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Ratesetting

TO PARTIES OF RECORD IN APPLICATION 18-01-012:

This is the proposed decision of Administrative Law Judges Kelly A. Hymes and Sasha Goldberg. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's August 15, 2019 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

The Commission may hold a Ratesetting Deliberative Meeting to consider this item in closed session in advance of the Business Meeting at which the item will be heard. In such event, notice of the Ratesetting Deliberative Meeting will appear in the Daily Calendar, which is posted on the Commission's website. If a Ratesetting Deliberative Meeting is scheduled, *ex parte* communications are prohibited pursuant to Rule 8.2(c)(4)(B).

/s/ MICHELLE COOKE for
Anne E. Simon
Chief Administrative Law Judge

AES:gp2
Attachment

Decision **PROPOSED DECISION OF ALJS HYMES AND GOLDBERG**
(Mailed 7/16/2019)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of San Diego Gas &
Electric Company (U902E) For
Approval of Senate Bill 350
Transportation Electrification
Proposals Regarding Medium and
Heavy-Duty Electric Vehicles and a
Vehicle-To-Grid Pilot.

Application 18-01-012

DECISION APPROVING SETTLEMENT ON APPLICATION

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Appendix A – Settlement Agreement Regarding San Diego Gas & Electric Company’s Medium-Duty and Heavy-Duty Electric Vehicle to Grid Electric School Bus Pilot Application, A.18-01-012

Appendix B – Responses of San Diego Gas & Electric Company to Questions in Administrative Law Judges Ruling Noticing Prehearing Conference Regarding Medium/Heavy Duty Electric Vehicle Statement

Summary

Today's decision adopts with modifications the *Settlement Agreement Regarding San Diego Gas & Electric Company's Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Application*, A.18-01-012.

Application 18-01-012 is closed.

1. Procedural Background

Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act (Chapter 547, Statutes of 2015), established new clean energy, clean air, and greenhouse gas reduction goals for California for 2030 and beyond. Among other things, SB 350 requires the California Public Utilities Commission (Commission), in consultation with the California Air Resources Board (CARB) and the California Energy Commission (CEC), to direct the utilities under our regulatory oversight to undertake transportation electrification activities consistent with Public Utilities Code Sections (Pub. Util. Code §§) 237.5 and 740.12.¹

Decision (D.) 16-11-005 affirmed the direction to Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE) to file their first round of applications by January 20, 2017. The utilities met this obligation by filing Applications ((A.) 17-01-020, et al.) and supporting testimony for approval of proposed programs and investments to accelerate widespread transportation

¹ Unless otherwise stated, all code section references are to the Public Utilities Code.

electrification² (TE) on January 20, 2017.³ Within the A.17-01-020, et al. docket, PG&E, SCE and SDG&E proposed various pilot projects (priority review projects) and larger TE programs (standard review projects). While PG&E and SCE focused their standard review projects in the medium-duty/heavy-duty (MD/HD) sector, SDG&E focused its standard review project to serve residential customers, as a light-duty EV charging infrastructure program.⁴ The Commission issued two decisions in the A.17-01-020, et al. docket. In January 2018, the Commission issued D.18-01-024 authorizing 15 priority review (pilot) projects and in June 2018, it issued D.18-05-040 approving PG&E and SCE's MD/HD programs and SDG&E's residential charging program.

Prior to the Commission issuing D.18-05-040, SDG&E filed A.18-01-012, seeking authorization to establish and implement a MD/HD program for 3,100 Class 2 – Class 8 on-road electric vehicles and off-road support vehicles (MD/HD EV Charging Infrastructure Program or Program); the Application also includes a pilot program to advance vehicle to grid operations (V2G Pilot). The Application was supported by prepared testimony.

² Transportation Electrification is defined as: the use of electricity from external sources of electrical power, including the electrical grid, for all or part of vehicles, vessels, trains, boats, or other equipment that are mobile sources of air pollution and greenhouse gases and the related programs and charging and propulsion infrastructure investments to enable and encourage this use of electricity. (See D.18-05-040 at 7, reference Pub. Util. Code Section 237.5).

³ D.18-01-024 sets forth the extensive procedural background leading to these applications, which we do not reiterate here.

⁴ Since the time of filing this application, the Commission issued D.18-05-040, which approved SDG&E's \$137 million Residential Charging Program. After approval, SDG&E filed Advice Letter 3341-E to withdraw from implementing the program explaining that the Commission approved a drastically different program than originally proposed making it an unfeasible investment for SDG&E to carry out.

On March 15, 2018, a prehearing conference was held, and on March 30, 2018, a Scoping Memo and Ruling was issued defining the scope and setting the procedural schedule for A.18-01-012 moving forward.

In light of the Commission's findings in D.18-05-040 with respect to PG&E's and SCE's approved MD/HD programs, SDG&E initiated settlement discussions with other parties in the summer of 2018. One week after intervenors served testimony on A.18-01-012, counsel for SDG&E requested a one-month extension for parties to file rebuttal testimony.⁵ In response to a request for additional time "in hopes of reaching settlement on the disputed issues of material fact in this proceeding", the Administrative Law Judges (ALJs) issued a ruling on August 27, 2018 granting a two-week extension to file rebuttal testimony. On September 26, 2018, a subsequent ruling was issued suspending the procedural schedule and taking the evidentiary hearing off the calendar but requiring a status update on settlement discussions by October 26, 2018. A settlement conference was noticed pursuant to Commission Rules of Practice and Procedure, Rule 12.1(b) and held on October 8, 2018. Pursuant to the September 26, 2018 Ruling, SDG&E filed a Status Report on October 24, 2018 stating that a settlement had been reached among the following parties: SDG&E, Public Advocates Office at the California Public Utilities Commission, Natural Resources Defense Council, Environmental Defense Fund, Union of Concerned Scientists, Coalition of California Utility Employees, CALSTART, Small Business Utility Advocates, Electric Motor Werks, Inc., Siemens, ChargePoint, Chanje Energy, Center for Community Action and Environmental Justice, East Yard

⁵ See August 27, 2018 Email Ruling of ALJ Goldberg.

Communities for Environmental Justice, Plug In America and Sierra Club (*collectively*, the Settling Parties).⁶

On November 5, 2018, the Settling Parties filed a motion seeking approval of a *Settlement Agreement Regarding San Diego Gas & Electric Company's Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Pilot Application*, A.18-01-012 (Settlement) (Motion). The Settling Parties explained that “after evaluating intervenor testimony in light of D.18-05-040’s findings and conclusions with respect to PG&E’s and SCE’s MD/HD applications, SDG&E initiated settlement discussions. These discussions focused on program and budget modifications that would bring SDG&E’s MD/HD proposals in line with what was decided for PG&E and SCE.”⁷ The Settling Parties did not propose making significant modifications to the V2G pilot program.⁸

Opening comments on the Motion were filed on December 5, 2018 by The Utility Reform Network (TURN), the National Diversity Coalition (NDC), San Diego Airport Parking Company (SDAP), and Tesla. Reply comments on the Motion were filed on December 20, 2019 by the Settling Parties, Greenlots, NDC, and San Diego Airport Parking Company (SDAP).

The assigned ALJs convened a second prehearing conference on February 27, 2019, during which the assigned ALJs provided the Settling Parties an opportunity to present an overview of the Settlement. The ALJs also asked

⁶ The non-settling parties are the National Asian American Coalition and National Diversity Coalition; The Utility Reform Network, San Diego Airport Parking Company, Greenlots and Tesla.

⁷ Motion at 3.

⁸ Motion at 13.

questions to ensure their understanding of the Settlement and proposed budget. The Settlement requests a budget of \$107.4 million for the MD/HD program agreed upon, based on the budgets adopted for PG&E and SCE in D.18-05-040.⁹ When SDG&E first filed its application in January 2018, the utility requested a budget of \$150 million for the MD/HD program.¹⁰ SDG&E explained that with loaders and escalation costs, the Settlement program will cost \$154.8 million over five years, and result in an annual bill impact of about \$4.57 for a typical residential customer using 500 kWh per month in 2022.¹¹ The Settling Parties agree that SDG&E's budget for the V2G Pilot (\$1.7 million, including unloaded and un-escalated direct capital and operation and maintenance [O&M] costs) as proposed in the application, is appropriate.¹²

The Utility Consumers Action Network (UCAN), Small Business Utility Advocates (SBUA), Coalition of California Utility Employees (CUE), and Center for Community Action and Environmental Justice and East Yard Communities for Environmental Justice all motioned for party status and described their interests in participating in the instant proceeding. Given the unique perspective and planned participation these entities described in their motions for party status, all were granted party status in the instant proceeding.

⁹ SDG&E and the Settling Parties agreed to present their settlement budget in 2018 dollars. To do so, SDG&E de-escalated the costs used to derive the PG&E and SCE budgets in D.18-05-040, which had been presented by PG&E in A.17-01-022 in escalated 2016 dollars, and then escalated them to 2018 dollars using IHS/Market Global Insights 2nd Quarter 2017 Power Planner forecast.

¹⁰ A.18-01-012 at 7.

¹¹ See Appendix B for SDG&E's cost estimates provided at the March 27, 2019 prehearing conference (PHC).

¹² Motion at 14.

This proceeding was submitted on February 21, 2019 with the issuance of the ALJs' email ruling denying CUE's motion to strike portions of NDC's reply Comments on the proposed Settlement.

2. Overview of SDG&E's Application

SDG&E designed its Program and Pilot to support the goals of SB 350.¹³ Among other things, the Program and Pilot strive to accelerate TE, provide greenhouse gas (GHG) emissions reduction benefits, provide local emissions reduction benefits, encourage sales growth for EV manufacturers and electric vehicle service providers (EVSPs), and provide employment opportunities for those in the charging equipment installation and maintenance industry.¹⁴ SDG&E states that its proposed Program and Pilot could have a positive impact on disadvantaged communities (DACs) by supporting many of California's state environmental and clean vehicle adoption goals.¹⁵

2.1. Program Description

The Program SDG&E initially proposed in its January 2018 application would provide charging infrastructure to support Class 2 through Class 8 EVs and off-road vehicles such as forklifts¹⁶ and transport refrigeration units (TRUs)¹⁷ (*collectively referred to as Target Vehicles*). SDG&E proposed to install, maintain

¹³ Exhibit SDGE-2 at 2.

¹⁴ Exhibit SDGE-2 at 2.

¹⁵ Exhibit SDGE-2 at 2.

¹⁶ Participation for forklifts in the Program will be limited to certain innovative EV technologies and to customers who have not yet adopted electric forklifts in high quantities (*See*, Exhibit SDGE-2 at 7).

¹⁷ Exhibit SDGE-2 at 7: TRUs are defined as refrigerator systems that are powered by internal combustion engines inside the unit. They control the environment of temperature-sensitive products, such as food, that are transported in refrigerated trucks and trailers.

and own the infrastructure to support the electrification of 3,100 target vehicles.¹⁸ Put another way, SDG&E proposed to install, maintain and own the make-ready¹⁹ infrastructure in its Program, including the electric vehicle supply equipment (EVSE). SDG&E also proposed to offer participants the option to have the utility or the participant own the EVSE connected to the make-ready infrastructure.²⁰ Under the utility-ownership model, SDG&E would own and maintain the EVSE on behalf of the customer.²¹ Under the customer-ownership model, the customer would own the EVSE, but SDG&E would require electric vehicle service providers (EVSPs) to provide extended warranties or maintenance packages.²² Under both ownership scenarios, SDG&E would install the EVSE utilizing trained electricians who have Electric Vehicle Infrastructure Training Program (EVITP) certification.²³ SDG&E would require any work completed by non-utility personnel to be performed by contractors signatory to the International Brotherhood of Electrical Workers (IBEW) who hold a valid C-10 contractor's license.²⁴

SDG&E designed its Program to address a purported key barrier of electrification of the public sector: upfront capital costs of charging

¹⁸ Exhibit SDGE-2 at 3 to 4.

¹⁹ Make-Ready is defined as the service connection and supply infrastructure to support EV charging comprised of the electrical infrastructure from the distribution circuit to the stub of the EVSE. It can include equipment on the utility-side (*e.g.*, transformer) and customer-side (*e.g.*, electrical panel, conduit, wiring) of the meter. (See D.18-05-080 at 6.)

²⁰ Exhibit SDGE-2 at 4.

²¹ Exhibit SDGE-2 at 4.

²² Exhibit SDGE-2 at 4.

²³ Exhibit SDGE-2 at 10.

²⁴ Exhibit SDGE-2 at 10.

infrastructure.²⁵ SDG&E proposed to offer Program participants an allowance (rebate) to offset the cost of the EVSE.²⁶ SDG&E proposed conducting a request for proposals (RFP) and then set the allowance amount using a median cost approach based on actual RFP data.²⁷ The allowance amounts would be based on the costs submitted through the RFP for networked EVSEs²⁸ that are qualified and contracted for the Program and support Target Vehicles' power needs. SDG&E proposed to offer a rebate amount that reflects the median cost for each vehicle class, as illustrated in Table 1 below.^{29, 30}

Table 1

Vehicle Weight Class	Power Requirement (kilowatt / kW)	Illustrative Allowance for Networked EVSE
Class 2 – 3	10 kW	\$1,000
Class 4 – 5	20 kW	\$1,800
Class 6	50 kW	\$35,000
Class 7 – 8	100 kW	\$45,000
On-Route Chargers	350kW	\$200,000

²⁵ Exhibit SDGE-2 at 7 and footnote 4.

²⁶ Exhibit SDGE-2 at 4.

²⁷ Exhibit SDGE-2 at 5.

²⁸ A networked EVSE is connected to the Internet via a cable or wireless technology and can communicate with the computer system of a charging network. Being connected to a network lets station owners or site hosts manage who can access stations and how much it costs drivers to charge. An EVSE network typically manages a group of networked EVSE and uses its communication capabilities to monitor and share real-time station status information and usage data, as well as to control access and facilitate payment. EVSE networks may also provide vehicle-grid integration (VGI) services to electrical utilities, as well as customized services to site hosts or station owners.

²⁹ Exhibit SDGE-2 at 4.

³⁰ Exhibit SDGE-2, Table 2.

Forklift or TRU	Various	\$2,000
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As proposed, Program participants would be responsible for EVSE costs over the allowance amount.³¹ SDG&E testified that adjustments may be made to the median cost, but such flexibility is meant to account for various options and features among EVSEs.³²

SDG&E proposed the percentage of EVSE costs covered by the allowance be based on vehicle type, year of Program sign-up³³, and whether the vehicle is located in, or travels through a DAC.³⁴ SDG&E proposed that the allowance amount be decreased over time to incentivize early adopters of the Program.³⁵ The decreased allowance amount is represented in the table below:

Table 2³⁶

	Allowance Percentage for Cost of EVSE
Year 1 (non-DAC)	100%
Year 2 (non-DAC)	90%
Year 3 (non-DAC)	80%
Year 4 (non-DAC)	70%
Year 5 (non-DAC)	60%
DAC	100% regardless of year
Transit and School Bus	100% regardless of year

³¹ Exhibit SDGE-2 at 3.

³² Exhibit SDGE-2 at 5.

³³ The Program is a multiyear program, with the sign-up period lasting up to five years once the Program opens for participant sign-up. Some installations may occur after the sign-up period has ended. (See Exhibit SDGE-2 at 12.)

³⁴ Exhibit SDGE-2 at 5.

³⁵ Exhibit SDGE-2 at 5 to 6.

³⁶ Exhibit SDGE-2, Table 3.

Forklift or TRU	\$2,000 regardless of year ³⁷
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SDG&E planned the allowance amounts to not only encourage early adopters to the Program, but also to provide greater support in DACs.³⁸ Because DACs are most impacted by local air pollution, SDG&E proposed to provide greater support in DACs by maintaining a 100 percent allowance in all years of Program sign-up in order to help reduce GHG and other local emissions from MD/HD vehicles.³⁹ SDG&E proposed allowances for transit and school buses remain at 100 percent throughout the duration of the Program because they provide public service to local communities and those who may not have alternative access to transportation.⁴⁰

Another aspect of SDG&E's Program is working with local transit agencies to support their conversion to electric buses. SDG&E believes transit buses⁴¹ are ripe for conversion based on commitments made by Antelope Valley Transit Authority Foothill Transit and Los Angeles Metropolitan Transit Authority to completely electrify their fleets by 2030.⁴² The Program would also include on-route high powered chargers to support electric transit buses.⁴³ On-route chargers can operate at approximately 350 kW to 500 kW, and would be installed

³⁷ Exhibit SDGE-2 at 6: the forklift and TRU allowance is set towards the lower end of the charger costs for this segment.

³⁸ Exhibit SDGE-2 at 6.

³⁹ Exhibit SDGE-2 at 6.

⁴⁰ Exhibit SDGE-2 at 6.

⁴¹ "Transit buses" are defined broadly to include buses that are operated by transit agencies but also buses operated by other organizations including universities, airports and tourist locations (see Exhibit SDGE-2 at 8).

⁴² Exhibit SDGE-2 at 8.

⁴³ Exhibit SDGE-2 at 12.

at transit hubs where bus routes intersect with other forms of public transportation.⁴⁴ On-route chargers can charge buses at a given location quickly, to support continual operation throughout the day.⁴⁵

SDG&E identified a number of partnerships it has pursued to help accelerate the electrification of buses in its service territory.⁴⁶ One potential participant is the Otay Mesa Chamber of Commerce, to support the electrification of MD/HD vehicles through the Otay Mesa East Port of Entry (POE), a border crossing between California and Mexico.⁴⁷ SDG&E suggests that its proximity to an international border may help reduce transportation emissions associated with interstate commerce.⁴⁸ SDG&E plans to work with Program participants to leverage non-ratepayer funds, including grants and incentive programs to ensure the upfront capital needs associated with MD/HD vehicle electrification aren't cost-prohibitive.⁴⁹

2.2. Pilot Description

Along with the Program, SDG&E requested authority to install, maintain and own charging infrastructure associated with the electrification of 10 school buses capable of V2G as distributed energy resources (DER) to bid into the California Independent System Operator (CAISO) markets.⁵⁰ SDG&E testified

⁴⁴ Exhibit SDGE-2 at 12.

⁴⁵ Exhibit SDGE-2 at 12.

⁴⁶ SDG&E lists the North County Transit District, San Diego Metropolitan Transit System, San Diego International Airport, Balboa Park, the San Diego Zoo, Living Coast Discovery Center, United Parcel Service, Amazon, and Caltrans as some of the entities its had discussions with regarding Program participation (*see* Exhibit SDGE-2 at 12 to 13).

⁴⁷ Exhibit SDGE-2 at 13.

⁴⁸ Exhibit SDGE-2 at 13.

⁴⁹ Exhibit SDGE-2 at 14.

⁵⁰ Exhibit SDGE-3 at 3.

that the Pilot would help the utility understand how it can utilize EVs as a DER to improve SDG&E's load factor, reduce GHG emissions, and reduce local air pollution.⁵¹ The Pilot would be the first to employ V2G enabled school buses to participate in the CAISO energy market utilizing 25 kW (discharging) V2G bi-directional chargers.⁵²

SDG&E planned to provide \$450,000 to help the Pilot (school district) participant fund the purchase of electric school buses.⁵³ SDG&E categorizes the \$450,000 as an O&M expense.⁵⁴ SDG&E stated it would give preference to sites located in a DAC to implement the Pilot.⁵⁵ SDG&E additionally proposed a \$100,000 stipend toward the cost of electricity during the Pilot's one-year duration.⁵⁶ SDG&E categorizes the \$100,000 as an O&M expense.⁵⁷ Similar to the Program, all construction, installation and maintenance will be completed by contractors with EVITP certification and any work completed by non-SDG&E employees will be performed by contractors that are signatories to the IBEW and who hold a valid C-10 contractor's license.⁵⁸

2.2.1. Background on V2G

V2G is the process of discharging energy from an EV battery to the electric distribution grid.⁵⁹ SDG&E testified that typically the EV battery is discharged

⁵¹ Exhibit SDGE-3 at 2.

⁵² Exhibit SDGE-3 at 2.

⁵³ Exhibit SDGE-3 at 3.

⁵⁴ A.18-01-012 at 8.

⁵⁵ Exhibit SDGE-3 at 3.

⁵⁶ Exhibit SDGE-3 at 3.

⁵⁷ A.18-01-012 at 8.

⁵⁸ Exhibit SDGE-3 at 7 to 8.

⁵⁹ Exhibit SDGE-3 at 3.

during normal vehicle driving, however, the battery can also be discharged back onto the distribution grid.⁶⁰ While the EV is stationary, the battery can be charged from the electrical grid as well as discharged to the grid to provide system level grid services.⁶¹ The Pilot will use an alternating current (AC) to direct current (DC) on-board converter to charge the buses as well as a DC to AC off-board inverter to discharge the buses to the grid.⁶² V2G can allow for greater utilization of an asset (electric bus) for the asset owner (Pilot participant / school district) and can provide a revenue stream from the CAISO markets.⁶³ SDG&E sees a future where V2G provides system-level services⁶⁴ to the grid at a larger scale, with the adoption of more and more EVs in the MD/HD and light-duty sectors.⁶⁵

In testimony, SDG&E suggested the Pilot would absorb solar generation in the early afternoon hours, and help offset the steep demand ramp that occurs in the evening hours.⁶⁶ Because of the predictable schedules of bus routes, SDG&E claims school buses are an ideal vehicle to explore solutions to such scenarios.⁶⁷ SDG&E testified that widespread V2G may help reduce the need to use more

⁶⁰ Exhibit SDGE-3 at 3.

⁶¹ Exhibit SDGE-3 at 3.

⁶² Exhibit SDGE-3 at 5 to 7.

⁶³ Exhibit SDGE-3 at 3.

⁶⁴ System-level grid services can include frequency regulation, load leveling, deferral of distribution capacity upgrades, voltage support, and improved integration of renewable energy.

⁶⁵ Exhibit SDGE-3 at 3.

⁶⁶ Exhibit SDGE-3 at 4.

⁶⁷ Exhibit SDGE-3 at 4

costly solutions such as the installation of new powerplants and reserve power infrastructure capable of rapid discharging to the grid.⁶⁸

2.3. Proposed Cost Recovery

SDG&E requested authority to establish a one-way balancing account to record the authorized revenue requirement and incremental implementation costs associated with the Program and Pilot.⁶⁹ SDG&E requested to spend \$150.6 million in direct Program costs and \$1.7 million in direct Pilot costs.⁷⁰ SDG&E proposed to record revenue and costs associated with the Program and Pilot in balancing accounts until both programs are fully implemented and the remaining and ongoing costs can be submitted as part of the base margin revenue requirement in a future General Rate Case (GRC).⁷¹ SDG&E proposed to record revenues associated with the authorized revenue requirement as well as capital-related costs (*i.e.*, depreciation, taxes and return) and operating and maintenance costs in the above referenced one-way balancing account.⁷² SDG&E proposed to recover all Program and Pilot costs from electric customers through distribution rates.⁷³

3. Overview of Protests and Responses

SDG&E's application sparked interest amongst a diverse group of stakeholders ranging from environmental organization to auto manufacturers.

⁶⁸ Exhibit SDGE-3 at 4.

⁶⁹ A.18-01-012 at 8.

⁷⁰ Exhibit SDGE-2 at 3, Exhibit SDGE-3 at 2.

⁷¹ A.18-01-012 at 8.

⁷² A.18-01-012 at 8 to 9.

⁷³ A.18-01-012 at 9.

Protests were filed by the National Diversity Coalition/National Asian American Coalition (NDC), the Public Advocate's Office of the Public Utilities Commission (Cal Advocates),⁷⁴ and The Utility Reform Network (TURN). Responses to the application were filed by ChargePoint, Inc. (ChargePoint), Environmental Defense Fund (EDF), Natural Resources Defense Council (NRDC), CALSTART, and Tesla, Inc. (Tesla).

NDC raises concerns over certain elements of the proposed Program and Pilot in its Protest. NDC has significant concerns about the cost estimates for the Program. NDC explains the costs and size of the Program are high given the limited data available on how best to accelerate TE in the MD/HD market in addition to the variable costs associated with the manufacturing of MD/HD EVs.⁷⁵ NDC also takes issue with the lack of deployment targets for each vehicle class (*e.g.*, within the category of Class 2 – Class 8 commercial vehicles) out of the 3,100 MD/HD EVs SDG&E proposes to support with the Program's charging infrastructure.⁷⁶ NDC believes SDG&E's estimated EVSE subsidies⁷⁷ could not have been reasonably calculated given the varying costs in EVSE associated with each class of MD/HD EVs.⁷⁸ NDC believes the Program's 40 percent DAC target should be higher given the higher air pollution usually found in DACs.⁷⁹ Turning to the Pilot, NDC is concerned with the Pilot's size, calling into question

⁷⁴ SB 854 (Stats. 2018, ch. 51) amended Pub. Util. Code Section 309.5(a) so that the Office of Ratepayer Advocates is now named the Public Advocate's Office of the Public Utilities Commission. We will refer to this party as Cal Advocates.

⁷⁵ NDC Protest at 9 to 10.

⁷⁶ NDC Protest at 10.

⁷⁷ See Table 2.

⁷⁸ NDC Protest at 10 to 11.

⁷⁹ NDC Protest at 12.

how SDG&E arrived at the number (10) of electric school buses.⁸⁰ NDC believes it would be better to wait for lessons learned from current electric school bus programs⁸¹ prior to investing ratepayer funds into the Pilot. NDC does support SDG&E's proposal to position the Pilot in a DAC, expressing that DAC children and families will have greater exposure to EVs which can help overcome some of the barriers to EV adoption.⁸²

Similarly, Cal Advocates has concerns over the Program's goals, size and SDG&E's cost estimates. Cal Advocates highlights that although SDG&E estimates the Program would provide a lifetime net emissions reduction of 476,552 metric tons of carbon dioxide equivalent (CO₂e) greenhouse gas emissions, 327.9 metric tons of nitrogen oxides (NO_x), and 50.5 metric tons of fine particulate matter (PM_{2.5}), the installation of charging infrastructure does not directly contribute to emissions reductions.⁸³ Cal Advocates notes that perhaps the emissions reduction goals will be met by requiring that Program participants procure the EV prior to the installation of any charging infrastructure.⁸⁴ Cal Advocates questions the methodology SDG&E used to arrive at its estimate of 3,100 Target Vehicles. Cal Advocates protests that SDG&E does not describe in detail how the 3,100 Target Vehicle number was derived, other than suggesting that the program serve approximately 3 percent of the Class 2 to Class 8 vehicles that operate in its service territory.⁸⁵ Cal Advocates requests that

⁸⁰ NDC Protest at 6.

⁸¹ NDC Protest at 6, referencing priority review projects approved in D.18-01-024.

⁸² NDC Protest at 8.

⁸³ Cal Advocates Protest at 3.

⁸⁴ Cal Advocates Protest at 4.

⁸⁵ Cal Advocates Protest at 4.

SDG&E provide a quantitative analysis of the reasonableness of its proposed budget, which is \$220.8 million once escalators and loaders are added.⁸⁶ Cal Advocates questions whether utility ownership of the EVSE is necessary or provides benefits superior to that of the customer-ownership model.⁸⁷ Additionally, Cal Advocates questions whether utility ownership of the EVSE unfairly competes with the third party MD/HD EVSE market.⁸⁸ Turning to the Pilot, Cal Advocates suggests SDG&E does not provide sufficient information regarding the anticipated ratepayer benefits, reasonableness of costs, or potential impacts on the EVSE markets the Pilot will provide. Cal Advocates questions why it is reasonable for SDG&E ratepayers to subsidize the procurement of the 10 proposed EV buses to be used in the Pilot.⁸⁹

TURN protests the proposed Program and Pilot on the basis that SDG&E ratepayers are already making significant investments in TE in the light-duty sector.⁹⁰ TURN suggests SDG&E wait to see the results from its MD/HD priority review projects before investing in a large-scale MD/HD program.⁹¹ TURN additionally suggests stakeholders have sufficient time to review and analyze a final decision on SCE and PG&E's MD/HD TE programs in A.17-01-020, et al.⁹² TURN proposes separating the Program into two phases, or significantly scaling

⁸⁶ Cal Advocates Protest at 4.

⁸⁷ Cal Advocates Protest at 5.

⁸⁸ Cal Advocates Protest at 5.

⁸⁹ Cal Advocates Protest at 7 to 8.

⁹⁰ TURN Protest at 4: SDG&E is implementing a \$45 million light-duty charging infrastructure program (A.14-04-014) and recently had another approximately \$19 million in Priority Review TE projects approved, three of which target the non-light duty sector.

⁹¹ TURN Protest at 4.

⁹² TURN Protest at 8.

it back, to protect ratepayer investments.⁹³ TURN asserts, “given that PG&E’s service territory is substantially larger with significantly more commercial customers (around 540,000 vs. 150,000 for PG&E and SCE, respectively) SDG&E’s budget and/or vehicle count may be inflated.”⁹⁴

ChargePoint, an EVSE manufacturer and network service provider⁹⁵, largely supports the Program and Pilot in its Response, but questions certain programmatic design elements.⁹⁶ ChargePoint explains that a one-time RFP would limit customers’ access to new entrants, new equipment and new services in the rapidly evolving TE manufacturer space.⁹⁷ ChargePoint suggests that if the Commission adopts SDG&E’s proposals, it should order a vendor qualification process that either remains open to all eligible providers over the course of the program or that provides for entry/ updating at a reasonable pace with industry changes, such as every six months.⁹⁸ ChargePoint suggests that establishing standards for charging equipment connectors will ensure that ratepayer funded infrastructure will remain used and useful throughout the duration of the program, and beyond.⁹⁹ ChargePoint notes that the Pilot “is interesting” but does not necessarily align with the goals of SB 350 because it was

⁹³ TURN Protest at 8.

⁹⁴ TURN Protest at 9, citing 2015 figures for PG&E and 2016 for SDG&E.

⁹⁵ ChargePoint Response at 1: ChargePoint engineers, manufacturers, and sells a complete line of L2 and DCFC EVSE and serves as a network service provider

⁹⁶ ChargePoint Response at 3.

⁹⁷ ChargePoint Response at 4.

⁹⁸ ChargePoint Response at 4.

⁹⁹ ChargePoint Response at 4 to 5.

not designed to “stimulate competition and innovation,” or “enable consumer options in charging equipment services.”¹⁰⁰

EDF intends its Response to be considered alongside the joint Response of NRDC.¹⁰¹ EDF and NRDC support SDG&E’s proposed investment in the MD/HD sector, noting that the Program and Pilot will provide charging infrastructure for vehicle categories that are ripe for deployment, including electric buses.¹⁰² EDF and NRDC believe the SDG&E application, alongside the MD/HD programs approved for PG&E and SCE should provide lessons learned and lay a solid foundation for MD/HD market expansion.¹⁰³ NRDC cites many health risks associated with MD/HD vehicle exposure, including respiratory diseases, heart conditions, and heightened cancer risks.¹⁰⁴ Because of the risks associated with MD/HD vehicle emissions (diesel particulate matter, NO_x, and GHG emissions), NRDC and EDF feel SDG&E sized its Program appropriately, especially with the proposed 40 percent DAC target.¹⁰⁵ EDF strongly supports siting the Pilot in a DAC, and encourages that data collection from the Pilot go on longer than one year due to the nascency of V2G technology.¹⁰⁶

CALSTART and Tesla generally support SDG&E’s application. CALSTART is a nonprofit organization aiming to accelerate the

¹⁰⁰ ChargePoint Response at 7, citing §740.12(a)(1)(F).

¹⁰¹ Parties to NRDC’s joint Response include Plug In America, Sierra Club, Environmental Defense Fund, Union of Concerned Scientists, Greenlots, Siemens, Electric Motor Werks, Inc. and Chanje Energy.

¹⁰² NRDC Response at 7.

¹⁰³ NRDC Response at 7.

¹⁰⁴ NRDC Response at 8.

¹⁰⁵ NRDC Response at 8.

¹⁰⁶ EDF Response at 7.

commercialization of clean transportation technologies, and Tesla is a leading clean technology and EV manufacturer. CALSTART supports the electrification of the MD/HD sector highlighting that California's MD/HD EV market is ready for a major utility infrastructure investment.¹⁰⁷ CALSTART attributes this "readiness" to technological advancements in the battery industry, including electrification of Class 8 vehicles gaining market share faster than light-duty vehicles.¹⁰⁸ Tesla supports investments in the MD/HD EV charging infrastructure for all vehicle types because of the variety of MD/HD EVs available in the next several years in addition to strong commitments by other state agencies to increase investment in MD/HD EVs.¹⁰⁹ Contrary to ChargePoint's Response, Tesla supports SDG&E's proposal to not require a standard connector for the EVSE.¹¹⁰ Tesla explains it is premature to require a standard connector for MD/HD charging participants due to the emerging technology in MD/HD EVs.¹¹¹

4. Overview of the Settlement

The Settlement covers the Program and the Pilot. We summarize the revisions to the Program and Pilot as agreed to by the Settling Parties below.

The Settling Parties agree on the Pilot as proposed by SDG&E. The Pilot will use ten electric school buses capable of V2G as distributed energy resources to bid into the California Independent System Operator market. SDG&E will install, maintain, and own EVSE for the Pilot. SDG&E will continue to seek and

¹⁰⁷ CALSTART Response at 4.

¹⁰⁸ CALSTART Response at 4.

¹⁰⁹ Tesla Response at 2.

¹¹⁰ Tesla Response at 3.

¹¹¹ Tesla Response at 4.

leverage alternate sources of funding for the electric school buses. Data collection and reporting will include monitoring to ensure asset utilization and V2G operation, analysis of scaling and interaction with the California Independent System Operator, and discussion of barriers and possible solutions. Following guidance from its Program Advisory Council (see Section 4.3 for more information), SDG&E may submit a Tier 2 Advice Letter to make any necessary programmatic changes to the Pilot. The Settling Parties agree on a budget of \$1.7 million for the Pilot with program flexibility so that SDG&E may adjust funds across different budget lines during the Pilot's deployment. Cost recovery for the Pilot will occur through distribution rates and be allocated to customer classes on an equal cents per kWh basis.

The Settling Parties agree that the Program will provide charging infrastructure to support a range of Class 2 through Class 8 vehicles including off-road support vehicles such as forklifts and transport refrigeration units. The Program will provide rebates, up to 50 percent, for transit and school bus EVSE. As further described below, the Settling Parties agree to modify SDG&E's proposed program and eliminate the utility ownership option for the EVSE. Settling Parties also agree that costs for the Program will be recovered by allocating costs to each customer class on an equal cent per kilowatt hour basis. Relying on estimates adopted in Decision (D.) 18-05-040 (approving Pacific Gas & Electric Company's (PG&E) MD/HD application),¹¹² the Settling Parties agree

¹¹² The per site cost estimates used to determine the budget are based on PG&E's A.17-01-022, which escalated costs from 2016 dollars to future dollars with assumed implementation in each year from 2018-2022 of the five-year program. SDG&E's budget is equal to \$107.4 million in 2018 dollars. This was calculated by de-escalating PG&E's per site estimates to 2016 dollars, escalating to 2018 dollars, and applying to SDG&E's program size. (See Motion at Footnote No. 3.)

to reduce the Program's budget to \$107.4 million while increasing the Program's size to a maximum of 6,000 MD/HD electric vehicles. Furthermore, the Settling Parties agree that the funding, while authorized in its entirety, will become available for program implementation at two points in time. Further details of the Settlement with respect to the Program and its funding timeline are provided in sections 4.1 through 4.3.

4.1. Program Budget, Per Se Metrics, Budget Timeline and Cost Recovery

The Settling Parties agree to a budget of \$107.4 million (in 2018 dollars un-escalated and unloaded)¹¹³ for the Program, which the Settling Parties ask the Commission to approve in its entirety in a decision addressing the Settlement. Consistent with the per site costs approved in D.18-05-040, the budget will be used to support a deployment minimum of 3,000, with authorization up to 6,068, MD/HD electric vehicles and the following "*per se* reasonable metrics". The Settling Parties agree that if SDG&E achieves these metrics, then its spending up to the authorized budget will be deemed reasonable.¹¹⁴

- a minimum of 300 make-ready installations are fully contracted for after five years of program deployment and 3,000 additional vehicles are electrified that are directly attributable to the authorized program achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric;

¹¹³ Overhead loaders are used to allocated undistributed company overhead costs across capital projects and Operations and Management. Overhead costs are those activities and services that are associated with direct costs, such as payroll taxes and pension and benefits, or costs that cannot be economically direct-charged, such as administrative and general overheads. Cost escalation factors are used to reflect the effect of inflation on SDG&E's costs. (See Motion at Footnote No. 4.)

¹¹⁴ Motion at 5.

- a minimum of 10 percent of the infrastructure budget¹¹⁵ will serve transit and school buses;
- a maximum of 10 percent of the infrastructure budget will serve forklifts;
- a minimum of 30 percent of the infrastructure budget will result in installations in disadvantaged communities in SDG&E's territory, using SDG&E's service territory definition for disadvantaged communities;
- rebate levels (not to exceed 50 percent of the charger cost) for beach head sectors and customers in disadvantaged communities are established in consultation with SDG&E's Program Advisory Council; and
- a maximum of 10 percent of the budget is spent on program administration.

The Settling Parties also agree that the funds will become available for use by SDG&E in two tranches. The Settling Parties explain that, upon issuance of the decision, SDG&E would be authorized to utilize \$84 million (2018 dollars unloaded and escalated) and then the remaining \$23.4 million (2018 dollars unloaded and escalated) would be utilized by SDG&E upon approval of a Tier 2 advice letter indicating SDG&E's progress towards the following interim metrics:

- a minimum of 150 make-ready installations are fully contracted for and 1500 additional vehicles are expected to be electrified that are directly attributable to the authorized Program achieved by site hosts that have procured at least two electric vehicles or converted two diesel fueled vehicles to electric; and
- a minimum of 30 percent of the infrastructure budget is committed to installations in disadvantaged communities

¹¹⁵ The infrastructure budget equals \$63.9 million of the total \$107.4 million budget. The infrastructure budget portion of the initial \$84 million is \$50 million.

in SDG&E's territory, using SDG&E's service territory definition for disadvantaged communities.

The Settling Parties clarify that achieving the interim *per se* metrics will not be a prerequisite to filing an advice letter to request the second part of funding. Further, the Settling Parties agree that SDG&E will not file the Tier 2 advice letter until approximately \$33 million, or 66 percent of the program's infrastructure budget has been committed to projects.¹¹⁶

As with the Pilot, Settling Parties agree that costs for the Program will be recovered from ratepayers through distribution rates and allocated to customer classes on an equal cents per kWh basis.¹¹⁷ The Settling Parties agree that 15 percent of the approved education budget will be dedicated to educating small businesses on the benefits of transportation electrification.

4.2. Program Consistency with D.18-05-040 and Other Program Terms

The Settling Parties agree that SDG&E's originally proposed Program should be modified to align with several aspects of the make-ready programs approved in D.18-05-040. Accordingly, the Settling Parties agree that SDG&E will construct, own, operate, and maintain the make-ready infrastructure on the utility side of the meter in all instances and in some instances on the customer side of the meter. Consistent with ordering paragraph 39 of D.18-05-040, if a customer chooses ownership, the customer must manage and pay for the installation of the customer-side infrastructure and use state licensed labor for which the utility will provide a rebate of up to 80 percent of the installation costs, treating these costs as an expense for ratemaking purposes, and the customer

¹¹⁶ Budget numbers referenced here are in 2018 dollars unloaded and escalated. (See Settlement at Appendix B.

¹¹⁷ Motion at 8.

must commit to operate and maintain the facilities consistent with relevant national, state, and local electrical standards for their site.¹¹⁸ The Settling Parties agree that the rebate for customer-side infrastructure the customer installs shall be the lesser of (a) 80 percent of the customer's actual installation costs; or (b) 80 percent of the average utility direct cost for installing the customer-side make-ready infrastructure in the relevant sector.¹¹⁹ The Settling Parties agree that SDG&E will not own the EVSE or charging station.¹²⁰

As noted previously, the Settling Parties agree that a minimum of 30 percent of the infrastructure budget will be allocated to deploy infrastructure in disadvantaged communities. Consistent with D.18-05-050, Settling Parties agree that 50 percent of funds reserved for DAC rebates not committed to sites in DACs after the fourth year of the Program may be released if SDG&E has not achieved 60 percent of its target in disadvantaged communities and 80 percent of its target in non-disadvantaged communities. The Settling Parties clarify that "released" is defined as the rebates may be used in non-disadvantaged communities to accelerate MD/HD EV adoption.¹²¹

Settling Parties agree that the Program will have a five-year enrollment period, while design and construction may extend beyond the fifth year. Settling Parties further agree that participants will be required to submit a load management plan detailing a strategy for facilitating charging behavior to

¹¹⁸ Motion at 8.

¹¹⁹ Motion at 8 to 9.

¹²⁰ Motion at 9.

¹²¹ Motion at 11.

minimize grid impacts and recognize periods of high renewable generation. SDG&E will monitor customer load management plans.¹²²

Settling Parties agree that all construction, installation, and maintenance of EVSE chargers and EVSE make-ready infrastructure not performed by SDG&E employees shall be performed by contractors who are signatory to the International Brotherhood of Electrical Workers who hold a valid C-10 contractor's license and any electricians must have an Electric Vehicle Infrastructure Training Program certification.¹²³

With respect to rebates for transit and school bus EVSE, Settling Parties agree that rebates are limited to no more than 50 percent of the cost of the EVSE and no more than the cost the site host pays for the EVSE after accounting for any other funding sources used for EVSE procurement. Further, Settling Parties agree that rebates may be offered to participants located in a disadvantaged community, as defined in D.16-01-045 for SDG&E's territory so long as those participants are not on the Fortune 1000 list.¹²⁴

Consistent with D.18-05-040, the Settling Parties agree that SDG&E will collect data and annually report information on EV adoption.¹²⁵ Four percent of the total budget is allocated to fund a third-party evaluator, as was adopted in D.18-05-040.

¹²² See Ordering Paragraph 10.

¹²³ Motion at 10.

¹²⁴ Motion at 10.

¹²⁵ Motion at 12 to 13.

Lastly, the Settling Parties agreed that SDG&E would hold an EV rates workshop by the end of November 2018.¹²⁶ SDG&E will then develop a new rate option(s) within six months of final approval the Program.

4.3. Creation of a Program Advisory Council

The Settling Parties agree that SDG&E will leverage a broad and diverse stakeholder community (including local and state government representatives, representatives from the Commission's Energy Division, industry and labor representatives, ratepayer and environmental advocates, and representatives of DACs) through the development of a Program Advisory Council, which will participate in planning and implementing the Program. Members of this council representing DACs may be paid for participation. Other roles of the Council include providing guidance to SDG&E in setting rebate levels for transit and school bus EVSE, developing further requirements for eligibility, and making general programmatic changes as needed.¹²⁷ However, changes to the Program must be approved through a Tier 2 advice letter. Consistent with D.18-05-040, Settling Parties also agree that after two years of program implementation and consultation with the Council, SDG&E may file a Tier 3 advice letter requesting to adjust budgets or metrics used to determine *per se* reasonableness.

5. Overview of Protests to the Settlement

Greenlots, NDC, SDAP, Tesla and TURN filed protests to the Settlement focusing on the following issues: the scale of the Program, Program requirements, the union labor requirement in the Program, Program rebates for EVSE, the portion of the Program budget allocated to disadvantaged communities, customer ownership option in the Program, and EV rates. No

¹²⁶ SDG&E held its EV rates workshop on November 5, 2018, pursuant to the Settlement.

¹²⁷ Motion at 12.

party objected to Settlement terms related to the Pilot. A brief overview of the objections is provided below.

With respect to the size of the Program, TURN, SDAP, and NDC contend the Program is oversized relative to SDG&E's service territory and commercial customer base. All three parties point to initial testimony that they assert overestimated costs and inflated EV adoption modeling. TURN argues that a \$68.3 million budget with a 3,085 vehicle target is more appropriately sized for SDG&E's service territory. SDAP highlights that SDG&E's commercial customer class and overall customer base is significantly smaller than PG&E and SCE's, and that the Program should be sized to avoid overburdening ratepayers. NDC alleges that the 6,000 EV target could be anticompetitive because it could affect approximately 6.5 percent of the MD/HD market in SDG&E's territory.

SDAP and Greenlots support some additional specific program requirements not included in the Settlement. SDAP requests that the Commission establish a minimum power level for the make-ready equipment to ensure it can support higher-power EVSE for larger batteries in the MD/HD sector. Greenlots recommends the addition of the option for SDG&E to own and operate the EVSE in order to encourage broader customer participation and reduce the risk of equipment malfunction leading to stranded assets. TURN however contends that customers should be required to own and operate the infrastructure on their side of the meter if it is found to be the least-cost option.

With respect to the requirement that contractors installing make-ready infrastructure in the Program be IBEW signatories, Tesla and NDC both oppose this requirement. Tesla argues there is no factual or legal grounds for this requirement. NDC alleges inconsistency with the Safety Requirements Checklist adopted in D.18-05-040 and D.18-01-024.

On the subject of rebates, TURN opposes the possibility of providing rebates to Fortune 1,000 companies. Arguing that any Fortune 1,000 participants should pay at least 50 percent of the customer-side infrastructure cost and 100 percent of the EVSE cost, TURN recommends that rebates should only apply to the cost of the EVSE not the installation costs. Further TURN recommends that the Commission, not the Program Advisory Council, establish rebate amounts.

Turning to the matters related to disadvantaged communities, TURN and NDC protest the reduction in targets for disadvantaged communities. NDC argues the reduction from 40 percent to 30 percent of installation dollars “will likely reduce the overall deployment of infrastructure in disadvantaged communities.” NDC adds that a higher deployment target would align the program with incremental state funding available to buy electric transit and school buses. TURN also argues against releasing the uncommitted rebate funds in the fourth year of the Program and highlights that D.18-05-040 does not authorize providing rebates for any site other than those electrifying transit/school buses or located in disadvantaged communities. NDC also protests the DAC definition the Settling Parties agree to. The Settling parties agree to SDG&E’s service territory definition for DACs, as approved in Advice Letter (AL) 2876-E on March 31, 2016.¹²⁸ NDC recommends the Commission change the DAC definition for the Program and V2G Pilot to the statewide methodology to ensure ratepayer funds are appropriately focused in communities that are the most impacted by MD/HD emissions.

¹²⁸ This AL filing was authorized in D.16-01-045.

On matters regarding EV rates, SDAP argues that while SDG&E is designing a new commercial EV rate, the Commission should require the utility to offer an interim rate with lower demand charges to commercial and industrial customers who adopt transportation electrification immediately.¹²⁹

6. Standard of Review for Settlements

The Commission has long favored the settlement of disputes.¹³⁰ Article 12 of the Commission's Rules of Practice and Procedure generally concerns settlements. Pursuant to Rule 12.1(d), the Commission will not approve a settlement unless it is found to be reasonable in light of the whole record, consistent with law, and in the public interest. This standard applies to settlements that are both uncontested and contested. Where a settlement is contested, it will be subject to more scrutiny than an uncontested settlement. The proposed settlement at issue here is contested because it was not agreed to by all the parties and it was protested.

While our policy is to favor settlement of disputed issues, our standard of review for settlements is designed to ensure that settlements meet a minimum standard of reasonableness in light of the law and the record of the proceeding. A settlement can be unreasonable, and we will not be persuaded to approve unreasonable settlements simply because of a general policy favoring the approval of settlements. There are several characteristics that can render a settlement unreasonable. One such attribute is the presence of significant deviations from Commission findings, policies, and practices if those deviations that are not adequately explained and justified in the motion for the settlement's

¹²⁹ On July 3, 2019 SDG&E filed Application 19-07-xxx, SDG&E's Application for Approval of EV High Power Charging Rate.

¹³⁰ D.17-08-030 at 9.

adoption. Another such attribute is the lack of demonstration that the settlement fully and fairly considered the interests of all affected entities – both parties and non-party entities such as affected customers. We have no obligation to approve unreasonable settlements.

With this standard in mind, we turn to the contested settlement at issue here.

6.1. The Settlement is Reasonable in Light of the Whole Record

The Commission has a well-established policy of adopting settlements if they are fair and reasonable in light of the whole record.¹³¹ In D.00-09-034, the Commission held that the parties' evaluation of their respective litigation positions and the settlement agreement is reasonable because it represents the collective best efforts of the Settling Parties.

The Settlement dated November 5, 2018 represents the collective best efforts of the Settling Parties because they have agreed to modified Program provisions that are supported by the testimony and responsive pleadings filed in this proceeding. Although certain elements of the Program and Pilot have been modified by the Settling Parties, the core of the original proposals remains intact.

One of the modified provisions we focus on is SDG&E's concession to not own the EVSE associated with the Program. This programmatic change is important to highlight because many of the protests and intervenor testimony questioned the need for the utility to own both the make-ready and EVSE infrastructure associated with the Program.¹³² We agree that SDG&E's original proposal to give Program participants the option to have the utility own the EVSE lacked explanation as to why such an option was in the ratepayers'

¹³¹ Motion at 16; D.18-09-034 at 20.

¹³² Exhibit TURN-1 at 15.

interest.¹³³ Eliminating utility ownership of the EVSE is not only supported by intervenor testimony, it aligns with the make-ready infrastructure programs approved in D.18-05-040.

We find the size of the Program to be reasonable in light of the whole record. The Settling Parties agreed to a lower budget than SDG&E had first proposed, and set 3,000 EVs as a minimum number of additional EVs directly attributable to the Program.¹³⁴ The Settling Parties attest the settled vehicle mix and per site budget cost estimates should allow for the electrification of 6,000 EVs for the Program.¹³⁵ Given some of the parties' protests that the Program was too large and costly, the agreed upon lower budget and vehicle/site mix targets are reasonable given the Settling Parties' expectation for SDG&E to do more with less funding than originally requested.¹³⁶ While we understand TURN's protest about the Program being too expensive, we do base our findings on SDG&E's costs estimates. Moreover, the MD/HD market is in very early stages which has some inherent cost uncertainty. The Program's *per se* reasonable standard and metrics are consistent with the *per se* minimums and budgets the Commission established in D.18-05-040 while providing ratepayer protections and meeting the objectives of SB 350.¹³⁷

6.2. The Settlement is Consistent with the Law

We conclude the Settlement is consistent with the law. In the Motion, the Settling Parties assert that the terms of the Settlement are consistent with the

¹³³ Exhibit TURN-1 at 15.

¹³⁴ Settling Parties Joint Reply at 3.

¹³⁵ Settling Parties Joint Reply at 3.

¹³⁶ Settling Parties Joint Reply at 4.

¹³⁷ Settling Parties Joint Reply at 5.

provisions of the California Public Utilities Code, prior Commission decisions, and other applicable laws including California's climate change laws and policies.¹³⁸ The Settling Parties' assertions are described below along with a description of other parties' allegations that the Settlement is not consistent with law.

With respect to climate change laws, the Settling Parties point specifically to SB 350, Assembly Bill 32, and SB 32, all pertaining to greenhouse gas reduction goals for California. We find that approval of the Settlement, which will result in adoption of the Program and Pilot, should reduce greenhouse gas emissions in the MD/HD sector consistent with California climate change laws and policies.

Furthermore, the Settling Parties also assert that the Settlement is consistent with SB 100 and Executive Order (EO) B-55-18, both of which are focused on carbon neutrality and net negative emissions.¹³⁹ We agree with the Settling Parties that the Program as modified by the Settlement is consistent with SB 100¹⁴⁰ and EO B-55-18 through its rebates incentivizing customers to adopt electric trucks and buses.¹⁴¹

Lastly, the Settling Parties highlight that the Settlement "reflects an effort to make its terms consistent with those approved in D.18-05-040."¹⁴² In our review of the Settlement, there are several examples of modifications to the Program indicating that Settling Parties put forth an effort to align the Program

¹³⁸ Motion at 17.

¹³⁹ Motion at 18. EO B-55-18 calls for the elimination of carbon emissions in the state by 2045 and SB 100 requires the state's electricity to be emissions-free by 2045

¹⁴⁰ SB 100 was codified as Chapter 312, Statutes of 2018

¹⁴¹ See Motion at 18.

¹⁴² Motion at 18.

with D.18-05-040. Importantly, the Settling Parties agreed to adopt the following program components from D.18-05-040: *per se* reasonableness metrics, make-ready infrastructure specifics, release of rebates reserved for disadvantaged communities, and authorization to file a Tier 3 advice letter to request programmatic changes.¹⁴³ Another example of consistency with D.18-05-040 is that the budget agreed upon by the Settling Parties relies on site cost estimates adopted in D.18-05-040.¹⁴⁴ We find the Settlement is consistent with D.18-05-040.

In protest to the Settlement, TURN and Tesla argue that certain aspects of the Settlement are not consistent with applicable law. We address each of these contentions.

We begin with TURN's contention that the size of the Program in the Settlement is inconsistent with D.18-05-040. TURN argues that the Settling Parties present no evidence for why 6,000 vehicles is an appropriate size for SDG&E's territory. SDG&E originally proposed to electrify 3,085 vehicles. TURN claims that the number of vehicles in the Settlement proposal for SDG&E's Program is significantly larger than that of the programs approved in D.18-05-040 for PG&E and Southern California Edison Company when accounting for the size of SDG&E's territory. SDG&E's vehicle number range in the Settlement is 3,000 to 6,000.¹⁴⁵ D.18-05-040 approved PG&E's range of 6,500 to 12,812 vehicles and SCE's range of 8,490 to 16,991 vehicles.

In reviewing D.18-05-040, it appears that the determination of the number of vehicles in the MD/HD programs was not an exact science. In fact, in D.18-05-040, the Commission acknowledged that "the proposed programs do not

¹⁴³ Settlement at III.D, I, L, and M.

¹⁴⁴ Motion at 4. See also Settlement at III.A.a.

¹⁴⁵ Motion at 6.

include the normal level of detail that provides us comfort that an upfront reasonableness determination, for the scale of the programs proposed, is appropriate.”¹⁴⁶ Further, the Commission stated that budget calculations “assume a certain number of sites in each sector to reflect our sector priorities; however, we do not require the utility to adhere to this specific sector mix, we use it only for purposes of developing the adopted budget.”¹⁴⁷ Hence, while we agree that the SDG&E range for its number of vehicles may not be precise, we find that this does not conflict with D.18-05-040. .

Tesla argues against the requirement that construction and installation of EVSE make-ready infrastructure and installation of EVSE/chargers not performed by SDG&E employees shall be performed by contractors who are signatories of IBEW. Tesla maintains that the Settling Parties provide no rationale for this requirement, which conflicts with Rule 12.1(a). Tesla also asserts that this requirement represents a “significant deviation” from the established checklist adopted in D.18-01-024 and D.18-05-040. In response, the Settling Parties point to SDG&E’s justification for the IBEW language in its original testimony, whereby SDG&E contends technology advancements and utility programs should support well-paying local jobs.¹⁴⁸ The Settling Parties also underscore that the Safety Requirements Checklist is a minimum and not the maximum amount of safety that can be exercised.¹⁴⁹ We find that the IBEW language in the Safety Requirements Checklist does not conflict with the IBEW requirements included in the Settlement.

¹⁴⁶ D.18-05-040 at 101-102.

¹⁴⁷ D.18-05-040 at 102.

¹⁴⁸ Settling Parties Reply to Comments on Settlement at 15 and Footnote No. 42.

¹⁴⁹ *Id.* at 15.

TURN takes issue with the Settlement's language regarding Fortune 1000 companies who allow tenants or other users to utilize EVSEs on their premises.¹⁵⁰ TURN contends the language on this issue is vague and is a departure from the exemption that Fortune 1000 companies are not to receive ratepayer funded rebates, as was established in D.18-05-040.¹⁵¹ TURN's concern centers on ensuring residential ratepayers, including low-income ratepayers, are not subsidizing wealthy corporations' charging needs.¹⁵² TURN argues that there has not been any evidence to justify modification of the exemption from EVSE rebates for Fortune 1000 company sites located in disadvantaged communities.¹⁵³ In response, the Settling Parties explain that increased EV adoption is needed to support the market and encourage robust supply chains and therefore adopters of all sizes should be encouraged.¹⁵⁴ We find this language consistent with D.18-05-040 in that it continues to focus on *use* (emphasis added) by those not on the Fortune 1000 list. As noted by the Settling Parties, the Settlement Agreement limits EVSE rebates as it pertains to Fortune 1000 companies but recognizes that EV adoption must be encouraged by both large and small companies.

With respect to the release of 50 percent of the rebate funds reserved for DACs, TURN asserts that the proposal to allow these funds to be spent as rebates in any location is not consistent with D.18-05-040.¹⁵⁵ TURN argues that D.18-05-040 did not approve providing EVSE rebates to non-transit/school bus

¹⁵⁰ TURN Comments on Settlement at 11 to 12.

¹⁵¹ TURN Comments on Settlement at 11.

¹⁵² TURN Comments on Settlement at 11 to 12.

¹⁵³ TURN Comments on Settlement at 11.

¹⁵⁴ Settling Parties Joint Reply at 13.

¹⁵⁵ TURN Comments on Settlement at 14.

or non-DAC sites. TURN explains that this language refers to releasing these funds to the make-ready portion of the program. In our review of D.18-05-040, it is apparent that the decision allows that “any remaining funds that are unallocated after year 4 may be spent in any location...to...ensure that the environmental and public health benefits of electrifying the MD/HD sector are realized, which would also benefit residents of DACs.”¹⁵⁶ However, this language is specific to rebates toward the EVSE for sites supporting transit and school buses.¹⁵⁷ We agree with TURN, and find that the release of funds for DACs to serve any location does not fit within the policy objectives of SB 350, and does not aim to serve the public at large in the same ways DAC funding would. We therefore find it reasonable to require a modification to this term (Section III (I), Settlement). After 4 years, SDG&E should be authorized to spend any released funds reserved for DACs on locations for sites supporting transit and school buses, regardless of whether the transit and school bus sites are located in DACs. For more discussion on this modification please look to Section 6.4.

Turning to the Settlement’s DAC definition, the Settling Parties agree to identify what sites qualify as “disadvantaged” by utilizing the DAC definition approved in AL 2876-E.¹⁵⁸ AL 2876-E authorized SDG&E to use its service territory methodology as opposed to the statewide methodology to calculate the number of DACs in SDG&E’s service territory. NDC discusses the deficiencies of SDG&E’s service territory DAC definition in comments.¹⁵⁹ Under the service

¹⁵⁶ D.18-05-040 at 96.

¹⁵⁷ D.18-05-050 at 95.

¹⁵⁸ AL 2867-E was approved on March 31, 2016 by the Commission’s Energy Division.

¹⁵⁹ *See generally*, NDC Comments on Settlement.

territory approach, 174 census tracts would be categorized as “disadvantaged” which, according to NDC, is over five times more than the 33 tracts that would qualify using the statewide approach.¹⁶⁰ NDC’s recommendation is that SDG&E use the statewide DAC definition, designating as “disadvantaged” only those tracts scoring in the top 25 percent of CalEnviroScreen¹⁶¹ scores, as the California Environmental Protection Agency (CalEPA) does.¹⁶² To bolster its argument, NDC points to area code 92113, which contains the most heavily polluted areas in SDG&E’s service territory, including the two most disadvantaged tracts scoring in the 96 to 100 percent range of CES scores.¹⁶³ Utilizing the CalEnviroScreen methodology, tracts in the 92113 area code make up 27 percent of all identified DACs, versus 5 percent under SDG&E’s service territory definition.¹⁶⁴ NDC is concerned that Program funds would not go to support area code 92113 and other similar burdened areas if SDG&E uses its service territory methodology for identifying DACs.¹⁶⁵

As stated at the beginning of Section 6, where a settlement is contested, it will be subject to more scrutiny. The issue of what DAC methodology to use for SDG&E’s MD/HD Program is one that is subject to more scrutiny not only because of the policy objectives of SB 350, but also due to NDC’s compelling

¹⁶⁰ NDC Comments on Settlement at 8 to 9.

¹⁶¹ The California Communities Environmental Health Screening 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. The tool and further information about its development by the California Environmental Protection Agency is available at <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>.

¹⁶² NDC Comments on Settlement at 9 and footnote 27.

¹⁶³ NDC Comments on Settlement 9.

¹⁶⁴ NDC Comments on Settlement at 9.

¹⁶⁵ NDC Comments on Settlement at 9.

figures illustrating the disproportion of which San Diego communities would qualify under the service territory definition. We agree with NDC that in order to prioritize which areas are truly disadvantaged the statewide DAC methodology should be utilized for SDG&E's Program. We modify the DAC definition in the Settlement to the top quartile of communities on a statewide basis, as defined by the California Environmental Protection Agency's CalEnviroScreen 3.0 tool. This modification is consistent with SB 350 and the methodology approved in D.18-05-040 for SCE and PG&E's MD/HD programs.¹⁶⁶

Incorporating the modifications described above, we conclude that the Settlement complies with the applicable law and that nothing in the Settlement contravenes statute or prior Commission decisions. In addition to complying with the applicable statutes of the Public Utilities Code, the Settling Parties also complied with Commission Rules of Practice and Procedure, Rule 12, regarding settlements.¹⁶⁷

6.3. The Settlement is in the Public Interest

The Commission has found when all active parties in a proceeding reach settlement, that settlement "commands unanimous sponsorship of the affected parties who fairly represent the interests affected by the Settlement."¹⁶⁸ Although the Settlement is not supported by all the active parties to this proceeding, it does reflect a wide range of stakeholder interest, including ratepayer advocates, environmental nonprofits, EV technology innovators, EVSE manufacturers, and the utility applicant. Moreover, the Settlement is consistent

¹⁶⁶ D.18-05-040 at 94 to 95.

¹⁶⁷ Motion at 3, describing the steps taken for complying for Rule 12.

¹⁶⁸ D.17-03-005 at 6 to 7.

with laws, policies and Commission decisions that by their nature are in the public interest.

The Settlement is an important step in increasing the deployment of MD/HD EV infrastructure aimed at advancing TE technology and reducing GHG emissions in SDG&E's service territory. The Program and Pilot not only aim to help improve air quality in SDG&E's service territory, with a 30 percent target for DACs, but also strive to stimulate job growth in the EVSP market. SDG&E's Program and Pilot aim to provide job opportunities via contracting for installation of the charging infrastructure.¹⁶⁹ The Program and Pilot also may lead to jobs in the MD/HD EV manufacturing sector.¹⁷⁰ More job opportunities in the MD/HD EV sector are in the public interest, because these careers are aimed at improving air quality and the advancement of TE.

The elimination of utility ownership of the Program's EVSE seeks to minimize overall costs and maximize overall benefits associated with the Program. The make-ready Program is in the public interest not only because it decreases the costs passed to ratepayers but also because it allows for competition amongst EVSE manufacturers. Because Program participants will be free to select charging equipment and network services from any qualified vendor, market participation from EVSE manufacturers should increase given the demand SDG&E's Program aims to create.¹⁷¹ Encouraging broad, privately-funded market participation is a goal of SB 350 and promotes the public interest.

¹⁶⁹ Exhibit SDGE-2 at 18.

¹⁷⁰ Exhibit SDGE-2 at 18.

¹⁷¹ Motion at 9.

The Settlement's terms for splitting the Program's funding into two parts are within the public interest because the tranche mechanism allows for additional Commission oversight in terms of SDG&E meeting certain programmatic milestones.¹⁷² The agreement for SDG&E to file a Tier 2 Advice Letter showing the utility's progress towards the interim and final *per se* reasonable metrics, provides an additional layer of Commission oversight which ensures ratepayer money is being spent appropriately for this program. Such oversight is within the public interest and should be implemented.

We want to acknowledge the work all of the parties did in developing a settlement that not only avoids litigation but is additionally supported by a wide range of stakeholder interest, and is consistent with recent TE Commission decisions.

6.4. Recommended Modifications

Before we complete our analysis of the proposed Settlement, there are two modifications¹⁷³ we wish to highlight.

Part III (I) of the Settlement states, "Consistent with Ordering Paragraph 41 of D.18-05-040, after the third year of the Program, 50 percent of funds that were reserved for DAC rebates but have not yet been committed to a deployment may be released if SDG&E has not achieved 60 percent of its target in DAC locations and 80 percent of its target in non-DAC locations. Released means that the DAC EVSE rebates may be used in non-DAC locations to accelerate MD/HD EV adoption. Any remaining rebate funds that are unallocated after year 4 may

¹⁷² Settling Parties Joint Reply at 8; Settlement Agreement at Appendix B.

¹⁷³ Pursuant to Rule 12.4(c) we ask that parties address these alternative terms in comments on the Proposed Decision. Parties should address whether these modifications are acceptable or not.

be spent as rebates in any location.” On review, we do not believe this release of funds is consistent with D.18-05-040.

In D.18-05-040, the Commission authorized the release of funds for rebates on EVSE for sites *supporting transit and school bus EVSE* in DACs to be used at any location after 4 years. Although these funds may be spent at any location, reading the dicta in Section 6.3, it is clear such funds are to be utilized at locations supporting transit and school bus EVSE. We therefore do not find Part III (I) to be reflective of D.18-05-040. We modify Part III (I) of the Settlement to specify that any unspent funds reserved for DAC sites after the fourth year be released to support any location electrifying transit and school buses, including a 50 percent rebate for those sites’ EVSE. We find this modification to be consistent with the Commission’s findings in D.18-05-040, reasonable in light of the whole record and in the public interest. By directing SDG&E to utilize any unspent DAC funds to support those sites that utilize transit and school buses, we ensure that ratepayer funds are being utilized to serve the public interest at large.

Our second modification focuses on the DAC methodology utilized by the Settling Parties. As discussed above, the Settlement’s current definition does not capture what areas are truly disadvantaged in SDG&E’s service territory. While the Settlement’s DAC definition was adopted through a 2016 AL, we agree with NDC’s assertions, and adopt their recommendation to apply the statewide methodology utilized by CalEPA’s CalEnviroScreen 3.0 tool. By changing the DAC definition in the Settlement to the statewide methodology, ratepayer funds will be utilized to serve those sites which suffer the most from emissions associated with MD/HD vehicles. We do not anticipate this modification will impact SDG&E’s ability to meet its target of spending a minimum of 30 percent

of its infrastructure budget in DACs. This modification ensures ratepayers are funding infrastructure at locations with the most need. We find this modification in conjunction with the modification for how funds reserved for DAC-specific incremental incentives could be released to be consistent with the Commission's findings in D.18-05-040, reasonable in light of the whole record, and in the public interest.

With these minor modifications, we conclude that the Settlement should be adopted by the Commission.

6.5. Approval of the Settlement

We reviewed the proposed settlement pursuant to Rule 12.1 (d), as defined above, and find the settlement meets the three criteria of reasonableness, legal consistency, and being in the public interest.

We grant the motion of the Settling Parties to adopt the Settlement, with the above modifications to the DAC definition and Section III (I). Accordingly, we approve SDG&E's application, as modified by the Settlement. We authorize cost recovery of \$107.4 million for the Program and \$1.7 million for the Pilot through distribution rates and allocated to customer classes on an equal cents per kWh basis.

7. D.18-05-040 Cost Estimates

The Settling Parties used cost estimates derived from PG&E's approved program budget in D.18-05-040. It is likely those cost estimates are not fully reflective of the costs SDG&E will incur when implementing its program in 2020 and beyond. To ensure transparency and to support the development of future transportation electrification program budgets, we direct SDG&E to track its

costs utilizing the line items it submitted during the February 27, 2019 PHC.¹⁷⁴ In order to better understand the costs associated with electrifying the MD/HD sector, we direct SDG&E to report any overages and/or savings on their line item cost estimates to the Commission's Energy Division annually. SDG&E should copy the service list to this proceeding on each annual update. The first budget tracking report will be due with one year of the date of adoption of this decision.

8. Data Gathering Requirements

The Commission will review the results of the Program and Pilot approved in this decision 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, D.18-05-040, and D.18-09-034 required to ensure standardization in reporting.

SDG&E is required to submit an annual report and a final report for each of its approved projects and serve the reports 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 includes a Microsoft Word document that has report headings and descriptions of the information that should be included in the report. A data reporting template in Microsoft Excel that has several tabs with specific quantitative data fields is also required to be completed by SDG&E with data specific to its program. The file linked at the above webpage contains instructions on how to complete each tab in the Excel spreadsheet. SDG&E

¹⁷⁴ See Appendix B for cost estimates.

should complete this in Excel format along with its qualitative annual and final reports. SDG&E is required to serve its reports to the service list of this proceeding, consistent with the Commission's direction in prior decisions.

9. Evaluation

Section 740.12(c) requires the Commission to review data concerning current and future TE adoption and charging infrastructure utilization prior to authorizing the utilities to collect new TE program costs. The evaluation process should, at a minimum, investigate and identify the following:

1. Whether the utilities' TE investments meet the stated purposes of accelerating widespread transportation electrification, reducing dependence on petroleum, meet air quality standards, achieve the goals of the Charge Ahead California Initiative, and reduce greenhouse gas emissions.
2. Whether the TE investments maximized benefits and minimized costs.
3. Learnings 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 various sectors;
 - d. Actual emissions reductions associated with TE investments; and
 - e. Actual grid impacts associated with TE investments.

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 that decision. The decisions further directed PG&E, SDG&E, and SCE to coordinate evaluation

efforts with PacifiCorp, Liberty Utilities, 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 SDG&E to again contribute four percent of its total approved Program and Pilot budget to support this evaluation effort, which should build-off of and expand upon the evaluation effort already underway for SCE and PG&E's MD/HD SB 350 programs. SDG&E should also work with SCE and PG&E to ensure any lessons learned in their early MD/HD program implementation are incorporated in SDG&E's implementation plan.¹⁷⁵

As directed in D.18-01-024, SDG&E must submit a Tier 1 advice letter providing a status update on implementation of and data available from the programs 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 programs. The expectation is for the evaluation efforts specific to SDG&E's MD/HD program to begin within 12 months from the filing of SDG&E's implementation advice letter.

10. Safety Considerations

The Commission's mission to ensure utilities provide safe and reliable service is an overarching focus in the emerging TE industry. Section 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

¹⁷⁵ D.18-05-040 at Section 11.

service consistent with § 451. The Commission's 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 worked with parties to the SB 350 TE proceedings to develop a 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, SDG&E must file a Tier 1 Advice Letter describing its efforts to comply with the Safety Requirements Checklist. The Advice Letter must contain an attestation signed by the Project Manager. SDG&E should file a final safety attestation, using the same template developed for the projects approved in D.18-05-040.

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

11. Categorization and Need for Hearing

In Resolution ALJ 176-3412, the Commission preliminarily categorized this proceeding as ratesetting, and preliminarily determined that hearings were necessary. The March 30, 2018 Scoping Ruling confirmed the categorization as ratesetting and set the time for evidentiary hearings in October 2018. As discussed in Section 1 above, evidentiary hearings were ultimately canceled due to settlement efforts amongst the parties.

12. Comments on Proposed Decision

The proposed decision of Administrative Law Judges (ALJs) Sasha Goldberg and Kelly A. Hymes 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. Filed comments on _____, and _____ filed reply comments on _____.

13. Assignment of Proceeding

Clifford Rechtschaffen is the assigned Commissioner and Kelly A. Hymes and Sasha Goldberg are the assigned ALJs in this proceeding.

Findings of Fact

1. Approval of the Settlement and therefore adoption of the Program and Pilot should reduce greenhouse gas emissions in the medium- and heavy-duty transportation sectors in compliance with California climate change laws and policies.
2. The Settling Parties complied with Commission Rules of Practice and Procedure, Rule 12.
3. SDG&E and the Settling Parties derived the program budget using cost estimates developed by PG&E for its January 2017 SB 350 application 17-01-020, et al.
4. SDG&E's cost estimates were derived from using cost estimates from PG&E's 2017 Application 17-01-022.
5. Requiring SDG&E to report overages and/or savings on its cost estimates will increase oversight, transparency and understanding of what it costs to electrify the MD/HD sector.

6. Requiring SDG&E to align its medium- and heavy-duty electric vehicle infrastructure program evaluation with the evaluations of SCE and PG&E's MD/HD vehicle electrification programs approved in D.18-05-040 is reasonable.

7. According to NDC, under the service territory approach, 174 census tracts would be categorized as "disadvantaged" which is over five times more than the 33 tracts that would qualify using the statewide approach.

Conclusions of Law

1. As modified, the Settlement is reasonable in light of the record.
2. As modified, the Settlement is consistent with the applicable law.
3. As modified, the Settlement is in the public interest.
4. Consistent with the Commission's findings in D.18-05-040, SDG&E should spend any released funds reserved for DACs on locations supporting transit and school buses.

5. The modification that SDG&E utilize the statewide methodology as opposed to the service territory definition for DACs is consistent with the Commission's findings in D.18-05-040, reasonable in light of the whole record and in the public interest.

6. The Settlement proposed by SDG&E, Public Advocates Office at the Commission, Natural Resources Defense Council, Environmental Defense Fund, Union of Concerned Scientists, Coalition of California Utility Employees, CALSTART, Small Business Utility Advocates, Electric Motor Werks, Inc., Siemens, ChargePoint, Chanje Energy, Center for Community Action and Environmental Justice, East Yard Communities for Environmental Justice, Plug In American and Sierra Club should be approved and adopted with the additional requirement that SDG&E spend any released funds reserved for DACs on sites supporting transit and school buses.

7. The Settlement proposed by SDG&E, Public Advocates Office at the California Public Utilities Commission, Natural Resources Defense Council, Environmental Defense Fund, Union of Concerned Scientists, Coalition of California Utility Employees, CALSTART, Small Business Utility Advocates, Electric Motor Werks, Inc., Siemens, ChargePoint, Chanje Energy, Center for Community Action and Environmental Justice, East Yard Communities for Environmental Justice, Plug In American and Sierra Club meets the requirements of Commission Rules of Practice and Procedure, Rule 12.

8. SDG&E should provide annual reports on program costs and spending given the Settlement's budget was derived using cost estimates from PG&E's 2017 SB 350 Application 17-01-022.

9. Consistent with D.18-05-040 and Appendix B to the Settlement, SDG&E's investments in charging infrastructure to serve the medium-and heavy-duty transportation sector should be considered *per se* reasonable if the metrics in Appendix B to the Settlement are met.

10. SDG&E should ensure participating customers' load management plans reflect current grid conditions and can be responsive to future grid needs. SDG&E should encourage participating customers to consider enrolling in a commercial electric vehicle time-of-use rate should the one that SDG&E will propose under the Settlement terms be approved by the Commission.

11. Application 18-01-012 should be closed.

O R D E R**IT IS ORDERED** that:

1. The *Settlement Agreement Regarding San Diego Gas & Electric Company's Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Application*, Application 18-01-012, attached as Appendix A to this decision is approved with the modifications outlined in Section 6.4 of this decision.

2. Consistent with the terms and conditions attached as Appendix A and Section 6.4 of this decision, San Diego Gas & Electric Company must spend any released funds reserved for disadvantaged communities after four years on sites supporting transit and school buses.

3. Consistent with the terms and conditions attached as Appendix A and Section 6.4 of this decision, 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 Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Pilot. At the end of three years of program implementation, SDG&E may file a Tier 2 Advice Letter with the Commission's Energy Division that at a minimum addresses: (1) status of its 30 percent disadvantaged community target; and (2) whether SDG&E is seeking to expand its disadvantaged community definition to the one approved in Advice Letter 2876-E.

4. The Application of San Diego Gas & Electric Company for Approval of Senate Bill 350 Transportation Electrification Proposals Regarding Medium and Heavy-Duty Electric Vehicles and a Vehicle to Grid Electric School Bus Pilot is

approved consistent with the terms and conditions set forth in Appendix A and Ordering Paragraphs 2 and 3 of this decision.

5. Prior to implementation, San Diego Gas & Electric Company (SDG&E) must file a Tier 2 Advice Letter with the Commission's Energy Division reflecting the Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Pilot terms and conditions contained in Appendix A and Ordering Paragraphs 1 through 3. SDG&E must incorporate lessons learned from Southern California Edison Company and Pacific Gas and Electric Company's medium-and heavy-duty programs approved in Commission Decision 18-05-040.

6. San Diego Gas & Electric Company's (SDG&E) authorized budget for its Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program (Program) will be considered *per se* reasonable provided: (1) a minimum of 300 make-ready installations are fully contracted after five years of Program deployment and 3,000 additional vehicles are electrified that are directly attributable to the authorized Program and achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric; (2) a minimum of 10 percent of the infrastructure budget serves transit style buses and school buses; (3) a maximum of 10 percent of the infrastructure budget serves forklifts; (4) a minimum of 30 percent of the infrastructure budget results in installations in disadvantaged communities in SDG&E's service territory; (5) rebate levels for beach head sectors and customers in disadvantaged communities should be established in consultation with SDG&E's Program Advisory Council; (6) rebate levels should not exceed 50 percent of the cost of the charger; and (7) a maximum of 10 percent of the infrastructure budget is spent on program administration.

7. San Diego Gas & Electric Company is authorized to recover costs for its Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Bus Pilot through a charge allocated to customer classes on an equal cents per kilowatt hour basis

8. Prior to implementation San Diego Gas & Electric Company shall file a Tier 2 Advice Letter with the Commission's Energy Division describing how the utility will implement the approved cost recovery method approved in Ordering Paragraph 6.

9. San Diego Gas & Electric Company (SDG&E) shall track costs associated with its Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program (Program) and Vehicle to Grid Electric School Bus Pilot (Pilot) utilizing the line items contained in Appendix B to this decision. SDG&E shall report annually on the actual costs of the approved Program and Pilot by filing a Tier 2 Advice Letter with the Commission's Energy Division. SDG&E must report on any overages or savings, relative to the line-item budget agreed to in the Settlement, on the Program and Pilot's cost estimates in the advice letter. This first advice letter is due within one year of the date of adoption of this decision.

10. San Diego Gas & Electric Company shall work with participating customers to develop and implement load management plans that reflect current grid conditions and can be responsive to future grid needs.

11. San Diego Gas & Electric Company shall contribute four percent of its total approved Program and Pilot budget to support the evaluation efforts described in Section 9 of this decision. Such evaluation efforts should build-off of and expand upon the evaluation effort already underway for Southern California Edison Company and Pacific Gas & Electric Company's approved medium-and heavy-duty programs in Decision 18-05-040.

12. San Diego Gas & Electric Company shall submit a Tier 1 Advice Letter to the Commission's Energy Division providing a status update on the implementation of and data available from the authorized Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program and Vehicle to Grid Electric School Pilot within one year (12 months) of the date of adoption of this decision. The Tier 1 Advice Letter must include the costs and balances associated with each line item described in the budgets attached in Appendix B to this decision.

13. No later than 18 months after the effective date of today's decision, San Diego Gas & Electric Company must file a Tier 1 Advice Letter containing an attestation signed by the Project Manager describing their efforts to comply with the Safety Requirements Checklist made available at <http://www.cpuc.ca.gov/sb350te/>. San Diego Gas & Electric Company must maintain all compliance documentation available should the Commission determine an inspection or audit is necessary.

14. Application 18-01-012 is closed.

This order is effective today.

Dated _____, at San Francisco, California.

APPENDIX A

**SETTLEMENT AGREEMENT REGARDING SAN DIEGO GAS & ELECTRIC
COMPANY'S MEDIUM-DUTY AND HEAVY-DUTY ELECTRIC VEHICLE
CHARGING INFRASTRUCTURE PROGRAM AND VEHICLE TO GRID
ELECTRIC SCHOOL BUS PILOT APPLICATION, A.18-01-012**

Pursuant to California Public Utilities Commission's Rules of Practice and Procedure, Article 12, Rule 12.1, San Diego Gas & Electric Company ("SDG&E"), Public Advocates Office of the California Public Utilities Commission, Natural Resources Defense Council, Coalition of California Utility Employees, Union of Concerned Scientists, ChargePoint, Center for Community Action and Environmental Justice, East Yard Communities for Environmental Justice, Electric Motor Werks, Inc., Siemens Digital Grid, Environmental Defense Fund, Small Business Utility Advocates, CALSTART, Sierra Club, Chanje Energy and Plug In America (collectively, together with SDG&E, the "Settling Parties") enter into this settlement agreement ("Settlement Agreement") regarding SDG&E's Medium-Duty and Heavy-Duty Electric Vehicle Charging Infrastructure Program ("MD/HD EV Charging Infrastructure Program") and Vehicle to Grid Electric School Bus Pilot ("V2G Pilot") proposal ("Proposal"), submitted for Commission consideration in Application A.18-01-012 (the "Application"). Except as otherwise identified, citation references in this Settlement Agreement are to the materials filed with or issued by the Commission in connection with the Application.

Settling Parties acknowledge that the positions expressed in this Settlement Agreement were reached after consideration of positions advanced by all Settling Parties regarding the Proposal and declare and mutually agree that the terms and conditions herein are reasonable, consistent with the law, and in the public interest. Accordingly, the Settling Parties shall use their best efforts to obtain Commission approval of this Settlement Agreement and shall jointly request that the Commission adopt this Settlement Agreement in its entirety and without modification.

I. Introduction and Background

SDG&E filed A.18-01-012 on January 22, 2018, supported by the prepared testimony of seven witnesses. SDG&E requested authorization to establish and implement a program to support Class 2 – Class 8 on-road electric vehicles as well as off-road support vehicles such as forklifts and transport refrigeration units. In addition, the Application included a pilot program to advance vehicle to grid operations.

On February 26, 2018, parties filed protests and responses to SDG&E's Application, to which SDG&E filed a reply on March 8, 2018. A prehearing conference was held on March 15, 2018, followed by a scoping ruling issued by Commissioner Carla J. Peterman, Administrative Law Judge ("ALJ") Kelly A. Hymes, and ALJ Sasha Goldberg. The scoping ruling set forth a schedule that included intervenor testimony, concurrent rebuttal testimony, and hearings.

After the filing of SDG&E's Application, the Commission issued its final decision on the medium-duty and heavy-duty applications of Pacific Gas & Electric Company ("PG&E") and Southern California Edison Company ("SCE"). The decision, Decision 18-05-040, was effective

as of May 31, 2018.

Intervenor testimony on SDG&E's Application was served on August 17, 2018. Several parties referenced D.18-05-040 in their testimony.

SDG&E filed a motion on September 25, 2018 to notify the Commission that parties were working towards a settlement and to suspend the schedule. The settlement terms materially modified the original application proposal to a degree that rebuttal testimony and hearings on the original application would not be productive. On September 26, 2018, ALJ Goldberg granted SDG&E's motion to suspend the procedural schedule. A settlement conference was noticed and held on October 8, 2018.

Settling Parties acknowledge that SDG&E's Proposal has been thoroughly vetted by a wide variety of parties, including ratepayer advocacy groups, environmental groups, the automobile industry, labor, representatives of disadvantaged communities, and EV charging providers. The Settling Parties, in light of D.18-05-040 and the feedback from interested parties, have agreed to certain important modifications to SDG&E's Proposal. These modifications are consistent with efforts to support widespread transportation electrification pursuant to Senate Bill 350, Senate Bill 32, Assembly Bill 32, the Governor's executive order setting a target of five million zero-emission vehicles in California by 2030, and California's and California agencies' clean air and climate change objectives. The modifications are also consistent with the most recent state policies including the passage of Senate Bill 100 and issuance of Executive Order ("EO") B-55-18. EO B-55-18 sets California on a statewide path towards carbon neutrality and net negative emissions. This will require significant decarbonization of the transportation sector. SDG&E's MD/HD EV Charging Infrastructure Program directly supports EO B-55-18, as well as state legislation, by lowering the upfront capital costs to adopt electric trucks and buses.

II. Definitions

"Application" means SDG&E's Application A.18-01-012 filed with the Commission January 22, 2018.

"Commission" means the California Public Utilities Commission.

"Disadvantaged Communities" means disadvantaged communities as identified by the California Environmental Protection Agency's Enviroscreen 3.0 tool. SDG&E will apply the service territory definition, as approved in D.16-01-045.

"Energy Division" means the Energy Division of the California Public Utilities Commission.

"EV" means an electric vehicle.

"EVSE" means electric vehicle supply equipment; and may be used interchangeably with EV charger or charging station.

"MD/HD EV Charging Infrastructure Program" or "Program" means SDG&E's Medium-Duty

and Heavy-Duty Electric Vehicle Charging Infrastructure Program.

“Program Advisory Council” or “PAC” means the stakeholder advisory council as described in Paragraph III.N. below.

“Proposal” means the MD/HD EV Charging Infrastructure Program and V2G Pilot as filed in A.18-01-012.

“SDG&E” means San Diego Gas & Electric Company, a California regulated public utility.

“Settlement Agreement” means this Settlement Agreement dated as of October 30, 2018 by and among the Settling Parties.

“Settling Parties” means the parties signatory to this Settlement Agreement.

“V2G Pilot” means SDG&E’s Vehicle to Grid Electric School Bus Pilot.

III. Settlement Agreement Provisions

In consideration of the mutual obligations, covenants and conditions contained herein, the Settling Parties agree to all of the following terms and conditions as well as the terms set forth in the attached Appendices as a complete and final resolution of all the disputed issues among them in this proceeding relating to the Proposal. Generally, these terms and conditions are consistent with the Commission’s findings and conclusions in D.18-05-040.

- A. SDG&E’s budget for the Program is \$115.0 million in escalated dollars¹ and includes unloaded² direct capital and operations and maintenance (“O&M”) costs. More detail is shown in Appendix A Table 1. All dollar amounts referenced in this Settlement Agreement refer to escalated dollars unless specified otherwise³. The Program budget in 2018 escalated, unloaded dollars is \$107.4 million, shown in more detail in Appendix A Table 2.
 - a. Settling Parties used the per site costs found to be reasonable in D.18-05-040 and Appendix C of D.18-05-040 as a basis for SDG&E’s budget.
 - b. The original budget request in A.18-01-012 was \$150.1 million unloaded and un-escalated in 2017 dollars.

¹ The per site cost estimates used to determine the budget are based on Pacific Gas and Electric Company’s (PG&E) Application (A.) 17-01-022, which escalated costs from 2016 dollars to future dollars with assumed implementation in each year from 2018-2022 of the 5-year program. SDG&E’s budget is equal to \$107.4 million in 2018 dollars, shown in more detail in Appendix A Table 2. This was calculated by de-escalating PG&E’s per site estimates to 2016 dollars, escalating to 2018 dollars, and applying to SDG&E’s program size.

² Overhead loaders are used to allocate undistributed company overhead costs across capital projects and O&M. Overhead costs are those activities and services that are associated with direct costs, such as payroll taxes and pension and benefits, or are costs that cannot be economically direct-charged, such as administrative and general overheads.

³ Cost escalation factors are used to reflect the effect of inflation on SDG&E’s costs.

- c. SDG&E’s minimum EV deployment requirement remains at approximately 3,000 EVs, consistent with the proposal in A.18-01-012. Additional detail regarding vehicle targets is provided in Appendix B.
 - d. The Appendix A budget included in this Settlement Agreement could support approximately 6,000 EVs if the infrastructure deployment follows the exact vehicle mix and per site budget cost estimates in Appendix A. The target for the Program is to deploy 6,000 EVs.
 - e. Consistent with D.18-05-040’s treatment of PG&E and SCE, Settling Parties agree to a per se reasonable Program deployment requirement (3,000 EVs) and budget authorization (supporting up to 6,068 EVs).
 - i. PG&E (in accordance with D.18-05-040)
 - 1. Per se reasonable: 6,500
 - 2. D.18-05-040 Appendix C: 12,812
 - ii. SCE (in accordance with D.18-05-040)
 - 1. Per se reasonable: 8,490
 - 2. D.18-05-040 Appendix C: 16,991
- B. Settling Parties request that the Commission approve the entire \$107.4 million (2018 dollars unloaded and un-escalated for Program years 2019 – 2024) budget to be collected from ratepayers. The funds will become available for Program implementation according to the following timeline: (1) upon issuance of a final decision approving this Settlement Agreement, SDG&E is authorized to utilize \$84 million (2018 dollars unloaded and escalated); and (2) the remaining \$23.4 million (2018 dollars unloaded and escalated) may be utilized by SDG&E upon approval of a Tier 2 Advice Letter that shows SDG&E’s progress towards certain metrics. The advice letter will include a report on the progress towards the interim per se reasonable metrics based on a proportional share of the final per se reasonable metrics. Interim per se metrics and final per se metrics are shown in Appendix B. The Tier 2 Advice Letter will include the number of vehicles supported (by type of vehicle), number of installations and number of chargers per installation. This information will be provided for deployments which are operational as well as locations that are in development. Cost data will be provided for the operational locations, and allocated costs will be provided for locations that are in development.
- a. The interim per se metrics will provide guidance. Achieving the interim per se metrics will not be a pre-requisite to filing an advice letter to request the second tranche of funding. SDG&E will describe in its Advice Letter report how it plans to achieve the final per se reasonableness metrics in Appendix B with the remainder of the funding.
 - b. Progress towards final per se metrics and expenditure of budget may not occur in a linear fashion. EV uptake is expected to accelerate in later years, lessons will be learned in the early years which could drive down costs, and certain expenditures may be front loaded such as marketing, education and outreach.
 - c. The total infrastructure budget is \$63.9 million of the \$107.4 million. The share for infrastructure in the first tranche of \$84 million is \$50 million. Numbers in B(c) are in 2018 dollars unloaded and escalated.
 - d. In order to avoid a gap in funding, SDG&E may submit the Tier 2 Advice Letter for incremental funds after 66% of the infrastructure budget (“trigger”) has been

allocated to projects based on commitments from participating customers, which is approximately \$33.0 million of the infrastructure funds. Numbers in B(d) are in 2018 dollars unloaded and escalated.

- C. Costs for the MD/HD EV Charging Infrastructure Program will be recovered from ratepayers through distribution rates and allocated to customer classes on an equal cents per kWh basis, i.e., costs will be allocated to each class based on each class's share of system sales.
- D. SDG&E's MD/HD EV Charging Infrastructure Program ownership structure has been modified to align with the make-ready infrastructure programs approved in D.18-05-040.
 - a. SDG&E will construct, own, operate and maintain the make-ready infrastructure on the utility side of the meter in all instances.
 - b. SDG&E will construct, own, operate and maintain the make-ready infrastructure on the customer side of the meter in some instances.
 - i. The customer may elect to have SDG&E construct, own, operate and maintain the make-ready on the customer side of the meter.
 - ii. Consistent with Ordering Paragraph 39 of D.18-05-040, SDG&E will allow customers the choice of whether to own, operate, and maintain infrastructure installed behind the customer's meter. If the customer chooses ownership, the customer must manage and pay for the installation of the customer-side infrastructure and use state licensed labor for which the utility will provide a rebate of up to 80 percent of the installation costs, treating these costs as an expense for ratemaking purposes, and the customer must commit to operate and maintain the facilities consistent with relevant national, state, and local electrical standards for their site. The customer must submit its site plans and estimated site construction costs to the utility and state its commitment to operate and maintain the facilities consistent with relevant national, state, and local electrical standards for their site. The utility shall provide a rebate to the customer for customer-side infrastructure the customer installs that is the lesser of: (a) 80 percent of customer's actual installation costs or (b) 80 percent of the average utility direct cost for installing the customer-side make-ready infrastructure in the relevant sector. The rebate shall be treated as an expense for ratemaking purposes.
- E. SDG&E will not own the electric vehicle supply equipment ("EVSE") or charging station. SDG&E, or third-party entity who is designated to qualify eligible EVSEs, will qualify equipment that will be eligible for the Program. This process will ensure that certain minimum qualifications are met. There will be an initial qualification period followed by additional opportunities to qualify equipment, as appropriate. Qualifying party (either SDG&E or third-party entity designated to qualify EVSEs) will review in a timely manner. Program participants will be free to select charging equipment and network services from any qualifying vendor.
- F. The MD/HD EV Charging Infrastructure Program will have a five year sign up period. Design and construction may extend beyond the fifth year. The Program will support the

full range of vehicles addressed in D.18-05-040, including forklifts, truck stop electrification, transport refrigeration units, port cargo trucks, transit buses, school buses, airport ground support equipment, medium-duty vehicles, heavy-duty vehicles, and Class 2 through Class 8 on-road vehicles, which is a broader range of vehicles than SDG&E originally proposed.

- G. All construction and installation of EVSE make-ready infrastructure and installation of EVSE/chargers that is not performed by employees of SDG&E shall be performed by contractors who are signatory to the IBEW who hold a valid C-10 contractor's license, and electricians must have Electric Vehicle Infrastructure Training Program ("EVITP") certification. All maintenance of EVSE make-ready infrastructure owned by SDG&E that is not performed by employees of SDG&E shall be performed by contractors who are signatory to the IBEW who hold a valid C-10 contractor's license, and electricians must have EVITP certification.
- H. SDG&E will set rebate levels for transit and school bus EVSE in consultation with its PAC. Rebates for transit and school bus EVSE will not be limited to deployments in Disadvantaged Communities ("DAC"). The rebates must not exceed 50 percent of the cost of the EVSE. Rebates may also be offered to participants: (1) who are located in DAC, as defined in D.16-01-045 for SDG&E's service territory; and (2) not on the Fortune 1000 list. SDG&E will work with its PAC to develop further requirements for participants located in DACs to be eligible for EVSE rebates. This will include consideration of treatment of companies on the Fortune 1000 list who allow tenants or other users who are not on the Fortune 1000 list to utilize EVSEs on their premises. The rebates shall not exceed the cost the site host pays for the EVSE after accounting for any other funding sources used for EVSE procurement.
- I. Consistent with Ordering Paragraph 41 of D.18-05-040, after the third year of the Program, 50 percent of the funds that were reserved for DAC rebates but have not yet been committed to a deployment may be released if SDG&E has not achieved 60 percent of its target in DAC locations and 80 percent of its target in non-DAC locations. Released means that the DAC EVSE rebates may be used in non-DACs to accelerate MD/HD EV adoption. Any remaining rebate funds that are unallocated after year 4 may be spent as rebates in any location.
- J. A minimum of 30% of the infrastructure budget will be allocated to deploy infrastructure located in DACs. In SDG&E's original proposal the target was 40% of (1) infrastructure located in a DAC or (2) infrastructure not located in a DAC that supports vehicles that travel through DACs. A metric to deploy 30% of infrastructure located in DACs will allow for easier tracking than the original proposal. The DAC definition will be consistent with the service territory definition, as approved in D.16-01-045.
- K. Program participants will be required to submit a load management plan detailing a strategy for facilitating charging behavior in a manner that minimizes grid impacts and takes into account periods of high renewable generation on the grid. During development of the load management plan, SDG&E will inform Program participants of the benefits of

managed charging and general capabilities of networked chargers. SDG&E will provide Program participants information on items that they should consider as they create their load management plan. SDG&E will monitor customer load management plans, including the ability to integrate renewable energy and integrate EV load with the electrical grid, to the extent feasible.

- L. Consistent with D.18-05-040, Ordering Paragraphs 31 and 32, SDG&E's investments will be considered per se reasonable if metrics are met. Specific metrics for SDG&E can be found in Appendix B.
- M. Consistent with D.18-05-040, Ordering Paragraph 2, after consultation with the PAC SDG&E may file a Tier 3 Advice Letter after two years of Program implementation to adjust the approved Program budgets and metrics used to determine per se reasonableness. At a minimum the Advice Letter must include: (1) a summary of Program status to date; (2) a breakdown of utility-side, customer-side, and other costs by sector; (3) a description of the major cost drivers for utility-side and customer-side infrastructure; and (4) an explanation of any site cost caps the utility used to determine customer eligibility for the Program or other metrics the utility used to control Program costs.
- N. SDG&E will leverage the participation of a broad and diverse stakeholder advisory PAC in planning and implementing the MD/HD EV Charging Infrastructure Program following its approval by the Commission. SDG&E will solicit PAC participation from representatives from local and state government (including representation from the Energy Division), industry, labor and other stakeholder participants, ratepayer and environmental advocates, and representatives of Disadvantaged Communities.
- O. With guidance from the PAC, SDG&E will make programmatic changes as needed to the MD/HD EV Charging Infrastructure Program. Consistent with the provisions of D.18-05-040, if SDG&E identifies any modifications necessary to effectively implement the Program, it will propose the modifications via a Tier 2 Advice Letter after reviewing the changes with the PAC.
- P. SDG&E will collect data and report annually consistent with the provisions of D.18-05-040. The report will include information on EV adoption by various sized businesses participating in the MD/HD EV Infrastructure Program. SDG&E will survey businesses to collect data on the size of the businesses participating in the Program, customer experience segmented by size of businesses, including for small commercial customers, and lessons learned. Four percent of SDG&E's total budget is allocated to fund a third-party evaluator consistent with D.18-05-040.
- Q. 15% of the approved education budget will be dedicated to educating small businesses on the benefits of transportation electrification which may include information on energy use, load management plans and incentive programs for EVs.
- R. SDG&E will hold an EV rates workshop by the end of November 2018. The workshop will include a discussion on emission reductions, load management as it relates to rates,

and time varying rates. After the EV rates workshop, SDG&E will develop a new rate option or new rate options, which consider the importance of time varying rates, that will be submitted to the Commission within six months of final approval of the MD/HD EV Charging Infrastructure Program. In designing the new rate option or new rate options, SDG&E will examine how incremental EV load may impact the electric bills of small businesses who adopt EVs and may utilize the new rate option or new options. SDG&E will assess the rate impact of the new rate option or options on ratepayers.

Settling Parties agree to approve SDG&E's V2G Pilot proposed in A.18-01-012.

- A. The Settling Parties do not propose making significant modifications to the V2G proposal in A.18-01-012.
- B. SDG&E's budget for the V2G Pilot is \$1.7 million, including unloaded and un-escalated direct capital and O&M costs. Due to the pilot nature of the proposal, the approved budget will allow for adjustments within capital and within O&M across line items as the V2G Pilot is deployed.
- C. The EVSE that are part of the V2G Pilot will be owned by SDG&E.
- D. Costs for the V2G Pilot will be recovered from ratepayers through distribution rates and allocated to customer classes on an equal cents per kWh basis, i.e., costs will be allocated to each class based on each class's share of system sales.
- E. SDG&E will continue to seek funds to pay for the electric school buses including through the Hybrid and Zero Emission Truck and Bus Voucher Incentive Program, Federal Environmental Protection Agency, California Energy Commission and others. SDG&E's contribution towards the cost of the buses may be reduced if sufficient funds to pay for the cost of the electric school buses are secured from alternate sources.
- F. SDG&E will require First Priority GreenFleet, the prospective EVSE provider for the V2G Pilot, to submit a revised proposal updating final electric bus costs, data collection and reporting, and other updates in alignment with the Commission's final decision on SDG&E's V2G Pilot. SDG&E will seek to further reduce costs and seek leveraged funding.
- G. Data collection and reporting will include monitoring to ensure asset utilization and V2G operation. The data will be analyzed to determine how V2G can be scaled for the electric school bus segment as well as other vehicle segments. Analysis will include how the assets interacted with the California Independent System Operator, wholesale and retail rate implications, energy consumption, duration and frequency of charging, peak electricity demand, energy exported to the grid, the ability of V2G operations to improve load factor, impacts of V2G on the vehicles' batteries and overall costs and benefits. The report will include potential barriers to scaling and barriers to interconnection as well as strategies to overcome barriers.

- H. With guidance from the PAC, SDG&E will make programmatic changes as needed to the V2G Pilot. Consistent with the provisions of D.18-05-040, if SDG&E identifies any modifications necessary to effectively implement the V2G Pilot, it will propose the modifications via a Tier 2 Advice Letter after reviewing the changes with the PAC.

IV. Additional Terms and Conditions

A. Performance

The Settling Parties agree to support and defend this Settlement Agreement, and shall perform diligently, and in good faith, all actions required or implied hereunder, including, but not necessarily limited to, the execution of any other documents required to effectuate the terms of this Settlement Agreement, and the preparation of exhibits for, and presentation of witnesses at, any required hearings to obtain the approval and adoption of this Settlement Agreement by the Commission. No Settling Party will contest in this proceeding, or in any other forum, or in any manner before this Commission, the recommendations contained in this Settlement Agreement. It is understood by the Settling Parties that time is of the essence in obtaining the Commission's approval of this Settlement Agreement and that all will extend their best efforts to ensure its adoption. In this regard, Settling Parties agree that they will not seek or support any measure that would delay immediate Commission consideration and disposition of the motion filed submitting this Settlement Agreement for the Commission's approval.

B. Non-Precedential Effect

This Settlement Agreement is not intended by the Settling Parties to be precedent for any other proceeding, whether pending or instituted in the future. The Settling Parties have assented to the terms of this Settlement Agreement only for the purpose of arriving at the settlement embodied in this Settlement Agreement. Each Settling Party expressly reserves its right to advocate, in other current and future proceedings, or in the event that the Settlement Agreement is rejected by the Commission, positions, principles, assumptions, arguments and methodologies which may be different than those underlying this Settlement Agreement, and the Settling Parties expressly declare that, as provided in Rule 12.5 of the Commission's Rules of Practice and Procedure, this Settlement Agreement should not be considered as a precedent for or against them.

C. Indivisibility, General Provisions

This Settlement Agreement embodies compromises of the Settling Parties' positions in this proceeding. No individual term of this Settlement Agreement is assented to by any Settling Party, except in consideration of the other Settling Parties' agreement with all other terms. Thus, the Settlement Agreement is indivisible and each part interdependent on each and all other parts. Any Settling Party may withdraw from this Settlement Agreement if the Commission modifies, deletes from, or adds to the disposition of the matters settled herein. The Settling Parties agree, however, to negotiate in good faith with regard to any Commission-ordered changes in order to restore the balance of benefits and burdens, and to exercise the right to withdraw only if such negotiations are unsuccessful.

The Settling Parties acknowledge that the positions expressed in the Settlement Agreement were reached after consideration of positions advanced by parties in the proceeding and declare and mutually agree that the terms and conditions herein are reasonable, consistent with the law, and in the public interest. This Settlement Agreement sets forth the entire agreement of the Settling Parties on all of the subject matters addressed herein and may only be modified in writing subscribed by all Settling Parties.

No Settling Party has relied, or presently relies, upon any statement, promise, or representation by any other Settling Party, whether oral or written, except as specifically set forth in this Settlement Agreement.

This Settlement Agreement may be executed in counterparts by the Settling Parties with the same effect as if all Settling Parties had signed one and the same document. All such counterparts shall be deemed to be an original and shall together constitute one and the same Settlement Agreement.

D. Modification of Settlement Agreement

The terms and conditions of this Settlement Agreement may only be modified in writing subscribed to by the Settling Parties.

E. Governing Law

This Settlement Agreement shall be interpreted, governed and construed under the laws of the State of California, including Commission decisions, orders and rulings, as if executed and to be performed wholly within the State of California.

F. Attachments

The Appendices to this Settlement Agreement are part of the agreement of the Settling Parties and are incorporated herein by reference.

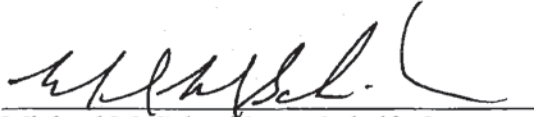
G. Non-Waiver

It is understood and agreed that no failure or delay by any Settling Party hereto in exercising any right, power or privilege hereunder shall operate as a waiver hereof, nor shall any single or partial exercise thereof preclude any other or future exercise thereof or the exercise of any other right, power or privilege.

H. Execution

This Settlement Agreement may be executed in counterparts by the Settling Parties with the same effect as if all the Settling Parties had signed one and the same document. All such counterparts shall be deemed to be an original and shall together constitute one and the same Settlement Agreement.

IN WITNESS WHEREOF, the Settling Parties have duly executed this Settlement Agreement by their authorized representatives as of this 30th day of October 2018.



Michael M. Schneider on behalf of
San Diego Gas & Electric Company

10/30/2018
Date

Darwin Farrar on behalf of Elizabeth Echols
on behalf of
Public Advocates Office of the California
Public Utilities Commission

Date

Max Baumhefner on behalf of
Natural Resources Defense Council

Date

Rachael Koss on behalf of
Coalition of California Utility Employees

Date

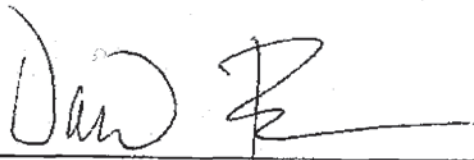
James O'Dea on behalf of
Union of Concerned Scientists

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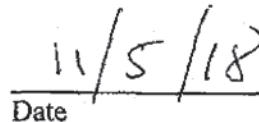
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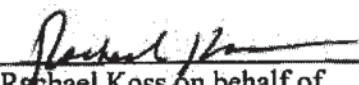
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Union of Concerned Scientists

10/29/2018

Date

Anne Smart

Anne Smart on behalf of
ChargePoint

10/29/18

Date

Sara Gersen on behalf of
Center for Community Action and
Environmental Justice AND
East Yard Communities for
Environmental Justice

Date

David Schlosberg on behalf of
Electric Motor Werks, Inc.

Date

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Siemens Digital Grid

Date

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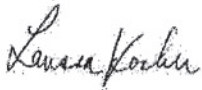
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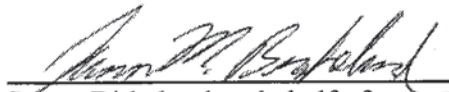
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James Birkelund on behalf of
Small Business Utility Advocates

October 30, 2018
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Ryan Schuchard on behalf of
CALSTART

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Joe Halso on behalf of
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James Tong on behalf of
Chanje Energy

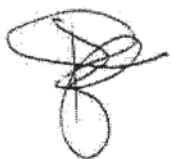
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Katherine Stainken on behalf of
Plug In America

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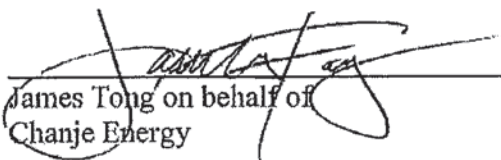
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Katherine Stainken

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Katherine Stainken on behalf of
Plug In America

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Appendix A

Table 1: SDG&E Budget for MD/HD EV Charging Infrastructure Program (in PG&E escalated dollars)

Sector	Est Cost Per Site - Capital	Est Cost Per Site - Expense	Est Cost Per Site - Total	# of Sites	# of Vehicles	Capital Budget	Expense Budget	Total Budget
Forklifts	131,897	716	132,613	48.0	921.1	6,331,056.0	34,368.0	6,365,424.0
Truck Stop Electrification	98,771	267	99,038	2.4	48.0	237,050.4	640.8	237,691.2
Transport Refrigeration Unit	184,930	609	185,539	42.7	811.7	7,900,209.6	26,016.5	7,926,226.1
Port Cargo Trucks	333,972	593	334,565	2.9	32.6	961,839.4	1,707.8	963,547.2
Transit Bus	340,651	419	341,070	31.6	379.0	10,764,571.6	13,240.4	10,777,812.0
School Bus	146,227	502	146,729	21.6	259.2	3,158,503.2	10,843.2	3,169,346.4
Airport GSE	133,427	487	133,914	9.6	192.0	1,280,899.2	4,675.2	1,285,574.4
MD Vehicles	147,661	435	148,096	192.0	2,304.0	28,350,912.0	83,520.0	28,434,432.0
Other HD Vehicles	340,651	419	341,070	28.8	1,120.3	9,810,748.8	12,067.2	9,822,816.0
Infrastructure Subtotal				379.6	6,068.0	68,795,790.2	187,079.1	68,982,869.3
Program Management						6,898,286.9	-	6,898,286.9
Contingency						6,898,286.9	-	6,898,286.9
Education						-	2,852,091.8	2,852,091.8
Evaluator - 4%							4,409,000.0	4,409,000.0
Data Collection						-	400,000.0	400,000.0
DAC Rebates							8,511,588.0	8,511,588.0
Transit & School Bus Rebates							16,084,235.0	16,084,235.0
Non Infrastructure Subtotal						13,796,573.9	32,256,914.8	46,053,488.7
Program Total						82,592,364.0	32,443,994.0	115,036,358.0

Table 2: SDG&E Budget for MD/HD EV Charging Infrastructure Program (in 2018 dollars – unloaded and un-escalated for Program years 2019 – 2024)

Sector	Est Cost Per Site - Capital Re-escalated to 2018	Est Cost Per Site - Expense Re-escalated to 2018	Est Cost Per Site - Total	# of Sites	# of Vehicles	Capital Budget	Expense Budget	Total Budget
Forklifts	\$125,489	\$680	\$126,169	48.0	921.1	\$6,023,486.5	\$32,628.7	\$6,056,115.2
Truck Stop Electrification	\$93,108	\$253	\$93,361	2.4	48.0	\$223,458.0	\$607.2	\$224,065.3
Transport Refrigeration Unit	\$174,039	\$577	\$174,616	42.7	811.7	\$7,434,935.5	\$24,653.7	\$7,459,589.2
Port Cargo Trucks	\$311,379	\$560	\$311,939	2.9	32.6	\$896,770.9	\$1,614.2	\$898,385.2
Transit Bus	\$310,868	\$393	\$311,261	31.6	379.0	\$9,823,436.5	\$12,405.7	\$9,835,842.3
School Bus	\$136,637	\$474	\$137,111	21.6	259.2	\$2,951,360.5	\$10,232.6	\$2,961,593.0
Airport GSE	\$125,776	\$461	\$126,238	9.6	192.0	\$1,207,452.9	\$4,429.6	\$1,211,882.5
MD Vehicles	\$136,688	\$410	\$137,098	192.0	2,304.0	\$26,244,175.1	\$78,712.2	\$26,322,887.3
Other HD Vehicles	\$310,868	\$393	\$311,261	28.8	1,120.3	\$8,953,005.5	\$11,306.5	\$8,964,311.9
Infrastructure Subtotal				379.6	6,068.0	\$63,758,081.5	\$176,590.4	\$63,934,671.8
Program Management						\$6,393,467.2	\$0.0	\$6,393,467.2
Contingency						\$6,393,467.2	\$0.0	\$6,393,467.2
Education						\$0.0	\$2,695,825.4	\$2,695,825.4
Evaluator - 4%							\$4,409,000.0	\$4,409,000.0
Data Collection						\$0.0	\$400,000.0	\$400,000.0
DAC Rebates							\$8,045,237.2	\$8,045,237.2
Transit & School Bus Rebates							\$15,121,969.2	\$15,121,969.2
Non Infrastructure Subtotal						\$12,786,934.4	\$30,672,031.9	\$43,458,966.2
Program Total						\$76,545,015.8	\$30,848,622.2	\$107,393,638.1

Appendix B

SDG&E's Per Se Reasonable Test

Proposed Ordering Paragraph for SDG&E's per se reasonable test:

1. a minimum of 300 make-ready installations are fully contracted for after five years of Program deployment and 3,000 additional vehicles are electrified that are directly attributable to the authorized Program achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric;
2. a minimum of 10 percent of the infrastructure budget serves transit style buses and school buses; transit style buses include all buses operated by transit agencies and buses operated by entities such as universities, colleges, airports, etc;
3. a maximum of 10 percent of the infrastructure budget serves forklifts;
4. a minimum of 30 percent of the infrastructure budget results in installations in disadvantaged communities in SDG&E's territory, using SDG&E's service territory DAC definition;
5. rebate levels for beach head sectors and customers in disadvantaged communities should be established in consultation with SDG&E's Program Advisory Council;
6. rebate levels should not exceed 50 percent of the charger cost; and
7. a maximum of 10 percent of the infrastructure budget is spent on Program administration.

* Regarding item 1, a make-ready installation will be defined as a distinct build out of infrastructure at a given time. If the same location has future EV growth and a new build out is required, then the subsequent deployment of make-ready infrastructure will be incremental towards the per se minimum requirement of make-ready installations.

** The above per se reasonable test will be adjusted downward if the full funding is not released beyond the initial \$84 million of funding. SDG&E will file a Tier 2 Advice Letter on this matter if full funding is not achieved.

SDG&E's Interim Per Se Reasonable Test

The remainder of the \$107.4 million budget (\$23.4 million) will be released upon approval of a Tier 2 Advice Letter that shows SDG&E's progress towards the final per se reasonable metrics above as well as the interim metrics listed below. The interim per se metrics will provide guidance. However, achieving the interim per se metrics will not be a pre-requisite to filing an advice letter to request the second tranche of funding. However, SDG&E will not file the Tier 2 Advice letter until approximately \$33.0 million of the infrastructure budget has been committed to projects. All numbers unloaded and escalated in 2018 dollars.

1. a minimum of 150 make-ready installations are fully contracted for and 1,500 additional vehicles are expected to be electrified that are directly attributable to the authorized Program achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric;
2. a minimum of 30 percent of the infrastructure budget is committed to installations in disadvantaged communities in SDG&E's territory, using SDG&E's service territory DAC definition.

(END OF APPENDIX A)

APPENDIX B

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of San Diego Gas & Electric Company
(U 902 E) For Approval of Senate Bill 350
Transportation Electrification Proposals Regarding
Medium and Heavy-Duty Electric Vehicles and a
Vehicle-To-Grid Pilot.

Application 18-01-012
(Filed January 22, 2018)

**RESPONSES OF SAN DIEGO GAS & ELECTRIC COMPANY TO QUESTIONS IN
ADMINISTRATIVE LAW JUDGES RULING NOTICING PREHEARING
CONFERENCE REGARDING MEDIUM/HEAVY DUTY ELECTRIC VEHICLE
SETTLEMENT**

1. **The Settlement states that “Achieving the interim per se metrics will not be a re-requisite to filing an advice letter to request the second tranche of funding.” (Settlement at 7)**
 - a. **What, if any, metrics does SDG&E propose to achieve to provide evidence that its spending of the initial tranche of funding is meeting program goals?**

Before getting to the detailed response below, it should be highlighted that the Settling Parties are seeking the approval of the entire budget amount of \$107.4 million. In other words, the process of releasing funds in tranches is simply a timing mechanism to allow for a mid-term review on progress and success before all deployments are complete.

As detailed in the Settlement Agreement, the second tranche of funding is to be released upon approval of a Tier 2 Advice Letter (“AL”) that shows SDG&E’s progress towards (1) the final per se reasonable metrics and (2) the interim metrics. These metrics will provide evidence that SDG&E’s spending of the initial tranche of funding is meeting program goals. Although these metrics are not intended to be prerequisites to filing the Tier 2 AL; the AL will not be filed until approximately \$33 million (66%) of the infrastructure budget has been committed to projects. The Settling Parties agreed that hitting this mark demonstrated sufficient program progress and a track record for purposes of filing the Tier 2 AL.

Further, progress will be demonstrated in the AL itself, which will include a report on the specific progress towards the interim per se reasonable metrics and how SDG&E plans to achieve the final per se reasonableness metrics. The Tier 2 AL will include the number of vehicles supported (by type of vehicle), number of installations and number of chargers per installation. This information will be provided for deployments which are operational as well as locations that are in development. Cost data will be provided for the operational locations, and allocated costs will be provided for locations that are in development. Assuming sufficient progress is shown, approval of the Tier 2 AL (or a resolution, assuming Energy Division deems that a resolution is appropriate) will allow for the second tranche of funding to be released.

The Settling Parties agreed on the foregoing process as a means of allowing for some flexibility and because setting mandatory metrics in advance may be premature and could have unintended consequences. For example, one of the interim per se metrics is 1,500 additional EVs. Due to the range of potential vehicles that can be electrified (from medium-duty delivery trucks to heavy-duty transit buses and semi-trucks), the costs can vary significantly. If 1,000 transit buses and regional semi-trucks are electrified with the first tranche of funding, it would likely cost more than electrifying 1,000 delivery trucks. However, electrifying 1,000 transit buses and regional semi-trucks may be an acceptable measure of progress to justify the release of the second tranche of funding. It is simply too early to specifically determine what justifies the release of the second tranche of funding.

Accordingly, the Settling Parties agreed that SDG&E should be allowed to submit a Tier 2 AL and make the case for why budget expenditures were a prudent use of funds and that the second tranche should be accessed for further transportation electrification.

b. What is the 66 percent of infrastructure budget “trigger” based on?

The trigger was set through negotiations with Settling Parties. 66 percent, or two-thirds, was set to achieve two goals. One, the percentage should be high enough so that a significant portion of the first tranche has been utilized. This will allow for sufficient information to evaluate the early progress. Second, the percentage should be low enough in order to avoid a gap in funding. That is, given the length of time it may take to resolve the Tier 2 AL, if the percentage is too high, then a funding gap could develop, which in turn could cause instability and uncertainty in the MD/HD market in San Diego and a pause in EV procurement by customers.

- 2. The Settlement states that “the per site cost estimates used to determine the budget are based on Pacific Gas and Electric Company’s (PG&E) A. 17-01-022, which escalated costs from 2016 dollars to future dollars with assumed implementation in each year from 2018-2022 of the 5 year program. SDG&E’s budget is equal to \$107.4 million in 2018 dollars, shown in more detail in Appendix A Table 2. This was calculated by de-escalating PG&E’s per site estimates to 2016 dollars, escalating to 2018 dollars, and applying to SDG&E’s program size.” (Settlement Attachment 1 at 3, footnote 1)**

- a. Discuss the decision to present the Settlement budget in 2018 dollars, unloaded and un-escalated.**

As a basis for the costs reflected in the Settlement Agreement, Settling Parties relied on Commission Decision (“D.”) 18-05-040’s costs per site for PG&E and SCE (see Appendix C of D.18-05-040). Since D.18-05-040 Appendix C states that the CPUC “calculated the estimated cost per site based on PG&E’s budget, rather than SCE’s,” the same methodology was used for SDG&E’s program.

SDG&E’s program is intended to run for five years starting in 2019. Since SDG&E’s proposed settlement was developed in 2018, it used 2018 as its starting point prior to applying escalation factors for the subsequent years due to the fact that PG&E’s forecasts were developed starting with 2016 dollars and then escalated to nominal dollars for the period from 2018 through 2022 based on IHS Power Planner Service, third quarter 2016 forecast for materials and labor.

SDG&E felt that it would be clearer to present the settlement budget in 2018 dollars due to the de-escalation and then escalation of PG&E’s costs to arrive at the settled amount of \$107.4 million. The settlement budget was presented unloaded and un-escalated. SDG&E has provided the escalated and loaded budget in the response to 2b, below.

- b. Provide detailed calculations of any escalation of costs SDG&E expects to see over the assumed program implementation timeline of 2019-2024 for each budget item.

MDHD Program Capital & O&M Costs Fully Loaded and Escalated Years 2019-2024						
	Direct Costs	Overheads	Escalation	Overheads	AFUDC &	Grand
	Costs	Only	Only	& Escalation	Property Tax	Total
Capital	\$76,545	\$25,480	\$13,326	\$115,351	\$5,501	\$120,852
O&M	\$30,849	\$182	\$2,918	\$33,948	\$0	\$33,948
Total	<u>\$107,394</u>	<u>\$25,662</u>	<u>\$16,243</u>	<u>\$149,299</u>	<u>\$5,501</u>	<u>\$154,800</u>

The escalation rates used in this forecast for both labor and non-labor were derived using IHS/Market Global Insight's 2nd Quarter 2017 Power Planner forecast, which was published in August 2017. The overhead, AFUDC, and property tax allocations adhere to the methodologies utilized by the Federal Energy Regulatory Commission ("FERC") and were derived using the same methodologies used in SDG&E's most recent General Rate Case ("GRC") filing. SDG&E used internal overhead planning rates for illustrative purposes and its authorized Rate of Return as a reasonable proxy for estimating AFUDC applied to construction work in progress ("CWIP"). However, actual overhead and AFUDC rates will be applied in the determination of actual revenue requirement, and only overheads that are incremental to the MD/HD Program will be included.

It should be noted that the foregoing table was developed using assumptions regarding the split between capital cost categories such as transformers and other electrical services costs. The splits were developed from SDG&E's original MD/HD application to reflect expected capital costs for infrastructure. Actual spend will be tracked during program deployment. Only the revenue requirement on actual spend will be collected from ratepayers. This approach to showing overhead and escalation costs is typical, since actual overhead and escalation costs cannot be predicted in advance. Generally, however, loaders and escalation factors are approved in General Rate Cases, and SDG&E intends to use the approved factors when applying them to its MD/HD program.

- c. Provide a line-item budget that includes any escalation of costs SDG&E expects to see over the assumed program implementation timeline of 2019-2024.

MDHD Program Capital & O&M Costs Fully Loaded & Escalated Years 2019-2024							
Capital Costs	Cost Category	Direct Capital Costs Loaded & Escalated					
		2019	2020	2021	2022	2023	2024
Transformer & Installation	Non-Labor	\$966	\$1,979	\$2,041	\$2,104	\$2,167	\$1,108
Transformer & Installation	Labor	\$732	\$1,501	\$1,548	\$1,595	\$1,643	\$840
Electrical Services	Non-Labor	\$3,161	\$6,477	\$6,680	\$6,884	\$7,092	\$3,626
Electrical Services	Labor	\$5,890	\$12,070	\$12,448	\$12,827	\$13,215	\$6,756
AFUDC & Capitalized Prop. Tx.	Non-Labor	\$230	\$1,055	\$1,097	\$1,132	\$1,166	\$821
Total Direct Capital		\$10,979	\$23,082	\$23,815	\$24,540	\$25,284	\$13,151
							\$120,852
O&M Costs	Cost Category	Direct O&M Costs Loaded & Escalated					
		2019	2020	2021	2022	2023	2024
Customer Allowances/Rebates	Non-Labor	\$2,397	\$4,879	\$5,003	\$5,128	\$5,247	\$2,668
Customer Engagement	Labor	\$284	\$580	\$597	\$614	\$632	\$323
Measurement & Evaluations	Labor	\$506	\$1,034	\$1,064	\$1,096	\$1,128	\$576
Maintenance - Equipment	Non-Labor	\$18	\$37	\$38	\$39	\$40	\$20
Total Direct O&M		\$3,205	\$6,529	\$6,702	\$6,877	\$7,047	\$3,587
							\$33,948
Total Direct Capital & O&M		\$14,184	\$29,612	\$30,517	\$31,417	\$32,332	\$16,738
							\$154,800

Also, see foregoing response regarding how loaders and escalation costs are generated.

3. Provide a comparison calculation (examples are adequate) of cost recovery through SDG&E's distribution rates, as initially proposed in A.18-01-012 and cost recovery at an equal cents per kilowatt hour, as proposed in the Settlement.

a. What are the customer rate impacts for each method of cost recovery, in dollars and as a percentage increase, by rate class?

Table 1 below presents the illustrative class average electric rate impacts for 2020 through 2022 of the proposed settlement revenue requirements. The rate and bill impacts have been updated to reflect rates effective January 1, 2019. Per the proposed Settlement Agreement, costs for the MD/HD EV Charging Infrastructure Program will be recovered from ratepayers through distribution rates and allocated to customer classes on an equal cents per kWh basis, i.e., costs will be allocated to each class based on each class's share of system sales. In addition, the revenue requirements presented reflect revenue requirements beginning in 2019. SDG&E combined the 2019 and 2020 revenue requirement and would recover the 2019 revenue requirement in 2020 to coincide with SDG&E's rate change occurring on January 1, 2020.¹

¹ Timing of implementation is dependent upon approval.

Table 1: Illustrative Class Average Electric Rates Impact – Settlement Proposal²

	Current 1/1/19 (¢/kWh)	Proposed Rate (¢/kWh)	2020 Change from Current (¢/kWh)	Change from Current (%)	Proposed Rate (¢/kWh)	2021 Change from Current (¢/kWh)	Change from Current (%)	Proposed Rate (¢/kWh)	2022 Change from Current (¢/kWh)	Change from Current (%)
Residential	26.251	26.312	0.061	0.23%	26.311	0.060	0.23%	26.328	0.077	0.29%
Small Comm.	24.963	25.024	0.061	0.24%	25.022	0.059	0.24%	25.039	0.076	0.30%
Med & Lg C&I	22.205	22.266	0.061	0.27%	22.264	0.059	0.27%	22.281	0.076	0.34%
Agriculture	17.459	17.522	0.063	0.36%	17.520	0.061	0.35%	17.537	0.078	0.45%
Lighting	21.850	21.912	0.062	0.28%	21.910	0.060	0.27%	21.927	0.077	0.35%
System Total	23.738	23.799	0.061	0.26%	23.797	0.059	0.25%	23.814	0.076	0.32%

In 2020, the annual bill impact is approximately \$3.64 for a typical residential customer using 500 kWh per month in both the Inland and Coastal climate zones, as compared to current rates. On a percentage basis, this equates to an increase of 0.2% for a typical residential customer in both the Inland and Coastal climate zones. In 2022 the annual bill impact is approximately \$4.57 for a typical residential customer using 500 kWh per month in both the Inland and Coastal climate zones, as compared to current rates. On a percentage basis, this equates to an increase of 0.3% for a typical residential customer in both the Inland and Coastal climate zones.

Table 2 below presents the illustrative class average electric rate impacts for 2020 through 2022 using the same proposed settlement revenue requirements as Table 1. The rate and bill impacts have been updated to reflect rates effective January 1, 2019. Consistent with SDG&E's initial proposal in A.18-01-012, the revenue requirements will be recovered from ratepayers through distribution rates and allocated to customer classes using the allocation percentages effective January 1, 2019. In addition, the revenue requirements presented reflect revenue requirements beginning in 2019. SDG&E combined the 2019 and 2020 revenue requirement and would recover the 2019 revenue requirement in 2020 to coincide with SDG&E's rate change occurring on January 1, 2020.³

² Differences between rate classes due to rounding.

³ Timing of implementation is dependent upon approval.

Table 2: Illustrative Class Average Electric Rates Impact – Initial Proposal⁴

	Current 1/1/19 (¢/kWh)	Proposed Rate (¢/kWh)	2020 Change from Current (¢/kWh)	Change from Current (%)	Proposed Rate (¢/kWh)	2021 Change from Current (¢/kWh)	Change from Current (%)	Proposed Rate (¢/kWh)	2022 Change from Current (¢/kWh)	Change from Current (%)
Residential	26.251	26.332	0.081	0.31%	26.330	0.079	0.30%	26.352	0.101	0.38%
Small Comm.	24.963	25.040	0.077	0.31%	25.038	0.075	0.30%	25.060	0.097	0.39%
Med & Lg C&I	22.205	22.249	0.044	0.20%	22.248	0.043	0.19%	22.261	0.056	0.25%
Agriculture	17.459	17.505	0.046	0.26%	17.504	0.045	0.26%	17.517	0.058	0.33%
Lighting	21.850	21.942	0.092	0.42%	21.939	0.089	0.41%	21.964	0.114	0.52%
System Total	23.738	23.799	0.061	0.26%	23.797	0.059	0.25%	23.814	0.076	0.32%

In 2020, the annual bill impact is approximately \$4.78 for a typical residential customer using 500 kWh per month in both the Inland and Coastal climate zones, as compared to current rates. On a percentage basis, this equates to an increase of 0.3% for a typical residential customer in both the Inland and Coastal climate zones. In 2022 the annual bill impact is approximately \$5.99 for a typical residential customer using 500 kWh per month in both the Inland and Coastal climate zones, as compared to current rates. On a percentage basis, this equates to an increase of 0.3% for a typical residential customer in both the Inland and Coastal climate zones.

Table 3 below presents a comparison of the illustrative class average electric rate impacts shown in Table 1 and Table 2 above.

Table 3: Illustrative Class Average Electric Rates Impact Comparison⁵

	2020				2021				2022			
	Initial Proposal (¢/kWh)	Settlement Proposal (¢/kWh)	Change (¢/kWh)	Change (%)	Initial Proposal (¢/kWh)	Settlement Proposal (¢/kWh)	Change (¢/kWh)	Change (%)	Initial Proposal (¢/kWh)	Settlement Proposal (¢/kWh)	Change (¢/kWh)	Change (%)
Residential	26.332	26.312	(0.020)	-0.08%	26.330	26.311	(0.019)	-0.07%	26.352	26.328	(0.024)	-0.09%
Small Comm.	25.040	25.024	(0.016)	-0.06%	25.038	25.022	(0.016)	-0.06%	25.060	25.039	(0.021)	-0.08%
Med & Lg C&I	22.249	22.266	0.017	0.08%	22.248	22.264	0.016	0.07%	22.261	22.281	0.020	0.09%
Agriculture	17.505	17.522	0.017	0.10%	17.504	17.520	0.016	0.09%	17.517	17.537	0.020	0.11%
Lighting	21.942	21.912	(0.030)	-0.14%	21.939	21.910	(0.029)	-0.13%	21.964	21.927	(0.037)	-0.17%
System Total	23.799	23.799	0.000	0.00%	23.797	23.797	0.000	0.00%	23.814	23.814	0.000	0.00%

(END OF APPENDIX B)

⁴ Differences between rate classes due to rounding.

⁵ Differences between rate classes due to rounding.