 1082 pilot programs. The IOUs must file a Tier 2 Advice Letter with the Commission's Energy Division including the survey questions within three months from the date of adoption of this decision.

32. All motions not previously ruled on in this proceeding are deemed denied.
33. Applications 18-07-020, 18-07-022, 18-07-023, and 18-07-025 are closed.

This order is effective today.

Dated _____, at San Francisco, California.