MD electric delivery vehicles. The businesses will be responsible for procuring the electric delivery vehicles. SDG&E proposes a total project cost of $3.691 million; $3.232 million in capital, and $458,786 in expense.

According to SDG&E, fleet delivery vehicles are good candidates for TE due to their operating characteristics and routes. The proposed project aims to eliminate the infrastructure costs to a fleet owner interested in utilizing EVs for their services.

SDG&E's primary partner will be United Parcel Service (UPS). SDG&E proposes to help support electrification of 60 of their delivery vehicles by providing charging infrastructure at three UPS locations. At each location, SDG&E plans to deploy 20 L2 chargers, and one DCFC. Two of the UPS sites are located within a DAC. SDG&E can also partner with other businesses to support about 30 more electric delivery vehicles with L2 chargers.

Like the Electrify Local Highways project, SDG&E proposes that fleet delivery partners be charged a commercial GIR that reflects grid conditions and encourages off-peak charging. SDG&E plans to work with its fleet partners to develop "a load management plan that efficiently integrates the new load with SDG&E's grid, thereby generating benefits to all ratepayers through grid optimization."[53]

SDG&E plans to use on-board data loggers and meter data to analyze electrification of fleet delivery vehicles. This data will help SDG&E to better understand the future electrification needs of fleet delivery vehicles. SDG&E also plans to analyze the utilization and the need for a DCFC.

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[53] Exhibit SDG&E-3 at RS-49.

SDG&E estimates that the 90 incremental EVs will result in an annual reduction of 894 metric tons of carbon dioxide per year, and a lifetime net carbon dioxide reduction of 14,109 metric tons.

After these electric delivery vehicles go into service, SDG&E plans to collect one year of data. Under this proposal, SDG&E will install charging infrastructure to support electric delivery vehicles at approximately six locations.[54] SDG&E includes a GIR with this PRP to encourage charging at times beneficial to the grid.[55]

3.4.1. Alignment with Statutory and Regulatory Goals

SDG&E's Fleet Delivery Services PRP aligns with the goals of SB 350 because it (1) encourages widespread TE;[56] (2) aims to reduce the health and environmental impacts from air pollution;[57] (3) assist in grid management and integration of renewable generation resources;[58] and (4) aims to produce data concerning the current and future TE market.[59] To ensure that SDG&E's Fleet Delivery Services project creates as many high quality jobs as possible, and has the most direct benefits to ratepayers, we direct SDG&E to identify minority-owned business enterprises/woman-owned business enterprises (MBE/WBE) and/or locally-owned fleets in deploying this project beyond the infrastructure deployed at UPS sites. All of the infrastructure beyond what is

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[54] A.17-01-020 at 7.

[55] A.17-01-020 at 7.

[56] Section 701.1(a)(2).

[57] Section 740.8(2).

[58] Section 740.12(a)(1).

[59] Section 740.12(c).

deployed at UPS sites must go to supporting up to 30 vehicles at MBE/WBEs and/or locally-owned fleets.

SDG&E is also directed to conduct outreach when selecting another business(es) to partner with to identify a site(s) where end-to-end utility ownership of the charging infrastructure may be the best or only model the customer is able or willing to pursue.

SDG&E's Fleet Delivery Services project encourages widespread TE in the fleet delivery vehicle industry as well as the MD/HD fleet vehicles sector. SDG&E's goal in supporting up to 60 UPS delivery vehicles in addition to partnering with other businesses to support an additional 30 electric delivery vehicles provides increased access to charging infrastructure and increased utilization of all-electric fleet delivery vehicles.

SDG&E's Fleet Delivery Services project aligns with the goals of SB 350 because utilization and implementation of 90 all-electric delivery vehicles will have an impact in reducing pollutants from MD/HD fleet vehicles. As referenced above, SDG&E estimates that the addition of 90 all-electric fleet vehicles will result in an annual reduction of 894 metric tons of carbon dioxide per year, and a lifetime net carbon dioxide reduction of 14,109 metric tons.

The Fleet Delivery Service participants will have to enroll in time-varying rates, as discussed further in Section 3.7.2. The time-varying rates the participants will enroll in have the potential to create less costly electric service because such rates encourage charging during off-peak times. This off-peak charging, in turn, leads to the improved electric system utilization. Additionally, the time-varying rates will encourage charging during periods of high renewable energy generation when demand for electricity is low. This will lead to the improved integration of renewable energy generation as contemplated in

§ 740.8(a). SDG&E's Fleet Delivery Services project has the potential for SDG&E to help its fleet partners develop and manage a charging plan that will maximize grid optimization, benefitting not only SDG&E's fleet partners, but ratepayers.

SDG&E's Fleet Delivery Services project aligns with the goals of SB 350 because it aims to produce data concerning the current and future TE markets. SDG&E's plan to implement on-board data loggers and meter data to analyze the electrification needs of fleet delivery vehicles will provide a basis for whether or not this project should be scaled in SDG&E's service territory and throughout other service territories. As more consumers shop online, fleet delivery vehicles are relied upon more. Collecting data to help understand both the charging needs of electric fleet owners and grid optimization, has the potential to inform the future of all-electric fleet vehicles not only within SDG&E service territory, but also throughout California.

SDG&E's Fleet Delivery Services PRP is approved. SDG&E is directed to partner with locally-owned businesses or MBE/WBEs that cannot or are not willing to own the additional infrastructure associated with the program, to support up to 30 more electric vehicles. SDG&E should discuss its selection criteria and its choice of any additional fleet partner(s) with its Program Advisory Council (PAC) as described in Section 7 below.

3.5. Green Taxi/Shuttle/Rideshare Project

SDG&E proposes to partner with taxi companies, shuttle companies, and transportation network companies (TNC) who want to electrify their fleets. SDG&E proposes to install, own, operate, and maintain charging facilities for these fleets that are integrated with the grid. SDG&E will also provide vehicle and fueling incentives.

SDG&E proposes up to five charging facilities, with each charging facility including one DCFC, and two L2 EVSEs. In addition, SDG&E proposes to install and own 50 L2 EVSE at taxi cab charging sites, shuttle charging sites, and at the homes of drivers for TNC where feasible and applicable.

SDG&E proposes to provide financial incentives to these companies to purchase EVs. For taxi companies, SDG&E proposes to offer a financial incentive of $10,000 per EV. Only one incentive per taxi company will be permitted. SDG&E will offer an EV fueling credit of $4,000 per EV for taxi companies to be used at an SDG&E project charging facility designed to maximize the number of zero emission miles driven by these EVs. For shuttle companies, SDG&E proposes to offer a financial incentive of $10,000 per electric shuttle vehicle, with no more than two incentives per shuttle company. For drivers of transportation network companies, SDG&E proposes to provide a zero emissions credit of $80 per every 1,300 kilowatt hours used as a transportation fuel for the first 12 months.

The companies and drivers for the TNC will be required to enroll in SDG&E's proposed public GIR as part of the project. For charging facilities that are installed at the home of a taxi cab driver or a driver for a transportation network company, these drivers will be required to enroll in a residential grid integrated rate.

SDG&E states that "Exposing taxi, shuttle and rideshare companies and drivers to [EVs] at this time will increase confidence in the technology, and

knowledge about the relevant economic benefits, which will help to accelerate the widespread adoption of EV in this market."[60]

After the project is approved, and the vehicles are in service, SDG&E plans to collect and report the data for a period of one year. SDG&E estimates that this project will result in a first year reduction of 769 metric tons of carbon dioxide, and a lifetime net carbon dioxide reduction of 12,032 metric tons.

SDG&E requests $3.467 million for this project, made up of $2.456 million for capital and $1.011 million for expense.

3.5.1. Alignment with Statutory and Regulatory Goals

As proposed, it is unclear how SDG&E's Green Taxi/Shuttle/Rideshare project align with the goals of SB 350. Many parties expressed concerns about this proposal, including the (1) benefits to ratepayers; (2) competitive issues, and; (3) viability of the project accelerating widespread TE. In particular, we have concerns with the proposed incentives for taxis and TNC drivers, as opposed to the incentives for shuttle companies. While we believe it is an important endeavor to electrify the taxi and TNC sector, given the record in this case, we are limiting our approval of this project to focus only on the shuttle company component. However, we do not prejudice any new applications to address electrification of taxi and TNC fleets.

TURN questions the ratepayer impact of this project and its impact on widespread TE given that $3.5 million in ratepayer funds will be spent to support a goal of adding 58 new EVs to SDG&E's service territory.[61] Specifically, TURN questions why, given existing state and federal rebates and tax credits for

[60] Exhibit SDG&E-3 at RS-62.

[61] TURN Opening Brief at 7, referencing Exhibit SDG&E-3 at RS-64.

EV purchasers, an additional $10,000 ratepayer funded incentive payment is a necessary part of the project.[62]

TURN also raises equity concerns regarding the use of ratepayer funds to pay taxi and shuttle companies and/or drivers $10,000 to purchase an EV.[63] TURN contends it is "inappropriate to have all SDG&E ratepayers, including low-income residential customers, pay for a $10,000 incentive for electric shuttles and taxis in addition to the many other subsidies SDG&E proposes."[64] We agree with this contention, and reject SDG&E's proposal to offer $10,000 per electric shuttle because offering vehicle incentives does not fall within investor-owned utilities' core responsibilities.[65] Moreover, there are existing state subsidies available for the purchase of electric shuttles under ARB's Hybrid Voucher Incentive Program.

Although Natural Resources Defense Council (NRDC) and General Motors (GM) state that electrifying TNC vehicles could significantly reduce emissions from TNC fleets,[66] EVgo notes this project would directly compete with privately funded partnerships forming between EVSPs and emerging taxi/TNC companies, such as the one between EVgo and GM's Maven.[67] SDG&E's proposal to provide free charging infrastructure and fueling incentives to TNC drivers could divert TNC companies' interest in partnering with nonutility

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[62] TURN Reply Brief at 9.

[63] TURN Opening Brief at 7, referencing Exhibit SDG&E-3 at RS-67.

[64] TURN Opening Brief at 7.

[65] TURN Opening Brief at 8.

[66] NRDC Opening Brief at 18; GM Reply Brief at 4.

[67] EVgo Opening Brief at 3.

entities unable to provide ratepayer funded subsidies to drivers. TURN also raises competition concerns, contending that SDG&E's Taxi/Shuttle/Rideshare project competes with nonutility companies, and could deter private investment.[68] TURN points to D.16-01-045 and D.16-12-065 as examples of why a full utility ownership model should not be allowed without limitations. For example, TNC company Uber has initiatives before the Oregon Public Utility Commission designed to partner with the local utility and leverages ratepayer funds.[69] We support these efforts by TNC companies and encourage the utilities to look for potential partnerships that optimize the utilities' and transportation carriers' different core competencies.

While we agree the electrification of taxi and TNC fleets could have a significant impact on air quality in the state, it is unclear whether SDG&E's Green Taxi/Shuttle/Rideshare project would provide direct benefits to anyone other than the few program participants. It is also unclear as to how providing vehicle and fueling incentives to a select few drivers will accelerate widespread TE. While SDG&E proposes to install new L2 and DCFC stations in this pilot, use of the charging equipment would be limited to program participants. EVgo argues the public DCFC stations in SDG&E territory operate on a tariff that "contains some of the highest demand charges EVgo faces in the country."[70] EVgo believes existing stations would be unable to compete with the DCFC

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[68] TURN Opening Brief at 7.

[69] SDG&E Opening Comments at 3, referencing Oregon Public Utility Commission, Docket Number UM 1811, PGE Transportation Electrification Program Applications.

[70] EVgo Opening Brief at 3 to 4.

owned by SDG&E that are eligible for the proposed Public GIR, described in Section 3.7.1, which does not include any demand charges.[71]

Furthermore, SDG&E does not provide adequate information to assess whether its proposal to install, own, and operate charging infrastructure for four electric taxis and up to 50 TNC drivers will accelerate transportation electrification. The financial incentives may encourage taxi companies to buy one additional electric vehicle each, but if no further EVs are adopted, the proposed charging infrastructure could be underutilized. Similarly, the incentives offered to TNC drivers would be most attractive to drivers that already own an electric vehicle, and may not result in the displacement of any internal combustion engines.

SDG&E's Taxi /Shuttle/Rideshare project is modified to focus solely on shuttle services that served fixed destinations, like hotels to airports or parking lots to transportation hubs.[72] Shuttles serving fixed routes have predictable duty cycles, as opposed to the varying drive times of taxi and rideshare companies. Parties support this modification, stating that utility expertise will be invaluable in evaluating what rates will support current and future TE.[73] Parties also point out that SDG&E's work in the shuttle sector has the potential to incorporate renewables with the infrastructure for electric fleets.[74] SDG&E's budget is reduced by $309,400,[75] with remaining funds available to cover the cost of

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[71] EVgo Opening Brief at 3.

[72] Hereafter we refer to the adopted project as the Green Shuttle Priority Review Project.

[73] San Diego Airport Parking (SDAP) Opening Brief at 5.

[74] SDAP Opening Brief at 5.

[75] The $309,400 reduction is apportioned as $192,000 in expenses and $117,400 in capital.

installing charging platforms that include L2 charging infrastructure and up to one DCFC for use by shuttle companies that agree to participate in this pilot. SDG&E may not use any of the funds approved for this project for vehicle incentives.

SDG&E is directed to work with pilot participants to design charging stations that best meet the shuttle companies' charging needs and ensure sufficiently high utilization rates. Additionally, we approve SDG&E's proposal to install a solar array and energy storage at one project facility to test the use of stored renewable energy to reduce a facility's demand during critical peak hours. If the shuttle operator and/or site host is able and willing to accommodate it, SDG&E should work with the participating shuttle company or companies to determine whether to allow specific taxi/vanpool/TNC company partners or make the EVSE available to all EV drivers, and whether the Public GIR is appropriate for any additional users.

3.6. Dealership Incentives

SDG&E's Dealership Incentives are designed to provide education and incentives to car dealerships and their sales teams. According to SDG&E, research "suggests there is insufficient EV training, poor salesperson EV knowledge, low retail satisfaction, and low commissions ($150-$200) to encourage salespeople to sell an EV over an internal combustion engine vehicle."[76]

The education portion of the project will be composed of an online or in person training course for the dealership and its sales team on the following EV

[76] Exhibit SDG&E-3 at RS-81.

topics: the benefits of driving electric; how to easily describe the benefits of driving electric during the sales process; and how to sign up drivers for the residential GIR with SDG&E. Once the salesperson has successfully passed this training, the salesperson can register online with SDG&E to participate in the project and to begin receiving incentives. SDG&E plans to focus on dealerships that are located within or adjacent to DACs.

To request an incentive payment, the salesperson must provide details about the sale or lease of an EV, including the vehicle identification number and copies of the proof of sale documents. SDG&E proposes to issue a $250 incentive payment to the car dealership, and a $250 incentive payment to the salesperson, for each new EV sold or leased.

To maximize the exposure of this project, SDG&E proposes to launch the competition on the day of the National Drive Electric Week's Electric Vehicle Day, which is expected to occur in September 2018. The project will run for one year following this launch.

SDG&E estimates that in the first year, there will be a reduction of 2,517 metric tons of carbon dioxide. SDG&E further estimates that there will be a lifetime net reduction in carbon dioxide of 41,346 metric tons based on their goal of 1,500 additional EVs being purchased as a result of the program.

SDG&E requests $1.790 million in expense for Dealership Incentives.

3.6.1. Alignment with Statutory and Regulatory Goals

With modifications, we approve SDG&E's Dealership Incentives project as we believe it will encourage widespread TE and help meet California's GHG

emissions reductions goals.[77] Some parties took issue with SDG&E's use of ratepayer funds to pay dealerships and their salespeople incentives to sell EVs. TURN contends that SDG&E's Dealership Incentives are inconsistent with the goal and statutory requirements of SB 350.[78] TURN contends that this is a questionable use of ratepayer funds because it is not directly related to SDG&E's normal business operations, such incentives amount to sales commission bonuses subsidized with ratepayer funds, and the cash incentive is not a long term scalable solution to encourage widespread TE.

Instead of using ratepayer funds to incent dealerships to sell EVs, TURN contends that this issue is better addressed through government mandates regarding the sales of EVs such as tax breaks. TURN also recommends "that the $250 incentives for dealership and salespeople be replaced by $50 incentives to EV purchasers or lessees and the salesperson if the purchaser or lessee signs up for an EV Time of Use (TOU) rate within one week of purchasing or leasing an EV.[79]

While we understand TURN's concerns that this project is outside of scope of activities that utilities have thus far participated in regarding TE adoption, we believe that SDG&E's proposal does have some merit to better understand whether or how dealer incentives can influence EV adoption. Car dealerships play a critical role in promoting widespread TE and meeting the State's 2025 EV adoption goals. As noted in the 2016 Zero Emission Vehicle (ZEV) Action Plan, increased dealership engagement and positive consumer experiences are critical

[77] Section 740.12(b).

[78] TURN Opening Brief at 6.

[79] TURN Opening Brief at 7.

to expanding the ZEV market."[80] After reviewing TURN's concerns and to better align this project with the utility's core competencies, we modify SDG&E's Dealership Incentives to allow the $250 incentives to be paid to the dealership and salesperson only if the EV buyer/lessee enrolls in an EV rate.

SDG&E's plan to educate car salespeople has the potential to drive economic growth in the EV sales industry.[81] As SDG&E notes, "according to the New Car Dealers Association of San Diego County, car dealership jobs have not only increased for the fifth consecutive year, but the jobs created also remain in San Diego County, which provides substantial economic benefits for the region as a whole...Ratepayers should benefit from this project by creating an EV-educated dealership workforce that will remain local to San Diego."[82]

While SDG&E's plan to market its incentive program as a competition and launch it during the National Drive Electric Week's Electric Vehicle Day may help ensure members of SDG&E's community are well-informed about the benefits of buying or leasing an EV during that national outreach effort, we encourage SDG&E to launch this project sooner than September 2018. SDG&E's online or in-person EV training for dealership personnel aims to make dealers more comfortable with being able to explain the benefits of an EV to their customers. Moreover, by offering the $250 incentives to salespeople and dealers only if a customer enrolls in an EV TOU rate, the program will increase salesperson and consumer knowledge about EV charging needs and could

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[80] Governor Edmund G. Brown's Interagency Working Group on Zero-Emission Vehicles, 2016 ZEV Action Plan at 19. https://www.gov.ca.gov/docs/2016_ZEV_Action_Plan.pdf.

[81] Exhibit SDG&E-3 at RS-80.

[82] Exhibit SDG&E-3 at RS-86, citing New Car Dealers Association of San Diego County, 2016 Economic Impact Report.

facilitate the efficient grid integration of these resources. Launching this effort prior to September will support the effort to accelerate widespread transportation electrification.

As GM notes, auto dealers have various business models, including some that do not provide commission to their salespeople.[83] SDG&E should ensure the incentives and educational materials it develops leverage its core competencies as a utility, are flexible to account for variable dealership business models, and are targeted to complement dealers' existing efforts.

In addition to accelerating widespread TE, SDG&E contends that its Dealership Incentives program has the potential to reduce emissions by 2,517 metric tons of carbon dioxide in the first year, and result in a lifetime net reduction of 41,346 metric tons of carbon dioxide.[84] If successful, the project expects to result in 1,500 new EVs on the road with the associated GHG emissions reductions.[85]

After reviewing parties' concerns about this project, we approve SDG&E's Dealership Incentives project with the following modifications. SDG&E may offer the $250 incentives only if the EV buyer or lessee enrolls in one of SDG&E's EV TOU rates (EV-TOU or EV-TOU-2) or any new residential EV rate that is available at the time of purchase. In addition, SDG&E must provide dealers with information on safe EVSE installation described in our Safety Checklist, as described in Section 10, along with the rebate information.

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[83] Reply Brief of General Motors, LLC at 5.

[84] Exhibit SDG&E-3 at RS-87; Exhibit SDG&E-8 at JCM-4.

[85] Exhibit SDG&E-3 at RS-85.

3.7. New Rates for Electric Vehicle Users

SDG&E proposes two new rates to support some of its PRPs: a public grid-integration rate and a commercial grid-integration rate.

3.7.1. Public Grid-Integration Rate

SDG&E recommends that its Public Charging GIR be applicable to participants on SDG&E's Electrify Local Highway and Green Taxi/Shuttle/Rideshare projects.[86] In addition SDG&E recommends that the GIR be made optionally available to all customers.[87] Multiple parties expressed concerns regarding SDG&E's proposed public GIR, which will change hourly based on day-ahead pricing from CAISO and adders to reflect grid constraints at the system and circuit levels.

Public charging stations provide a unique challenge in that there is no single driver that charges there. Demand charges associated with all charging at the station apply to the site host's bill. If a site is underutilized, it is difficult for the site host to recover potentially high demand charges through electricity sales. However, as parties note, SDG&E's "rate design is unnecessarily complex and creates uncertainty for itinerant EV drivers, which could serve as a disincentive to wider EV adoption."[88] While pilot participants would know to expect the price variability associated with the public GIR, other drivers may be surprised by unusually high prices during system or circuit peak hours.

SDG&E's proposed Public GIR does not include demand charges, which could test the use of dynamic rates to send price signals to customers. TURN

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[86] Exhibit SDG&E-5 at CF-30.

[87] Exhibit SDG&E-5 at CF-30.

[88] Opening Brief of NRDC, et. al. at 7.

recommends the utility collect "sufficient data to determine whether the additional complexity results in incremental load shifting compared to a Time of Use ("TOU") rate."[89]

Dynamic rates are complicated, highly variable, and do not provide enough predictability for drivers that may not be participating in a specific utility program. While we are not ruling out use of a dynamic rate at any public charging station in future proposals, at this time, SDG&E may not apply its proposed dynamic Public GIR at the EVSE it will own and operate through its Electrify Local Highways project as described in Section 3.2. When implementing that program, SDG&E is directed to apply an approved TOU rate, and to submit a Tier 2 Advice Letter detailing how it will pass through a portion of the sites' demand charges on to the drivers charging at the public stations. While we appreciate SDG&E's effort to embrace dynamic pricing for public charging, we believe, at least in the near term, this type of public charging site requires more pricing predictability for potential EV charging customers. We encourage SDG&E to develop a TOU rate for public charging sites that provides more pricing predictability for drivers.

To facilitate data collection as suggested by TURN, SDG&E may offer the proposed Public GIR at the charging stations SDG&E owns and operates for the adopted Shuttle Priority Review Project adopted in Section 3.5. This pilot is more limited to particular commercial partners that are more likely to be educated on and benefit from the dynamic rates.

[89] TURN Opening Brief at 33.

3.7.2. Commercial Grid-Integration Rate

SDG&E proposes to apply a Commercial Grid-Integration Rate to customers participating in its Fleet Delivery Services project as described in Section 3.4, and to the taxi and TNC drivers that would have participated in its Green Taxi/Shuttle/Rideshare program described in Section 3.5.

SDG&E proposed significant changes to the structure of its proposed Commercial GIR in its rebuttal testimony submitted as part of this proceeding's standard review process. In light of those changes, the Commission will consider whether to approve the Commercial GIR as amended through the Standard Review Project track of the instant proceeding. In the Shuttle Priority Review Project as approved, any participating taxi, vanpool, or TNC drivers would have to agree to take service on the Public GIR or other SDG&E tariff, if allowed to utilize the EVSE installed for the shuttle program as described above. For the approved Fleet Delivery Services Program, SDG&E is directed to work with participating customers to determine the most appropriate available rate at the time of implementation.

4. Discussion and Analysis of SCE's Proposed PRPs

SCE proposes six PRPs be authorized for a total $19.450 million.

SCE: Summary of Proposed PRPs[90]

Section	Proposed PRP	Capital	Expense	Total
4.1	Residential Make-Ready Rebate Pilot	$2.96	$1.04	$4.0
4.2	EV Rideshare Reward Pilot	$0.79	$3.88	$4.0
4.3	Urban DCFC Clusters Pilot	$3.79	$0.19	$3.98
4.4	Electric Transit Bus Make-Ready Program	$3.83	$0.15	$3.98
4.5	Port of Long Beach Rubber Tire Gantry Crane	$3.04		$3.04
4.6	Port of Long Beach Terminal Yard Tractor	$0.45		$0.45
	SUBTOTAL:	**$14.86**	**$5.26**	**$19.45**

Many of SCE's proposals included very detailed information about the structure of the program, identifying specific project partners and leveraging other sources of funding. Parties largely supported these proposals, particularly the ones that will occur at the Port of Long Beach. SCE's Port of Long Beach projects are approved as proposed. SCE's Residential Make-Ready Rebate Project, Urban DCFC Clusters, and Electric Transit Bus Make-Ready projects are approved with modifications as described in the following sections. SCE's EV Rideshare Incentives project is denied, for reasons detailed in Section 4.2.1.

[90] All costs in millions and based on A.17-01-021, without overhead loaders.

Table 1 in Section 6 summarizes the approved funding levels for SCE's proposed projects.

4.1. Residential Make-Ready Rebate Pilot

The Residential Make-Ready Rebate Pilot provides a rebate to residential customers to help offset the cost of hiring a licensed electrician to install make-ready infrastructure and the associated permitting fees. The rebate will be determined by surveying service providers or through trade group studies, and is intended to cover most standard costs incurred by customers who need to install a new circuit, new panel, or new meter socket for home EV charging.[91] The rebate will not cover costs for charging equipment. SCE notes that this pilot is complimentary to its Charge Ready Pilot Program.[92]

The make-ready rebate will be offered in two tiers:

1. Tier 1 Rebate is for customers who agree to enroll in a whole-house TOU rate plan (Schedule TOU-D or TOU-DT) for 24 months.[93]
2. Tier 2 Rebate is for customers who agree to take service on Schedule TOU-EV-1, SCE's separately-metered EV rate plan, for 24 months.[94]

The Residential Make-Ready Rebate Pilot will be available on a first-come, first-serve basis to eligible residential customers who must:

- Have access to a dedicated parking space in either a single-family residence or multi-unit dwelling in SCE's service territory;

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[91] Exhibit SCE-01 at 30.

[92] D.16-01-023 adopted SCE's Charge Ready Pilot Program, which targets non-residential customers.

[93] Exhibit SCE-01 at 29.

[94] Exhibit SCE-01 at 29-30.

- Obtain approval from the property owner (if renting) to install the make-ready infrastructure;
- Provide proof of a recent EV purchase or lease, and registration of a light-duty EV at the SCE's customer's address;
- Provide a receipt from a licensed electrical contractor for deploying a new circuit (Tier 1 Rebate) and for the installation of a new panel or meter socket to house SCE's meter for Schedule TOU-EV-1 (Tier 2 Rebate), together with a copy of all permits required by the city;
- Agree to take service on either Schedule TOU-D or TOU-DT for 24 months (Tier 1 Rebate); or Schedule TOU-EV-1 for 24 months (Tier 2 Rebate); and
- Agree that SCE may conduct random spot checks at the customer's residence to confirm that the work was performed.[95]

SCE contends that the cost of installing EV charging infrastructure discourages consumers from buying or leasing an EV, and that the rebate will help address this concern. SCE plans to use targeted online advertising and to work closely with EV dealers to make prospective EV drivers aware of this pilot particularly in DACs.

SCE plans to collect and report on a number of different metrics, including the participation by segment such as single family residence, multi-unit dwelling, and DAC; volume of unserved customers if the pilot's budget is fully expended during the pilot's duration and not all applicants are served; electrical work and permitting costs; customer preference between the whole-house TOU

[95] Exhibit SCE-01 at 31-32.

rate and the separately-metered TOU rate; load profiles, including off-peak usage; and customer satisfaction with the pilot and with TOU rate plans.

SCE estimates that as many as 5,000 of its residential customers could participate in this pilot. SCE requests $4 million for the Residential Make-Ready Rebate Pilot which will cover "the cost of the make-ready rebates, enrollment and rebate processing (including compliance verification), and education and outreach to potential participating customers."[96]

4.1.1. Alignment with Statutory and Regulatory Goals

SCE's Residential Make-Ready Rebate Pilot aligns with the goals of SB 350 by (1) encouraging widespread TE,[97] (2) helping to achieve GHG reduction goals,[98] and (3) producing data concerning the current and future TE market.[99]

SCE's Residential Make-Ready Rebate Pilot will help defray costs associated with in-home charging. Through the provision of rebates to offset permitting and licensed-electrician fees associated with installing electric vehicle chargers, SCE aims to incentivize customers to take the step toward EV ownership. As GM notes, by tying the rebates to TOU rates, SCE can demonstrate customer savings associated with charging during off-peak hours.[100] SCE's criteria for customer enrollment eligibility are not overly burdensome, and should not deter individuals from buying or leasing an EV. Moreover, SCE's requirement that participants enroll in a TOU rate has the potential to lower EV

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[96] Exhibit SCE-01 at 34.

[97] Section 701.1(a)(2).

[98] Section 740.12(a)(1).

[99] Section 740.12(c).

[100] Reply Brief of General Motors, LLC at 2.

charging costs by encouraging charging during off-peak periods when the grid is underutilized.[101] SCE is directed to limit its make-ready rebates to customers that purchase a Level 2 charging station, to maximize the potential benefit of its investments given the increasing battery sizes of light-duty EVs.

SCE estimates that as many as 5,000 of its residential customers could participate in this pilot. Furthermore, SCE's plan to use targeted advertising to prospective customers in DACs will allow benefits from EV adoption, including improved air quality and lower transportation fuel costs, to accrue near or adjacent to DACs.

SCE's Residential Make-Ready Rebate Pilot should produce data concerning the current and future TE market. SCE's plan to collect and report on a number of different metrics from this pilot will help identify customer satisfaction with the pilot and the different TOU rate plans.

Several parties suggest SCE should set aside a percentage of the rebates to go to customers in DACs. As Green Power Institute and Community Environmental Council note:

> EV policies are designed first and foremost to promote EV adoption and mitigate climate change... where it makes sense to include DAC carveouts or a DAC focus in order to enhance EV adoption, we fully support such policies. But we don't support shifting the focus of EV policy to economic development of DACs when that is not the intention of legislators or the Commission in this proceeding.[102]

TURN also provides recommendations on how to increase EV adoption among low-income drivers and residents of DACs within SCE's Residential Make-Ready

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[101] Opening Brief of the NRDC, et. al. at 21.

[102] GPI-CEC Reply Brief at 6.

pilot.[103] First, TURN recommends limiting program eligibility to customers who purchased or leased an EV within 6 months of applying for this rebate, to fully measure and evaluate the impact of the program on EV adoption.[104] Second, TURN recommends reserving 50% of the rebate funds for low-income customers (California Alternate Rates for Energy/Family Electric Rate Assistance eligible) or customers living in a DAC.[105] Within this recommendation, TURN recommends SCE utilize the income eligibility requirements from the Clean Vehicle Rebate Project to prohibit customers above certain income levels from receiving rebates.[106] Finally, TURN recommends SCE measure the impact on EV adoption by conducting surveys or other methods to determine what groups are most influenced by a home charging rebate to purchase an EV.[107]

TURN's proposed modifications align with the overarching goals of SB 350. However, we have concerns that implementing income eligibility requirements would be administratively burdensome for a small, short-term project. Therefore, we adopt TURN's modifications to (1) limit program eligibility to customers who purchased or leased an EV within 6 months of applying for this rebate; (2) reserve 50% of the rebate funds for customers living in a DAC, and; (3) measure the impact on EV adoption by conducting surveys or other evaluation methods. These modifications will help to maximize EV

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[103] TURN Opening Brief at 10.

[104] TURN Opening Brief at 10.

[105] TURN Opening Brief at 10.

[106] TURN Opening Brief at 10, referencing Clean Vehicle Rebate Project Income Eligibility webpage. The current income caps are: $150,000 for single filers, $204,000 for head-of-household filers, $300,000 for joint filers. Available at: https://cleanvehiclerebate.org/eng/income-eligibility.

[107] TURN Opening Brief at 10.

adoption and will produce data to measure the scalability of this pilot in both SCE's service territory and throughout California. After consulting with its PAC, SCE may release the funds reserved for DAC customers if they have made a reasonable attempt at outreach to DACs and any of the set-aside funds remain after the half-way point of the pilot sign-up period.

SCE proposed to treat its rebate costs as regulatory assets. Consistent with D.16-12-065, SCE is directed to treat these rebates as expenses and not as regulatory assets.

SCE's Residential Make-Ready Rebate Pilot is approved as modified.

4.2. EV Rideshare Reward Pilot

The Rideshare Reward Pilot provides a monetary award to rideshare drivers who use an EV and exceed a specified number of rides during a given period of time. SCE "plans to work with interested rideshare companies to administer the pilot, determine reward requirements, and develop communications to drivers while ensuring compliance with privacy and confidentiality requirements."[108]

SCE notes that despite the growing use of rideshare transportation, very few rideshare drivers use EVs. SCE's pilot is designed to encourage EV adoption by rideshare drivers, and to increase the EV miles traveled to support energy and clean air policy requirements and goals.

To be eligible for this pilot, the drivers must:

1. Qualify as residential customers;
2. Provide proof of their personal vehicle as defined by D.16-12-037; and

[108] Exhibit SCE-01 at 35.

3. Complete the number of required rideshare trips in a given week or month, as demonstrated[109] by rideshare or taxicab services participating in the pilot.[110]

SCE plans to conduct online advertising targeted at customers interested in EVs and rideshare services, work with EV dealers, and with rideshare services to reach drivers. SCE may leverage its Clean Fuel Reward program, and CARB's Enhanced Fleet Modernization Program and Plus Up Pilot Project[111] to disseminate information about this rideshare pilot. SCE also plans to target customers in DACs to participate in the pilot.

SCE will collect and report on a number of different metrics, including the volume of participants by vehicle type and community location; survey results from participants, including the benefits and challenges of using an EV for rideshare services; volume and amounts of rewards issued; and miles traveled.

SCE requests funding of $4 million for the cost of the rewards, enrollment, rebate processing, and education and outreach. SCE will take about six months to implement the project, which will run for about 12 months following the launch.

4.2.1. Alignment with Statutory and Regulatory Goals

As proposed, it is unclear how SCE's EV Rideshare Reward Pilot aligns with the goals of SB 350. As stated in a previous section, while we believe that electrifying the TNC sector is an important endeavor, the SCE proposal as

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[109] Exhibit SCE-01 at 36 FN 82: SCE will work with rideshare companies to determine these requirements.

[110] Exhibit SCE-01 at 35-36.

[111] Exhibit SCE-01 at 36 citing https://www.arb.ca.gov/msprog/aqip/efmp/efmp.htm and https://www.arb.ca.gov/newsrel/efmp_plus_up.pdf.

presented does not clearly identify the barriers and opportunities that balance accelerating widespread TE with benefits to ratepayers.

Although proposed to encourage EV adoption, some parties oppose this pilot on the basis that it will not encourage widespread EV adoption in the TNC sector. The National Diversity Coalition (NDC) contends that SCE's rideshare project will not result in long term, scalable benefits because of the limited term of the program, and because there is no evidence that providing such an incentive will encourage more people to purchase or lease an EV.[112] However, NRDC et. al., counter that shared-use vehicles comprise a rapidly growing percentage of vehicle miles traveled, which demonstrates a need for electrifying this transportation sector.[113]

Parties expressed concerns that SCE's proposal was vague, providing an undetermined monetary incentive for electric vehicle miles traveled to an unknown number of rideshare drivers. GM, which generally supports SCE's proposal, states that the "potential return on investment for this pilot will depend on implementation details that have yet to be specified."[114] ORA and TURN both recommend that prior to approval of any such incentive program, SCE should have to submit further details, based on surveys or other means of information gathering, of how much would be offered per driver, whether TNC partners were sought, whether a sufficient number of TNC drivers would be

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[112] Opening Brief of the National Diversity Coalition at iv and 8.

[113] Opening Brief of the Natural Resources Defense Council, Coalition of California Utility Employees and Plug in America at 21.

[114] Reply Brief of General Motors, LLC at 5.

interested in such a program, and whether the experience of riding in an EV can actually influence a rider's likelihood of adopting an EV in the future.[115]

Although some data exists suggesting "test drive events are the fastest and least expensive way to convert people to EV ownership,"[116] ORA contends there is no indication that a TNC driver would be able or willing to share the same types of information that dealers and EV advocates provide during ride-and-drive events.[117]

As structured, the project does not identify mechanisms to target DACs. Although SCE notes that it plans to target customers in DACs to participate in this pilot,[118] SCE does not connect how this pilot will provide economic or TE-related environmental benefits to DACs. Greenlining notes that TNC services have been found to compound congestion in busy city centers and can burden public transit agencies by reducing ridership.[119] Greenlining asserts that DACs and ratepayers would see greater benefits from investments to support electric buses that move through the city more efficiently than increased use of individual cars.

Finally, SCE does not propose to leverage any external funding or partnerships to support its incentive program.[120] Providing cash incentives to

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[115] TURN Opening Brief at 10 to 11, ORA Opening Brief at 7.

[116] SCE Opening Comments at 8.

[117] ORA Reply Comments at 4.

[118] Exhibit SCE-01 at 36.

[119] Greenlining Reply Brief at 8-10.

[120] TURN Opening Brief at 29.

TNC drivers is not a sustainable use of ratepayer funds, so the program as proposed could not provide a basis for any larger-scale effort.

SCE's proposed Rideshare Reward Pilot is denied. SCE has not demonstrated how it would accelerate TE and, with the information provided on the record, it is not clear that the model is sustainable if scaled. Because of the lack of baseline data available to SCE, we are also concerned that SCE would not be able to complete an analysis of the effectiveness of the Rideshare Reward Pilot. We encourage SCE to pursue partnerships with transportation companies that fall within the utility's core competencies and present a more cost-effective use of ratepayer funding.

4.3. Urban DCFC Clusters Pilot

SCE proposes to deploy and operate five DCFC sites in urban areas with up to five dual-port charging stations at each site, resulting in up to 50 new DCFC ports, at a cost of $3.980 million. Locating DCFC in urban clusters "could help residential customers without access to overnight off-street parking or home charging adopt an EV and quickly charge it near their homes."[121] SCE would install, own, and maintain the make-ready infrastructure at the participating customer sites. The site hosts participating in this project will have the opportunity to select from qualifying DCFC charging stations, and receive a rebate to cover the base cost of the charging stations. Potential site hosts include cities, parking lot operators, and EV service providers that provide public access to the DCFC stations. The participating site host will set the EV charging rate for drivers.

[121] Exhibit SCE-1 at 39.

Eligible site host customers must: qualify as a non-residential customer; own or lease the participating site, or be the customer of record associated with the premises meter where the charging stations will be deployed; provide an agreement by the participating site's owner granting SCE appropriate real property rights and continuous access to the customer participant site infrastructure that is to be installed, owned and maintained by SCE; commit to and provide acceptable proof of qualified charging station purchase, and price paid, prior to deployment by SCE; agree to take service on an eligible TOU rate and participate in applicable demand response program(s); and agree to participate in the pilot for five years, including maintaining the charging stations in working order and contracting with a qualified EV charging network service providers to provide transactional data to SCE.

In order for the site to be eligible, the site must: provide public access during its normal operation hours; be located in an urban area, near residential neighborhoods, as determined by SCE; and include an appropriate location within the site to deploy charging stations in a cost-effective manner as determined by SCE in its sole discretion but subject to the customer's agreement.[122] All of the DCFC stations must meet certain technical and listing standards and energy efficiency recommendations, and must be demand response capable. SCE will follow an approach similar to SCE's Charge Ready Pilot Program to qualify vendors, charging stations, and network services. SCE also plans to solicit expertise and proposals from EV service providers on potentially eligible sites.

[122] Exhibit SCE-01 at 39-40.

SCE will collect and report on a number of different metrics, including the following: number of charging events, times, duration; load profiles and adherence to off-peak periods; and demand response event participation levels.

Planning and deployment for the Urban DCFC Clusters Pilot will take approximately 12 months. The data collection will require 12 months at each site, and an additional three months of review and reporting.

4.3.1. Alignment with Statutory and Regulatory Goals

Deploying five DCFC sites in urban areas will increase access to EV charging and pilot whether or how the fast charging approach in urban areas will encourage adoption of EVs, in particular for customers that lack access to dedicated parking and EV charging at home. GM states that most of the drivers participating in its ridesharing program, Maven Gig, have no access to charging at home and rely solely on public, urban charging stations. As NRDC notes, SCE's pilot program provides an opportunity to test the theory that urban DCFC stations can serve as a solution for those who do not have home charging options.[123] However, as noted by the National Diversity Coalition, as proposed, SCE's Urban DCFC Clusters pilot does not contain any specific deployment goals in DACs.[124] SCE states that approximately 45 percent of the state's DACs are in its service territory.[125] In order to widen exposure and interest in EVs within DACs, SCE should position all of its proposed sites in DACs.[126] The Joint

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[123] NRDC et al., Opening Brief at 22.

[124] National Diversity Coalition Opening Brief at 12.

[125] Exhibit SCE-01 at 13.

[126] TURN Opening Brief at 35; National Diversity Coalition Opening Brief at 12.

Environmental Groups[127] also support this recommendation because it provides access to charging for residents of multi-unit dwellings (MUD).[128]

SCE's Urban DCFC Clusters Pilot should produce data useful for developing future TE markets. SCE should work with its PAC and the evaluator, as discussed in a later section, to determine whether the necessary data is available to conduct a comparative analysis of the utilization of rates for the DCFCs in this project with other DCFC sites in SCE's service territory.[129] SCE's Urban DCFC Clusters Pilot is approved. Consistent with our approach in D.16-12-065, SCE must to work with site hosts to develop load management plans and ensure charging is not cost-prohibitive. Moreover, SCE is directed to place its proposed cluster sites in or adjacent to DACs.

4.4. Electric Transit Bus Make-Ready Project

This program will deploy make-ready infrastructure at bus depots and along bus routes to serve electric commuter buses operating in SCE's service territory. SCE will provide a rebate to participating customers to cover the cost of the charging equipment and installation. The goal of the program is to expand the number of electric buses operating in SCE's service territory. According to SCE, this program will also reduce GHG and pollutant emissions by 100 percent over the lifetime of a fully electric bus.[130]

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[127] East Yard Communities for Environmental Justice, Center for Community Action and Environmental Justice, Sierra Club, and Union of Concerned Scientists.

[128] Joint Environmental Groups Opening Brief at 22.

[129] TURN Opening Brief at 35.

[130] SCE states that a typical diesel powered commuter bus emits about 80 metric tons of carbon dioxide per year, and 0.4 metric tons of NOx and .0064 metric tons of particulate matter during the lifetime of the bus.

As electric bus technology matures, SCE believes transit agencies will need to overcome new challenges like siting and deployment of charging infrastructure, and operational impacts such as charging times and the training of maintenance technicians as they convert to electric fleets.

This program will be available on a first-come, first-served basis to non-residential customers who: qualify as a government transit agency; own or lease the participating site, or are the customer of record associated with the premises meter where the charging equipment for the buses would be deployed; provide SCE with an agreement by the participating site's owner which grants SCE appropriate real property rights and continuous access to the customer participant site infrastructure; acquire at least one new electric or plug-in hybrid bus to provide transit service to the public; commit to and provide acceptable proof of qualified charging equipment and vehicle purchase with price information prior to deployment by SCE; agree to take service on an eligible TOU rate; and agree to participate in the pilot for its entire duration, including maintaining the charging equipment in working order and participating in surveys and data collection. To qualify for the rebate, the installed charging equipment must meet certain technical and listing standards and energy efficiency recommendations.[131]

SCE estimates that the program will take approximately 12 months to complete after the launch of the program. At the completion of this program, SCE will issue a close-out report to identify the actual costs incurred in deploying the electric infrastructure for this program.

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[131] Exhibit SCE-01 at 44.

SCE requests funding of $3.980 million for the Transit Bus Make-Ready project to cover deployment costs of serving up to 20 charge ports, and customer rebates to offset the costs of qualified charging equipment and installation.

4.4.1. Alignment with Statutory and Regulatory Goals

SCE's Electric Transit Bus Make-Ready Project aligns with the goals of SB 350 because it aims to (1) encourage widespread TE;[132] (2) reduce the health and environmental impacts from air pollution;[133] and (3) produce data concerning the current and future TE market.[134] In order to maximize the reduction of health and environmental impacts from air pollution, this pilot should be fully deployed to maximize electric transit bus routes in DACs.[135]

Expanding the number of electric buses operating in SCE's service territory and collecting data on the air quality impacts from this electric bus expansion has the potential to drive electric bus adoption in SCE's service territory and could support scaling this project throughout the state, encouraging widespread TE. As the Joint Environmental Groups note, electric transit buses are "commercially available and ready to be deployed, but charging infrastructure can be prohibitively expensive."[136] The California Transit Association identifies the upfront capital costs of charging infrastructure as one of the key barriers to electrification of the public transit sector.[137]

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[132] Section 701.1(a)(2).

[133] Section 740.8(2).

[134] Section 740.12(c).

[135] TURN Opening Brief at 14.

[136] Reply Brief of Joint Environmental Groups at 8.

[137] Opening Brief of California Transit Association at 4.

We adopt the Joint Environmental Groups' recommendation that SCE report where the make-ready infrastructure is located to allow for the identification of the routes served.[138] This information, in addition to SCE's other data collection, should produce data to help shape the future of the electric bus market, and will help determine the scalability of this program.

SCE's Electric Transit Bus Make-Ready Project is approved, with the stipulation that SCE should seek to maximize electric transit bus routes in DACs.

4.5. Port of Long Beach Rubber Tire Gantry Crane Electrification Project

The Port of Long Beach Rubber Tire Gantry Crane Electrification Project will deploy make-ready infrastructure to serve nine cranes at the SSA Marine Terminal J at the Port of Long Beach at a cost of $3.040 million. The nine cranes currently use on-board diesel engines to power the electric lift and propulsion drives. SCE proposes to remove the diesel engines and provide a high voltage utility connection and the electric infrastructure to power the gantry cranes. SCE has identified the diesel powered gantry cranes as the second largest source of Nitrous oxide (NO_x) emissions[139] at the terminal, and electrifying rubber tire gantry cranes could significantly reduce emissions if similar projects are adopted by other port operators in California.[140] According to SCE, approval of this project will improve air quality and reduce GHG emissions for all neighboring

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[138] Opening Brief of Joint Environmental Groups at 22.

[139] The reference to NOx emissions refers to both nitric oxide and nitrogen dioxide.

[140] SCE states that if the ports of Oakland, Los Angeles, and Long Beach adopted all electric gantry cranes, this could reduce, on an annual basis, 708 tons of NOx, 35 tons of particulate matter, and 24,780 tons of carbon dioxide.

communities. SCE further notes that the communities surrounding the Port of Long Beach are considered DACs as shown on the CalEnviroScreen map.

SCE will design, own, install, and maintain the electric infrastructure serving the nine participating gantry cranes including two new substations near the gantry cranes to convert the electric voltage. SCE will not design or deploy the electric infrastructure until the customer has secured the required funding and ordered the electric gantry cranes. The customer will also have to commit to operate these electric gantry cranes for a minimum of ten years after the infrastructure is completed.

SCE estimates that this project will take about 12 months to complete. Upon completion of the project, SCE will issue a close-out report to identify actual costs incurred.

4.5.1. Alignment with Statutory and Regulatory Goals

SCE's Rubber Tire Gantry Crane Electrification project aligns with the goals of SB 350 because it (1) encourages widespread TE;[141] (2) reduces the health and environmental impacts from air pollution;[142] and (3) will produce data concerning the current and future TE market.[143] Overall parties support this pilot and recommend quick adoption and approval as this project is part of a broader port electrification effort funded in large part by a CEC grant that has a tight compliance timeline.[144]

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[141] Section 701.1(a)(2).

[142] Section 740.8(2).

[143] Section 740.12(c).

[144] Joint Environmental Groups Opening Brief at 11-12.

The Port of Long Beach overwhelmingly supports SCE's PRPs that pertain to the Port of Long Beach. As the second busiest port in the United States, the Port of Long Beach notes that this project will help advance the Port's goals of achieving zero-emissions cargo handling equipment and vehicles.[145] This project can help demonstrate to port terminal operators that electrification of port operations can be "cost-effective options with durability and performance equivalent to traditional, diesel-powered equipment."[146]

The project will also benefit the communities surrounding the port which are largely if not completely defined as DACs. As TURN notes, SCE's proposed port projects have the potential to directly provide air quality and other benefits in DACs.[147]

The Port of Long Beach also expects to augment its "existing workforce development and training programs to better support the Port's zero-emission goals and to promote jobs in disadvantaged communities" and directly support 35 jobs in these communities through SCE's port projects.[148] As the Joint Environmental Groups note, the Port of Long Beach proposals are a perfect example of the collaboration occurring among technology developers, state agencies, fleet owners and operators, and the ports, to advance transportation electrification.[149] Like the SDG&E Port Electrification project, SCE's Port of Long Beach projects are consistent with the California Sustainable Freight Action Plan.

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[145] City of Long Beach Opening Brief at 8.

[146] City of Long Beach Opening Brief at 8.

[147] TURN Opening Brief at 21.

[148] City of Long Beach Opening Brief at 9.

[149] Join Environmental Groups Reply Brief at 7.

The evidence supports the finding that the Port of Long Beach projects will significantly reduce the environmental and health impacts of GHG emissions. "The conversion of the rubber tire gantries and yard tractors will reduce nitrogen oxides and particulate matter by 100%, resulting in reductions of nearly 27 tons of NO_x and .45 tons of particulate matter per year" and GHG emissions will be reduced by about 1,140 metric tons per year, once electricity replaces the use of diesel fuel.[150]

SCE's Port of Long Beach Rubber Tire Gantry Crane Electrification project is approved. We agree with the Port of Long Beach that this project has the potential to serve as a model for electrification of other rubber tire gantries throughout California.[151] Moreover, the ratepayers in SCE's service territory are the direct beneficiaries of the potential environmental and economic benefits associated with this project.

4.6. Port of Long Beach Terminal Yard Tractor

SCE proposes to deploy electric make ready infrastructure to serve some of the yard tractors at the ITS Terminal at the Port of Long Beach at a cost of $450,000. Yard tractors move intermodal containers around the port facility and currently are fueled by diesel engines. On an annual basis, each yard tractor produces about five pounds of particulate matter and 341 pounds of NO_x.

SCE will design, deploy, own, and maintain the electric infrastructure serving 24 charging points for the ITS Terminal's electric yard tractors located on the west side of Pier G, with service coming from the Pier Substation.[152] To serve

[150] Opening Brief of the City of Long Beach at 10.

[151] Opening Brief of the City of Long Beach at 11.

[152] Exhibit SCE-01 at 50.

the estimated load at the 24 charging points, SCE will need to upgrade its distribution infrastructure, including additional pad mounted switches, a capacitor bank, and transformers. SCE estimates that designing and deploying the infrastructure for this project will take about 12 months.

When the project is completed, SCE will issue a close-out report to identify actual costs incurred.

4.6.1. Alignment with Statutory and Regulatory Goals

SCE's Yard Tractor Project aligns with the goals of SB 350 because it (1) encourages widespread TE;[153] (2) reduces the health and environmental impacts from air pollution;[154] and (3) will produce data concerning the current and future TE market.[155] Overall parties support this pilot and recommend quick adoption and approval as this project is part of a broader port electrification effort funded in large part by a CEC grant that has a tight compliance timeline.[156]

The Port of Long Beach's Clean Air Action Plan sets aggressive goals to accelerate TE technology development. The ITS Terminal currently has a fleet of 120 diesel powered yard tractors. The ITS Terminal is attempting to secure funding from the South Coast Air Quality Management District for 68 electric yard tractors, but the funding will not cover the supporting electric infrastructure. The project will support the terminal's use and evaluation of electric yard tractors, and can accelerate the deployment of their use.

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[153] Section 701.1(a)(2).

[154] Section 740.8(2).

[155] Section 740.12(c).

[156] Opening Brief of East Yard Communities for Environmental Justice, Center for Community Action and Environmental Justice, Sierra Club, and Union of Concerned Scientists at 11 to 12.

As described in the Tire Gantry Project section, the Port of Long Beach and many other parties overwhelmingly support SCE's PRPs that pertain to the Port of Long Beach.

For the same reasons as we articulated for the Tire Gantry Project, SCE's Port of Long Beach Yard Tractor Project is approved.

5. Discussion and Analysis of PG&E's Proposed PRPs

PG&E proposed five PRPs in its January 20, 2017 application. PG&E requests that the Commission approve a total of $20 million for costs associated with the five PRPs.

PG&E: Summary of Proposed PRPs[157]

Section	Proposed PRP	Capital	Expense	Total
5.1	Medium/Heavy Duty Fleet Customer Demonstration	$1.73	$1.63	$3.36
5.2	Electric School Bus Renewables Integration	$0.51	$1.70	$2.21
5.3	Idle Reduction Technology	$0.87	$0.85	$1.72
5.4	Home EV Charger Information Resource Project	N/A	$1.75	$1.75
5.5	Open Request for Proposals	N/A	$10.96	$10.96
	SUBTOTAL:	**$3.11**	**$16.89**	**$20.0**

In general, PG&E's application lacks details in comparison with the other utilities to this proceeding. While we want to explore the projected benefits of PG&E's proposed projects, in many instances it was hard to decipher the

[157] All costs in millions and based on PG&E's August 23, 2017 *Updated Cost Estimates For Priority Review Projects* (Exhibit PG&E-1 at 2-2).

objectives and goals of each PRP. PG&E has the opportunity to be at the forefront of TE innovation in California, but as to its PRP application, the Commission is disappointed with the gaps in PG&E's proposals.

Three of PG&E's proposals are pilot projects in the medium- and heavy-duty sectors aimed at identifying and developing solutions to overcome the key barriers to TE in those sectors. Accelerating TE in these sectors was identified by several parties as a critical part of meeting California's greenhouse gas reduction and air quality targets.

PG&E's MD/HD Fleet Customer Demonstration, Electric School Bus Renewables Integration, Idle Reduction Technology, and Home EV Charger Information Resource projects are approved with modifications described in the following sections. PG&E's Open RFP is denied, for reasons detailed in Section 5.5 below. Table 1 in Section 6 summarizes the approved funding levels for PG&E's proposed projects.

5.1. Medium/Heavy Duty Fleet Customer Demonstration

Under the MD/HD Fleet Customer Demonstration, PG&E will identify and partner with one customer who is currently operating a fleet of MD or HD vehicles (e.g., transit buses or short-haul delivery vehicles) and, using utility tools and expertise, assist the customer in deploying EVs instead of fossil-fueled vehicles. Specifically, the MD/HD Fleet Customer Demonstration will: (1) deploy utility-owned make-ready infrastructure to serve expected growth in EV charging; (2) provide an incentive for EV chargers; (3) provide technical assistance, including rate optimization, and demand management technologies to minimize operating costs of the EVs; and (4) produce a summary handbook of

lessons-learned to inform fleet and other non-light duty EV deployments.[158] PG&E will potentially incorporate an energy management system and/or behind-the-meter storage to better manage charging costs without interrupting the customers' duty cycles.

PG&E's goal for the MD/HD Fleet Customer Demonstration is to demonstrate a lower total cost of ownership for MD/HD electric fleet vehicles, as compared to fossil fuel vehicles. PG&E contends that this project will address two critical barriers to the electrification of MD and HD fleet vehicles. The first barrier is upfront infrastructure costs, and the second is the potential for managing higher ongoing fuel costs of electricity compared to gasoline or diesel fuel. To remove or reduce these identified barriers, PG&E proposes to install, own and maintain the make-ready infrastructure and to form a dedicated project team made up of "PG&E's Service Planning and Applied Technology Services groups, as well as the Clean Energy Programs and business Energy Solutions teams."[159] This team will design and build the make ready infrastructure to serve the fleet of EVs. PG&E will also work with the customer and third parties to develop strategies to manage charging costs, such as off peak charging, or using on-site energy storage to reduce charging during peak demand. After the infrastructure design and construction phase, PG&E proposes to support and monitor one year of the fleet's EV operations.

PG&E plans to reserve $900,000 of its MD/HD Fleet Customer Demonstration budget for charger incentives for the customer(s). PG&E will determine the incentive to offer its customer(s)' EVSE. These incentives would

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[158] Exhibit PG&E-1 at 2-3.

[159] Exhibit PG&E-1 at 2-4.

go towards buying the EVSE, and would be in addition to PG&E owning and maintaining the make-ready infrastructure, potentially owning and operating energy storage and charge management equipment, and offering guidance to customers on charging strategies and load management.[160]

PG&E plans to provide a report summarizing the results of this customer demonstration project. This report will contain: an evaluation of the total cost of ownership; cost and savings of demand mitigation strategies; customer success and willingness to expand a fleet of EVs; savings of GHG and criteria pollutants as compared to the existing fossil fuel fleet; and a list of the lessons learned. The results of the project will be made public through the report.

PG&E requests a total of $3.36 million for this PRP, consisting of $1.73 million in capital, and $1.63 million in expense.

5.1.1. Alignment with Statutory and Regulatory Goals

PG&E's MD/HD Fleet Customer Demonstration will: (1) encourage widespread TE;[161] (2) help achieve GHG reduction goals;[162] (3) reduce costs for charging;[163] and (4) produce data concerning the current and future TE market.[164]

PG&E's MD/HD Fleet Customer Demonstration encourages widespread TE by addressing two critical barriers within the HD and MD fleet vehicle sectors: (1) upfront infrastructure costs; and (2) ongoing vehicle fuel costs. PG&E's plan to provide make ready charging infrastructure will lower the

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160 PG&E Data Response dated August, 14, 2017.

161 Section 701.1(a)(2).

162 Section 740.12(a)(1).

163 Section 740.12(a)(1).

164 Section 740.12(c).

customer's overall upfront cost of installing EV charging infrastructure. PG&E's proposed Service Planning and Applied Technology Services group, as well as the Clean Energy Programs and business Energy Solutions team, will support development of EV charge management strategies that optimize low-cost charging opportunities. Overall, parties support PG&E's MD/HD Fleet Customer Demonstration, and believe this PRP will help improve the environment and encourage widespread TE.

By targeting MD/HD Fleet Customers, this PRP should support improved public health and achieve GHG reduction goals. As Greenlining noted, HD vehicles are the largest source of nitrous oxide (NO_x) pollution, and produce more particulate matter pollution than all of California's power plants combined. Because PG&E's MD/HD Fleet Customer Demonstration focuses on working to cut the use of HD fossil fuel vehicles, it is expected that this PRP will reduce contributions of NO_x pollution, thereby improving air quality and public health. Many parties recommended this PRP be taken a step further to ensure a direct benefit that is specific to DAC ratepayers consistent with § 740.8 by directing that 100 percent of resources from this PRP be deployed in DACs.

We agree. Air pollution and emissions from MD/HD vehicles are critical sources of pollution in DACs. Because so many DACs are located near heavy concentrations of factories, as well as freight corridors and ports, requiring 100 percent of PG&E's MD/HD Fleet Customer Demonstration to be deployed in a DAC may allow us to track and better understand the effects of electrified MD/HD vehicles in adversely impacted air-polluted areas. We anticipate additional benefits from the project for local communities in regards to air quality improvements. In that regard, we direct PG&E to deploy the MD/HD Fleet Customer Demonstration in one or more DACs in order to better

understand the air quality benefits associated with replacing fossil-fueled vehicles within those communities. As SB 350 states, "widespread transportation electrification" will include the increased use of zero-emissions vehicles in DACs to "enhance air quality, lower greenhouse gas emissions, and promote overall benefits to those communities and other consumers."

PG&E's MD/HD Fleet Customer Demonstration will produce important data concerning the current and future TE market for MD/HD fleets. PG&E's report on this MD/HD customer's success and willingness to expand a fleet of EVs will help to shape the future expansion of the MD/HD EV market. This data, coupled with statistics on this MD/HD customer's savings, will help future MD/HD fleet customers make an informed choice as to whether or not to convert to an all EV fleet. PG&E's plan to report on GHG and criteria pollutant savings as compared to the customer's existing fossil fuel fleet will provide data on the future effects of the scalability of this PRP. PG&E's report on its MD/HD Fleet Customer Demonstration should provide data and analysis specific to the benefits achieved in the DAC(s) where the project is located.

PG&E's MD/HD Fleet Customer Demonstration is approved with the modification that all resources for this project be deployed in DACs.

5.2. Electric School Bus Renewables Integration

PG&E proposes to work with a school district that agrees to buy electric school buses, to ensure the district charges the buses during periods of peak renewable generation. Typically, school buses have predictable duty-cycles, and are not used during mid-day when peak generation from renewable sources occurs. PG&E proposes to deploy make-ready infrastructure for the charging of two to five electric school buses. After the infrastructure design and construction phase, PG&E proposes that this project operate for one year. PG&E will explore

opportunities for managed charging during mid-day, depending on the bus fleet's driving patterns and needs, including "testing the value of incentives that could be provided to the fleet operator in exchange for shifting the time of vehicle charging and/or throttling demand."[165]

PG&E requests $2.210 million for this project, which consists of $510,000 in capital, and $1.70 million in expense.

5.2.1. Alignment with Statutory and Regulatory Goals

PG&E's Electric School Bus Renewable Integration project aligns with the goals of SB 350 and the regulatory requirements identified in the ACR. This project: (1) encourages widespread TE;[166] (2) aims to produce data concerning the current and future TE market;[167] and (3) encourages charging strategies that maximize renewables integration.[168] After reviewing parties' briefs, we adopt the proposal that PG&E's Electric School Bus Renewable Integration project be deployed in a school district that primarily serves one or more DACs.

Greenlining, TURN, ChargePoint, and the Joint Environmental Groups all recommend that PG&E's Electric School Bus Renewable Integration project be modified to target school districts located in DACs, as identified using CalEnviroScreen. As TURN notes, "School buses have the potential to directly impact air quality in the neighborhoods they travel through and this project is an opportunity to provide emissions reductions in DACs or low-income

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165 PG&E-1 at 2-10.

166 Section 701.1(a)(2).

167 Section 740.12(c).

168 ACR Section 3.6.1, at 20.

communities."[169] Modifying this PRP to be deployed in a school district that primarily serves one or more DACs will allow us to measure and evaluate impacts that school bus electrification can have for communities impacted by poor air quality.

PG&E's Electric School Bus Renewable Integration project will encourage widespread TE because it will facilitate the adoption of all-electric school buses by lowering the upfront costs of the charging infrastructure. In addition, this project will explore new opportunities for managed charging within the MD/HD sector by testing the value of incentives provided to school bus fleet operators in exchange for shifting the time of vehicle charging. Managed charging should lead to improved use of the electric system, offsetting system upgrades, and helping absorb renewable overgeneration in the middle of the day. The project will additionally identify how incentives for charging infrastructure and appropriate guidance on load management strategies for electric school bus operators can facilitate the adoption of TE. NRDC and California Coalition of Utility Employees believe this PRP will accelerate a transition away from diesel engines that are responsible for particulate pollution. PG&E's focus on school buses, a highly utilized mode of transportation, may also support development of clean energy technology within the MD/HD sector, helping to promote the accelerated adoption of electric vehicles across a variety of sectors.

PG&E's Electric School Bus Renewable Integration project will produce data on electric school bus duty cycles, charging needs, and ability for the utility to manage voltage going to the vehicle. The project may also demonstrate the distribution system benefits of charging buses during periods of peak renewable

[169] TURN Opening Brief at 12.

generation. If successful, data from this project can be used to scale managed charging of electric school buses, and could be used in expanding the utilization of electric school bus fleets throughout California. The Joint Environmental Groups support PG&E's Electric School Bus Renewable Integration project, but recommend that PG&E report on where the make-ready infrastructure is located to allow for the identification of the routes served.[170] We agree that this information will be useful in evaluating whether the project directly benefits DACs and help measure charging infrastructure utilization. The report on the location of make-ready infrastructure and associated bus routes should be completed as part of a meeting with the PAC as described in Section 7 below.

PG&E's Electric School Bus Renewable Integration Project is approved, with the stipulations that all the infrastructure be deployed in a school district that primarily serves one or more DACs. PG&E should provide a report on the location of the make-readies and associated bus routes to its PAC.

5.3. Idle Reduction Technology

PG&E proposes to demonstrate idle-reduction technologies (for truck stop electrification or transport refrigeration units) and develop a handbook for other fleets based on lessons learned. Specifically, PG&E proposes to provide: (1) at least 15 electrified parking spaces at one parking site; (2) incentives to encourage idle-reduction; and (3) technical assistance in rate optimization and demand management. After the infrastructure design and construction phase, PG&E proposes that these technologies be deployed for one year.

[170] Joint Environmental Groups Opening Brief at 22.

For truck stop electrification, PG&E is considering a single system technology, which provides conditioned air and electric access to the vehicle through a window attachment, and dual system technology, which provides electricity directly to the truck through an electrical connector. To evaluate the success of this project, PG&E proposes to produce a final report evaluating total cost of ownership; cost and savings of demand mitigation strategies; customer success and willingness to expand electric fleet; GHG/particulate matter savings compared to existing fleet; and lessons learned. Single-system technologies do not require any special equipment on the truck, but dual system technologies do. PG&E does not plan to include any truck retrofits as part of this pilot, but has requested the flexibility to do so within its proposed budget.

PG&E contends its proposal could demonstrate how the electrification of truck stops and installation of idle reduction technology can reduce diesel engine idling for transport refrigeration units. By using these types of idle reduction technologies, emissions of air pollutants from diesel engines that typically power refrigeration units will be reduced.

PG&E requests a total of $1.720 million, which consists of $870,000 in capital and $850,000 in expense.

5.3.1. Alignment with Statutory and Regulatory Goals

As proposed, PG&E does not adequately identify what barriers are currently limiting the adoption of these technologies, or explain how its proposal would address those barriers. While it is clear that reducing idle time for fossil fuel vehicles would help reduce air pollutants, it is not clear, "if market barriers unrelated to the investment made by an electric corporation prevent electric transportation from adequately utilizing available charging infrastructure." In which case, "the commission shall not permit additional investments in

transportation electrification without a reasonable showing that the investments would not result in long-term stranded costs recoverable from ratepayers."[171]

Parties raised issues with the lack of data available on whether long-haul trucks already utilize idle reduction technologies. However, as noted by NRDC et al., electrifying truck stops and refrigeration units could be a key strategy to meeting air quality standards in the San Joaquin Valley and other areas of the state where goods movement and agriculture require refrigerated transportation.[172]

The NDC recommends that this project be reduced in scope, and narrowly designed to test assumptions about this project and the market sector.

> [V]irtually no information was provided on the state of the [Idle Reduction Technology] IRT sector. There is insufficient data to determine whether long-haul trucks are already rapidly adopting such technologies, or if not, the reason why it has not become more popular. This demonstration will not likely accelerate adoption if the barriers to adoption have not been identified and are not being addressed. It will also remain unknown whether this project accelerated adoption of IRT because the initial level of adoption in the sector is unknown. PG[&]E has not provided research on how many trucks or truck stops currently use such technologies. A presentation by the Air Resources Board indicates that electric power takeoff (ePTO) systems, which allow auxiliary equipment to draw power from the vehicle's battery with the engine off, are in widespread use in California currently. The growing adoption of ePTO and how it may fully or partially supplement the truck stop electrification and electric truck refrigeration unit needs intended to be addressed in this pilot should be better understood. More research and discussion

[171] Section 740.12(c).

[172] NRDC et al. Opening Brief at 16.

> on the state of IRT are needed to properly design a pilot that will be likely to accelerate TE. As currently proposed, the IRT program should be significantly reduced in scope and narrowly designed to test basic assumptions about this project and the market sector.[173]

TURN would require PG&E to work with a customer located in a DAC to implement PG&E's idle reduction project unless PG&E is unable to find a customer site in a DAC to carry out this project, in which case TURN recommends PG&E file a Tier 1 Advice Letter to be relieved of this condition.

In an effort to align with the goals of SB 350, we require this PRP be sited in a DAC and, prior to implementing the Idle Reduction Technology project, PG&E must provide additional information to the Commission, via a Tier 2 Advice Letter. The Tier 2 Advice Letter must identify commitments from both truck stops and fleet operators before building any charging infrastructure to support this PRP; discuss PG&E's efforts to engage and educate these partners throughout the pilot; and explain how PG&E will design the project to collect data necessary to inform future rate designs that can make these idle-reduction technologies economically feasible. The Advice Letter should specify whether PG&E will support truck stop electrification, transport refrigeration units, or both. If PG&E will support truck stop electrification, the Advice Letter should provide analysis of the existing electrified truck stops in its territory and any other electrified truck stops nationally. PG&E must review its implementation plan with the California Freight Advisory Committee (CFAC) and present the CFAC's feedback to the Commission as part of the Advice Letter filing. We also

[173] National Diversity Coalition Opening Brief at 11.

clarify that PG&E is not authorized to use its approved budget for any vehicle retrofits.

PG&E's Idle Reduction Technology Demonstration is approved contingent upon the provision of further information about the economic viability of the technology and identification of partners. PG&E cannot begin deployment of any idle reduction technology prior to the Commission's approval of its Tier 2 Advice Letter providing this additional information.

5.4. Home EV Charger Information Resource Project

PG&E proposes to "develop a web-based information resource, enabling EV drivers to research residential charging equipment and search a database of certified electrical contractors who can perform safe installations of charging equipment."[174] The website will provide the following: (1) a customer questionnaire regarding commute and driving patterns, vehicle type, and number of EVs, which will be followed by a suggestion for the level of charging suitable to meet expected customer driving needs; (2) a list of commercially available residential chargers; and (3) a database of local licensed electricians who possess a C-10 contractor's license and Electric Vehicle Infrastructure Training Program certification to safely perform residential charging equipment installations. As part of the pilot, PG&E will conduct outreach about the website to those who have recently purchased an EV and at car dealerships.

According to PG&E, the Home EV Charger Information Resource Project will help overcome barriers to EV adoption by simplifying the process of understanding home charging needs, informing and educating prospective EV

[174] Exhibit PG&E-1 at 2-15.

purchasers about available charging options, and assisting EV owners on whether a faster charging option makes sense for them. The information about charging will address the relationship between charging during off-peak hours and the time it takes to fully charge an EV at different charging levels, and ongoing customer cost.

PG&E requests $1.750 million for this pilot. PG&E proposes that this pilot be developed and implemented over a period of one year.

5.4.1. Alignment with Statutory and Regulatory Goals

As proposed, it is not clear how PG&E's Home EV Charger Information Resource PRP (1) will provide any incremental EV adoption or accelerate widespread TE,[175] and (2) is in the interest of ratepayers.[176] ORA and TURN find PG&E's Home EV Charger Information Resource Pilot is duplicative of pre-existing resources already offered by PG&E.[177] While PG&E states that its Home Charger Information Resource PRP will simplify the process of understanding home charging needs and help customers find a contractor who possesses the necessary qualifications to install home charging infrastructure,[178] many parties disagree. TURN points to ARB's Drive Clean website, which has a Plug-in Electric Vehicle Resource Center that provides extensive resources on PEVs, in addition to PG&E's website for consumers that provides similar information to what is proposed in the Home EV Charger Information Resource

[175] Section 701.1(a)(2).

[176] Section 740.8.

[177] TURN Opening Brief at 5; ORA Opening Brief at 1.

[178] PG&E Opening Brief at 7.

Pilot.[179] PG&E states its current web-based tool is for its EV Charge Network program[180] and is intended to help customers understand the full cost and benefits of owning an EV and address questions about range, electricity costs and incentives, trying to distinguish it from the Home EV Charger Information Resource Pilot proposed here.[181] PG&E argues the Home EV Charger Information Resource PRP addresses different barriers to EV adoption than the proposed EV Charge Network program's web-based tool.

PG&E does not adequately explain how adding a web resource to specifically provide contractor selection advice will accelerate widespread TE and help the state meet its greenhouse gas reduction and air quality targets. PG&E also did not respond to concerns raised by ChargePoint about the proposed web resource's impact on competition if the information about contractor and charging options is not kept up-to-date. It remains unclear how frequently the information would be updated and whether it would continue to be updated after the one-year pilot ends. The Commission shares ChargePoint's concern that developing and making available a list of EVSEs and licensed electricians for customers to choose from during the one-year pilot could quickly lead to out-of-date information and potentially exclude new EVSE models and electricians simply because they were unknown or unavailable at the time PG&E publishes the initial list.

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[179] TURN Opening Brief at 5 to 6, referencing: https://www.driveclean.ca.gov/pev and https://pluginamerica.org.

[180] *See* D.16-12-065.

[181] PG&E Reply Brief at 7, see also Advice Letter 5064-E, Education and Outreach Proposal Pursuant to Decision 16-12-065 at 12-15. (https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5064-E.pdf).

While we are extremely interested in gathering data about how information resources support and impact TE adoption, we had a hard time deciphering the specific goals and objectives for this project and how they might support this understanding. Therefore, PG&E's Home EV Charger Information Resource Project is modified to better align with the regulatory criteria for PRPs and to better reflect the one-year timeframe for the proposal. First, PG&E's authorized budget for its Home EV Charger Information Resource Project is capped at $500,000.

Second, PG&E should focus this modified budget to build-out its current webpages to maximize outreach of its website to individuals living in DACs. Rather than qualifying specific EVSE models and contractors, PG&E is directed to develop checklists to inform customers of the important criteria to consider when searching for an EVSE and/or contractor. PG&E should ensure its marketing for this program, including handouts and educational information are provided in languages prevalent in PG&E's service territory. PG&E should similarly translate the EVSE and contractor checklists it develops and make the translated versions available on its website.

Third, prior to implementation, PG&E should file a Tier 2 Advice Letter with the Commission's Energy Division outlining details on how it will spend the $500,000. The Advice Letter should detail PG&E's plans to leverage existing state and non-profit resources to ensure its efforts are not duplicative.

Finally, PG&E may seek to withdraw its Home EV Charger Information Resource Project by filing a Tier 2 Advice Letter with the Commission's Energy Division.

5.5. Open Request for Proposals

PG&E proposes to conduct an open competitive Request for Proposals (RFPs) to solicit proposals from third parties for innovative TE project ideas. PG&E states this open RFP would promote innovation and competition among non-utility enterprises. Proposals "could include such things as testing of novel approaches to vehicle-to-grid integration, demonstrating advanced technologies (e.g., automated charging), and piloting strategies to increase uptake of EVs by ride-sharing services."[182]

If approved, PG&E proposes to "form an external advisory committee to assist in the development of the RFP evaluation criteria and weighting, and evaluate submitted proposals."[183] PG&E suggests that the evaluation criteria for the RFPs "could include scalability, project management, budget, potential emissions reductions, targeting of benefits in disadvantaged communities, proposal for outreach and dissemination of project results, and applicant qualifications."[184]

PG&E requests that this project use the unallocated portion of the $20 million available for PG&E's PRPs, $10.96 million.

5.5.1. Alignment with Statutory and Regulatory Goals

As proposed, it is unclear how PG&E's Open RFP aligns with the goals of SB 350 and the regulatory objectives outlined in the ACR. Without more detail, it is difficult to assess how potential projects that would be awarded in the Open

[182] Exhibit PG&E-1 at 2-18 to 2-19.

[183] Exhibit PG&E-1 at 2-19.

[184] Exhibit PG&E-1 at 2-19.

RFP would: (1) encourage widespread TE;[185] and (2) be in the interests of ratepayers.[186] While PG&E contends that each project participating in the RFP would be under the $4 million project cap, the overall budget for the RFP does not meet the budgetary criteria set-forth in the ACR.

PG&E plans to spend more than half of its total allowable budget ($10.96 million) allotted for PRPs on its Open RFP to solicit "wide-ranging, innovative, and entrepreneurial" proposals from third-parties. PG&E's proposal and supporting briefs includes few details about the criteria for the projects that it would select through this Open RFP and it is unclear how any selected projects would meet the requirements of SB 350.

Many parties to this proceeding filed briefs opposing PG&E's Open RFP because of the lack of detail provided. Specifically, The National Diversity Coalition and the National Asian American Coalition contend the Open RFP seeks to replace CPUC oversight with utility discretion. Alternatively, TURN contends PG&E's Open RFP is duplicative of the EPIC program, which is designed to test innovative strategies through research and development projects.[187] On the other hand, ChargePoint expressed support for PG&E's Open RFP, suggesting the PRP could create opportunities for "projects developed by customers or other stakeholders to fill gaps not addressed by the utilities' proposals."[188] However, ChargePoint does not offer proposals for criteria that

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[185] Section 701.1(a)(2)

[186] Section 740.8

[187] TURN Opening Brief at 4.

[188] ChargePoint Opening Brief at 32.

would ensure the projects developed by other customers or stakeholders would fill gaps rather than be duplicative.

Greenlining proposes two detailed options for the use of the proposed funds instead of an RFP.[189] The first project would create a tariffed, on-bill financing program that provides upfront grants for transit agencies to buy electric buses. The ratepayer funds deployed would be fully recovered over the useful life of the buses, according to Greenlining. This option was supported in reply briefs by EDF, TURN, East Yard Communities for Environmental Justice, Center for Community Action and Environmental Justice, Sierra Club, and Union of Concerned Scientists.[190] Similarly, the California Transit Association proposed that transit agencies be the primary beneficiary of the Open RFP, and the Santa Clara Valley Transportation Authority suggested PG&E should instead use the funds to develop infrastructure plans for large-scale TE for the fleet operators in its service territory that have committed to electrifying. The second project Greenlining proposed would create an "EV for all program" specifically increasing access to EVs and charging infrastructure for DACs.

In its reply brief, PG&E states that it would support consideration of the alternatives proposed by parties in opening briefs as part of, rather than instead of, its Open RFP project.[191]

PG&E proposed to develop a program advisory committee to advise it in developing selection criteria and participate in the evaluation of the RFPs, and to

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[189] Greenlining Opening Brief at 12-18 and Attachments A, B and C.

[190] Earthjustice (representing East Yard Communities for Environmental Justice and Center for Community Action and Environmental Justice), Sierra Club, and Union of Concerned Scientists Opening Brief at 25; TURN Opening Brief at 12; EDF Opening Brief at 16.

[191] PG&E Reply Brief at 9.

amend its proposal to require Energy Division to convene a working group of interested parties to review and provide recommendations on specific RFP content, criteria, and processes. PG&E also provides some criteria in its opening brief that it "expects" to be considered in its Open RFP. However, we do not believe these proposed amendments to the Open RFP program adequately address concerns that PG&E's proposal attempts to circumvent the appropriate Commission review process, which is necessary to ensure projects are in the interest of ratepayers and meet the goals of SB 350. Additionally, it is unclear why this RFP process is necessary, because the research and development projects it seeks to fund could be duplicative of or better suited to participation in the Electric Program Investment Charge (EPIC), a program that is focused on research and development.

The Assigned Commissioner Ruling was clear that PRPs would be limited to $4 million. PG&E's proposal to spend more than $10 million on a single project does not meet the ACR's guidance. Additionally, PG&E's request for upfront approval of the entire budget before the Commission knows any details of the RFP process or outcomes is inappropriate and does not allow for sufficient Commission review and oversight.

PG&E's Open RFP proposal is not adopted. If PG&E wishes to support innovative and entrepreneurial projects, it can present them in a subsequent application after the details have been further developed with third party partners. Any project proposed through a future application should be detailed enough to provide assurance the project(s) will accelerate TE and meet the state's emissions reduction goals. We welcome projects that leverage ongoing rebuilding efforts in disaster-affected areas, or new developments, within PG&E's service territory, that focus on ensuring the redevelopment or

development of utility infrastructure in those areas includes transportation electrification infrastructure. If proposed, these projects should align with other entities' efforts to ensure the redevelopment or new development is climate-resilient.

If PG&E pursues an RFP to develop additional projects, PG&E should develop criteria and procedures for its RFP in conjunction with its PAC, as well as the Commission's Energy Division. PG&E may file an additional application after conducting the RFP so long as it identifies a well-defined project or projects that meet the requirements of SB 350 and the guidelines within the ACR.

6. Authorized Project Funding and Cost Recovery

Section 740.12(b) allows the TE programs and investments proposed by the utility to be recovered through a reasonable cost recovery mechanism if they are consistent with § 740.12, do not unfairly compete with nonutility enterprises as required under § 740.3, include performance accountability measures, and are in the interests of ratepayers as defined in § 740.8.

Table 1 summarizes the funding approved for the authorized PRPs by utility and cost category.

Table 1: Summary of Funding Approved for Authorized Priority Review Projects

Priority Review Project	Capital	Expense	Total
San Diego Gas & Electric Company			
Airport Ground Support Equipment	$2,405,598	$434,140	$2,839,738
Electrify Local Highways	$3,309,212	$690,788	$4,000,000
Port Electrification	$1,840,575	$565,000	$2,405,575
Fleet Delivery Services	$3,231,963	$458,786	$3,690,749
Green Shuttle Priority Review Project	$2,338,887	$818,918	$3,157,805
Dealership Incentives		$1,790,000	$1,790,000
Evaluation		$715,355	$715,355
Total	**$13,126,235**	**$5,472,987**	**$18,599,222**
Southern California Edison Company			
Residential Make-Ready Rebate Pilot	$79,000	$3,920,000	$3,999,000
EV Rideshare Reward Pilot			Denied
Urban DCFC Clusters Pilot	$3,788,000	$192,000	$3,980,000
Electric Transit Bus Make-Ready Program	$2,731,000	$1,247,000	$3,978,000
Port of Long Beach Rubber Tire Gantry Crane	$3,038,000	$0	$3,038,000
Port of Long Beach Terminal Yard Tractor	$450,000	$0	$450,000
Evaluation		$617,800	$617,800
Total	**$10,086,000**	**$5,976,800**	**$16,062,800**
Pacific Gas and Electric Company			
Medium/Heavy Duty Fleet Customer Demonstration	$1,730,000	$1,625,000	$3,355,000
Electric School Bus Renewables Integration	$507,200	$1,702,300	$2,209,500
Idle Reduction Technology	$874,400	$845,000	$1,719,400
Home EV Charger Information Resource Project		$500,000	$500,000
Open Request for Proposals			**Denied**
Evaluation		$311,356	$311,356
Total	**$3,111,600**	**$4,983,656**	**$8,095,256**

Budgets reflect modifications approved in this decision based on the utilities' proposed budgets provided in: Exhibit PG&E-1, Attachment 2, Exhibit SDG&E-3, Appendix A – Detailed Project Costs, Exhibit SCE-01 at 51. All funding is in 2016 dollars.

This decision addresses the appropriate ratemaking treatment for recovery of the costs for the authorized priority review projects. The appropriate ratemaking treatment for SRPs will be addressed concurrently with the disposition of those proposals in a subsequent decision.

As described below, each utility plans to create a new balancing account to record approved project costs and revenues and use existing regulatory accounts to ensure that under- or over-collections are amortized annually in distribution rates.

6.1. SDG&E Ratemaking for Authorized Project Costs

SDG&E proposes a two-way, interest bearing, balancing account for PRPs to record revenues associated with the authorized revenue requirement and costs associated with the approved projects. SDG&E proposes to record the PRPs' share of billed revenue in the balancing account and any under- or over-collection would be amortized annually as part of the Tier 2 Advice Letter SDG&E files each October in its electric regulatory account update. The under- or over-collection of all balancing accounts represented in the electric regulatory account update Advice Letter would be amortized in rates effective January 1 of the following year.

SDG&E seeks approval of the revenue requirement calculated on the approved capital and operation and maintenance (O&M) costs for 2018-2019 and the years until the projects' associated assets can be rolled into the next appropriate General Rate Cases (GRC). SDG&E would roll forward any undepreciated book value of plant balances associated with its PRPs for recovery in its post-2019 GRC. SDG&E proposes the TE revenue requirement be recovered through distribution rates. Final disposition and closure of the balancing account would be addressed in SDG&E's post-2019 GRC, which SDG&E expects to file in 2020, covering 2022-2024.

6.2. SCE Ratemaking for Authorized Project Costs

SCE proposes a Transportation Electrification Portfolio Balancing Account (TEPBA) to "record the actual O&M expenses, payroll taxes, and capital revenue

requirement (i.e., depreciation, return on rate base, property taxes, and income taxes) in the TEPBA associated with the activities as approved by the Commission for the TE Portfolio pilot projects."[192]

> SCE proposes to include in distribution rates a forecast annual revenue requirement effective January 1 of each year, for at least five years, or until the TEPBA-related costs are included in a future general rate case (GRC). To help ensure that customers only pay the actual TE Portfolio revenue requirements, SCE proposes to transfer the revenue requirement recorded in the TEPBA to the distribution sub-account of the BRRBA [Base Revenue Requirement Balancing Account] on an annual basis. Using this approach, any difference between the forecast TE Portfolio revenue requirements included in rate levels and the actual recorded TE Portfolio revenue requirements will be trued up in the BRRBA. This proposed ratemaking provides that no more and no less than the reasonable revenue requirements associated with the TE Portfolio activities will ultimately be collected from customers. Any over-collection recorded in the BRRBA at the end of each year will be refunded to customers in the subsequent year. Similarly, any undercollection recorded in the BRRBA at the end of each year will be recovered from customers in the subsequent year."[193]

6.3. PG&E Ratemaking for Authorized Project Costs

PG&E proposes a Transportation Electrification Balancing Account (TEBA) with a subaccount for its priority review projects. Recording the "forecast cost for each of the three programs ... will allow PG&E to recover the actual revenue requirements up to the level of the forecast total capital and expense

[192] Exhibit SCE-01 at 101.

[193] Exhibit SCE-01 at 101.

expenditures"[194] for the term of the SB 350 TE program. On an annual basis the revenue requirements recorded in the TEBA subaccounts "would be trued-up by transferring the subaccount balance in the TEBA to the [Distribution Revenue Adjustment Mechanism] DRAM as part of the Annual Electric True-up process at the end of the year for rates effective January 1 of the following year."[195] This would then result in either an over- or under-collection, which would then be amortized in rates up to the authorized forecast costs. PG&E requests an upfront finding that spending for the proposed TE projects at or below the forecast cost is reasonable.

6.4. Analysis

Several parties[196] raised concerns that SDG&E's direct project costs during the 2018-2019 pilot implementation period are below $4 million each, but including the O&M costs through 2050 cause four of the six projects to exceed $4 million, even before reflecting loaders and escalation as described in Exhibit SDG&E-6, Table MAC-5. The post-2019 O&M costs, which run through 2050 in SDG&E's cost estimates, add $6.21 million to the projected project costs. When escalation and adders are included in the project cost estimates as described in Exhibit SDG&E-6, Table MAC-11, four of the PRPs would each be over the $4 million budget even before post-2019 O&M is included. Although this issue was raised most directly in the context of SDG&E's project costs, the situation is the same for PG&E and SCE project costs, SDG&E simply provided more detailed cost and revenue requirement estimates through the lifetime of

[194] A.17-01-022 at 4 to 5.

[195] A.17-01-022 at 8.

[196] UCAN, ORA, TURN, and ChargePoint.

assets than PG&E and SCE. While the ACR was silent as to whether the direct costs or lifetime costs of the project needed to meet the $20 million total/$4 million project limits, we find that it is reasonable to use the direct costs as the basis for determining whether the project meets the intent of the ACR.

TURN notes that PG&E and SCE appear to propose a one-way balancing account, while SDG&E proposes a two-way balancing account. TURN recommends that we expressly require the utilities to establish a one-way balancing account to recover the costs of its EV infrastructure program up to the cost cap established for each project, or at a minimum, the $20 million limit established by the Commission for the portfolio of projects. "Any over-collection recorded in the balancing account at the end of each year should be refunded to customers in the subsequent year. In the event of under-collection, ratepayers should only be charged for costs actually incurred. Further, the Commission must have the ability to review costs *ex-post* for reasonableness."[197]

TURN also recommends that SCE's proposal that it be allowed to file an application, or some other mechanism, to request recovery of additional costs, be rejected. TURN notes that the ACR established strict price caps for the priority review projects, and that they should remain in place "to encourage prudent program management and to hold the utility accountable."[198]

ORA suggests the utilities should be required to establish memorandum accounts to record costs not to exceed the approved budgets of each project. ORA states the Commission should conduct an after-the-fact- reasonableness

[197] TURN Opening Brief at 25.

[198] TURN Opening Brief at 18.

review on all expenditures prior to deeming any spending as reasonable.[199] NDC suggests a similar cost-recovery mechanism, stating if the utilities know the costs are only recoverable after ratepayer benefits have been demonstrated, they are more likely to develop and implement cost-effective programs.[200]

"The CCA Parties question whether it is appropriate for the [utilities] to include all TE application and program costs in the distribution function, with no costs being allocated to the generation function."[201] They argue that:

> [w]ider use of EVs, when combined with the ability of EV owners to have access to daytime workplace charging infrastructure, can facilitate the development of additional local solar power generation, by providing a load to take delivery of solar power produced during the daytime. Widespread adoption of EVs with variable charging mechanisms (or the ability to supply power back to the grid) can also benefit grid management. Another one of the corollary benefits of TE is that it has the potential to make use of otherwise stranded renewable generation assets, especially given the significant amount of projected departing load as a result of CCA growth across the state. SCE has clearly indicated on a number of occasions that the majority of their PRPs are intended to incentive customers to adopt Time-of-Use ("TOU") rates in order to both better integrate renewables and also to address solar over generation.[202]

The CCA Parties request that the Commission specifically address the issue of cost allocation between the distribution and generation functions in this proceeding, but acknowledge that the issue may not be ripe for a determination,

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[199] ORA Opening Brief at 14.

[200] National Diversity Coalition Opening Brief at 14.

[201] CCA Parties Opening Brief at 10.

[202] CCA Parties Opening Brief at 11.

because the absence of cost support by parties. If the Commission determines the issue is not ripe, the CCA Parties request that be specifically identified for future action by the Commission.

Each utility is authorized to file a Tier 2 Advice Letter establishing a new one-way balancing account to record the actual O&M expenses, payroll taxes, and capital revenue requirement (i.e., depreciation, return on rate base, property taxes, and income taxes) associated with the approved PRPs as summarized in Table 1. The utilities should record the revenue requirement associated with the PRPs on a monthly basis, and the balances of each balancing account should be transferred annually to a distribution account for amortization in distribution rates. Each utility may use its existing regulatory accounts and Advice Letter procedures for this annual amortization. The next year's forecast revenue requirement should be included in rates as follows:

- SDG&E should use its Annual Electric Regulatory Account Update, filed as a Tier 2 Advice Letter in October and its consolidated end-of-year Tier 1 Advice Letter in late December.
- SCE should use the existing, annual Tier 2 Advice Letter process for its ChargeReady light-duty EV program.
- PG&E, as proposed in its testimony, should include this as part of its Annual Electric True-Up, filed as a Tier 2 Advice Letter by September 1, and a supplemental Tier 1 Advice Letter in late December.

This decision approves a budget, as detailed in Table 1, associated with the direct costs for each PRP. The utility may record for each PRP the revenue requirements up to the authorized direct costs for each project. The approved budgets are not fungible across PRPs. At the end of the projects, any forecasted

costs that were included in rates but were not spent should be returned to customers through rates.

SDG&E's and SCE's proposals for transferring ongoing costs into their GRC are approved. PG&E's proposal to phase operations and maintenance costs into its 2020 GRC, before including capital costs in its 2023 GRC, is denied. PG&E should continue recording all costs associated with the PRPs in its new balancing account until its 2023 GRC.

Given the annual Advice Letter process and Commission oversight over project implementation, we will not require any after-the-fact cost reasonableness reviews. The PRP costs will be deemed reasonable and approved for recovery through the Advice Letter process if they are within the project-specific budget limits approved in Table 1, and consistent with the approved project scope. Costs incurred for each project up to the authorized level will be considered *per se* reasonable subject only to the utility's prudent administration of the project; costs above authorized level will be borne by shareholders.

We do not take up the issue of cost allocation between the distribution and generation functions of the rate recovery for these programs, but may address it in a future decision in this proceeding.

7. Program Advisory Councils

Each utility has proposed some form of advisory council in its application, although each utility takes a different approach. SDG&E proposes to solicit its current PAC used for its Power Your Drive light-duty infrastructure charging pilot to provide feedback on the approved SB 350 projects.[203] SCE plans to

[203] Exhibit SDG&E-2 at LB-40.

develop an advisory board for its Medium and Heavy Duty standard review proposal" with customers and industry stakeholders to provide input, guidance, and suggestions on the execution and improvement of the program."[204] PG&E suggests it will form an external advisory committee specifically related to its Open PRP "to assist in the development of the RFP evaluation criteria and weighting, and evaluate submitted proposals."[205] Each utility has an existing PAC (which SCE calls an Advisory Board) to provide them guidance during implementation of their ongoing light-duty infrastructure pilots.[206]

We direct each utility to form a PAC to provide feedback and guidance during implementation of the approved PRPs. The utilities should finalize implementation details for the approved projects based on feedback from its PAC. If a utility identifies any modifications necessary to effectively implement the programs approved in this decision, it should propose those modifications via a Tier 2 Advice Letter after reviewing the changes with their PAC.

The utilities may combine this with its existing PAC if that facilities stakeholder participation. Each utility's PAC should meet quarterly following the Commission's approval of the projects and throughout the implementation and design phase of the projects. Utilities can continue the PAC meetings at their discretion once project construction or implementation has begun. The PACs shall include a diverse set of stakeholders with expertise relevant to the PRPs,

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[204] Exhibit SCE-01 at 56.

[205] Exhibit PG&E-1 at 2-19.

[206] SDG&E's Power Your Drive pilot as approved in D.16-01-045, SCE's Charge Ready pilot as approved in D.16-01-023, and PG&E's EV Charge Network as approved in D.16-12-065.

including CCAs. Each utility shall, at a minimum, solicit participation through the service list for this proceeding.[207]

8. Data Gathering Requirements

Because one of the objectives of deploying pilots is to gather information and share lessons learned in nascent sectors, we adopt certain data collection and reporting requirements. While each utility proposed a different set of reporting metrics for each project, we find that standardizing the data collection and reporting process will enable the greatest sharing of information across utilities and with interested stakeholders. The purpose of the standardized reporting is to ensure that each utility collects the necessary data to analyze each project upon its completion to show how well it has met the goals of SB 350.

Each utility is required to submit a final report for each of their approved PRPs, and serve this to the service list for this proceeding. Underlying data should generally be made available on an aggregated basis to parties, including CCAs, to perform their own analyses. Additionally, if the utility has not completed any PRP within one year of the adoption of this decision, it shall file an interim report and data template detailing accomplishments to date. Energy Division staff, in consultation with the utilities and the PACs, will develop final report templates that the utilities must use. The purposes of reporting templates are to ensure reporting is consistent across utilities and all data is reported in a usable format that can be analyzed by outside groups and easily shared across utilities. The current draft templates are available on the CPUC website (http://www.cpuc.ca.gov/sb350te/) under the "reporting requirements" section

[207] D.16-01-045, Attachment 2, Appendix A includes details on the composition and activities of the PAC.

of this page. Energy Division will make the final templates available on this same location and notify the service list when these documents are available.

The templates include:

- A final report template in Microsoft Word format that includes report headings and descriptions of the information that should be included in the report. The reporting information at the beginning of the template is common across all projects. Additional, project specific information is included at the end of the template.
- A data reporting template in Microsoft Excel that has several tabs for the utilities to report various quantitative data. The first tab of the file contains instructions on how to complete the files. Each utility should complete this file and submit it in Excel format along with its final report. The final tab of the Excel file is for the utilities to report individual charging session data; each utility should provide this data quarterly to Energy Division from the time that the EVSE becomes operational and continuing for at least five years beyond pilot completion.

9. Evaluation

Pub. Util. Code § 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.

The utilities will collectively fund a budget equal to four percent of their total approved PRP budgets from all ratepayers, and issue an RFP to select a third-party evaluator. The evaluator should conduct an assessment of each PRP to determine the success of each project and determine if and how each PRP could be scaled for the future. PG&E, SDG&E, and SCE are directed 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 PRPs.

The expectation is for the evaluator to commence evaluation efforts by early-2019 and to deliver a final evaluation report of all PRPs by December 31, 2019. The utilities may seek to extend this deadline, if needed, through a letter to the Commission's Executive Director. The utilities are directed to work with Energy Division staff and, to the extent possible, their PACs, on the RFP and evaluation processes.

Separately, SDG&E has indicated that CALSTART will support its data collection efforts by providing a third-party evaluation of the integration of the new vehicles associated with its Fleet Delivery Services project to the grid.[208] SDG&E may work with CALSTART during project implementation to ensure the

[208] Exhibit SDG&E-1 at RS-57.

proper information is collected to evaluate vehicle performance and energy use, grid impacts of the new vehicles, and future grid scenarios based on the expected future penetration of similar fleet delivery vehicles.[209] All data collected through this collaboration should be made available to the selected evaluator for inclusion in its process.

For SDG&E's Electrify Local Highways PRP and SCE's Urban DCFC Clusters PRP the utilities should work with the evaluator to explore the feasibility of deploying customer surveys at the DCFC sites once the DCFC have been installed. These customer surveys should be geared toward measuring utilization and customer charging behavior.

10. Safety Considerations

The Commission's focus on ensuring utilities provide safe and reliable service is an overarching focus in the emerging TE industry. Pub. Util. Code § 740.8 defines the "interests" of ratepayers to mean: direct benefits that are specific to ratepayers consistent with safer, more reliable or less costly gas or electrical service consistent with § 451. The ACR directed that TE Applications should promote driver, customer and worker safety.[210] SED issued a data request to better understand how the utilities are addressing these objectives. Based on the responses, a draft Safety Requirements Checklist has been developed and is available on www.cpuc.ca.gov/sb350te along with the data collection templates detailed in Section 8. The purpose of this Safety Requirements Checklist is to consolidate current standards and requirements in

[209] Exhibit SDG&E-1 at RS-57.

[210] ACR, Section 3.8.

one place and to ensure the utility infrastructure is installed and operated safely and does not adversely affect reliability of electrical service.

Over time, Commission staff, in consultation with the utilities and the PACs, will refine the Safety Requirements Checklist that the utilities must use. Energy Division will make the final checklist available on the same website and notify the service list when these documents are available.

No later than 18 months after today's decision is approved, the sponsoring utility for each project must file a Tier 1 Advice Letter describing their compliance efforts. The Advice Letter must contain an attestation signed by the Project Manager. The PAC should develop the format and template for attestation and other necessary logistical details to support compliance with the Safety Requirements Checklist.

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

11. Categorization and Need for Hearing

In Resolution ALJ 176-3392, the Commission preliminarily categorized this proceeding as ratesetting, and preliminarily determined that hearings were necessary. However, as addressed in the April 13, 2017 Scoping Ruling, evidentiary hearings are only required for the Standard Review Project portion of this proceeding. Evidentiary hearings were not held for the Priority Review Project portion of this proceeding. The April 13, 2017 Scoping Ruling confirmed the categorization as ratesetting.

12. Assignment of Proceeding

Carla J. Peterman is the Assigned Commissioner. Administrative Law Judges Michelle Cooke and Sasha Goldberg are the Presiding Officers.

13. Comments on Proposed Decision

The proposed decision of ALJs 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 of the Commission's Rules of Practice and Procedure. Comments were filed on December 12, 2017 by ChargePoint; EDF; GM; Green Power Institute and Community Environmental Council; Greenlining; Joint Environmental Groups; Lyft, Inc. (Lyft); NDC; NRDC and Coalition of California Utility Employees (CCUE); ORA; PG&E; Port of Long Beach; Small Business Utility Advocates (SBUA); SCE; SDAP; SDG&E; Tesla; TURN; and Utility Consumers' Action Network (UCAN). Reply comments were filed on December 18, 2017 by the Alliance of Automobile Manufacturers; ChargePoint; EDF; GM; Greenlining; Lyft; NRDC, CCUE and Plug In America; ORA; PG&E; SBUA; SCE; SDAP; SDG&E; Tesla; TURN; UCAN; and Union of Concerned Scientists. Changes have been made throughout the decision in response to comments to improve clarity, add additional detail especially surrounding cost recovery, and correct errors.

Findings of Fact

1. HD vehicles are the largest source of NO_x pollution and produce more particulate matter pollution than all of California's power plants combined.

2. Air pollution and emissions from MD and HD vehicles are critical sources of pollution in DACs.

3. Unlike SCE and PG&E proposals, SDG&E proposes end-to-end utility ownership of the charging infrastructure associated with its priority review projects, including ownership of the EVSE.

4. Existing electric GSE make up 20 percent of SDIA's fleet of 540 GSE vehicles.

5. There is not enough data available to inform whether further investment in new charging infrastructure is necessary to support more electric GSE than are currently deployed.

6. SDG&E's Electrify Local Highways project will encourage adoption of EVs by making L2 charging stations and DCFCs more accessible by daily commuters and the public.

7. The addition of 20 L2 charging stations and 2 DCFCs at each of four different sites will widen the visibility and accessibility of EV charging to the public.

8. SDG&E's proposed load research meters will allow SDG&E to collect one year of consumption, charging, and operational data that will serve as a baseline data set and will allow SDG&E to compile, evaluate, draw conclusions, and report on the project data for its Port Electrification project.

9. SDG&E's deployment of data loggers in its Port Electrification project will produce data that reduces current gaps in understanding and evaluating the utilization of electric MD/HD vehicles and forklifts, and the varying benefits/disadvantages such infrastructure can provide to grid management.

10. If SDG&E's Port Electrification project performs as expected, the increased use of MD/HD and forklift EVs will reduce carbon dioxide emissions by 228 metric tons in the first year, and aims to support the lifetime net carbon dioxide reduction of 4,102 metric tons.

11. SDG&E's Port Electrification project is consistent with the 2016 California Sustainable Freight Action Plan.

12. SDG&E's Port Electrification project will deploy more zero-emission vehicles in the MD/HD and forklift market segments in San Diego.

13. SDG&E's Port Electrification project will help inform the development of an optimized grid-integration solution for the MD/HD and forklift EV market segment.

14. SDG&E's Fleet Delivery Services reduces the barrier and cost to a fleet owner of installing EV charging infrastructure.

15. SDG&E's deployment of data loggers in its Fleet Delivery Services project will produce data to reduce current gaps in understanding whether fleet delivery vehicles are good candidates for TE.

16. If SDG&E's Fleet Delivery Services project performs as expected, the increased use of EVs will result in an annual reduction of 894 metric tons of carbon dioxide per year, and a lifetime net carbon dioxide reduction of 14,109 metric tons.

17. SDG&E's proposed Public GIR does not include demand charges, which could test the use of dynamic rates to send price signals to customers.

18. There are existing state subsidies available for the purchase of electric shuttles under ARB's Hybrid Voucher Incentive Program.

19. SCE's Residential Make-Ready Rebate Pilot will help defray upfront costs associated with in-home electric vehicle charging.

20. SCE's Residential Make-Ready Rebate Pilot is complementary to its Charge Ready Pilot Program.

21. If SCE's Residential Make-Ready Rebate Pilot performs as expected, 5,000 of SCE's residential customers could participate in this pilot.

22. SCE's plan to collect and report on a number of different metrics from its Residential Make-Ready Rebate Pilot will help identify customer satisfaction with this project and the different TOU rate plans offered.

23. Providing cash incentives to rideshare drivers is not a sustainable use of ratepayer funds.

24. If SCE's DCFC Clusters pilot performs as expected, it will produce data useful for developing future TE markets.

25. As electric bus technology matures, transit agencies will need to overcome new challenges like siting and deployment of charging infrastructure, and operational impacts such as charging times and the training of maintenance technicians as they convert to electric fleets.

26. Expanding the number of electric buses operating in SCE's service territory and collecting data on the air quality impacts from this expansion has the potential to drive electric bus adoption in SCE's service territory and could support scaling electric bus deployment throughout the state.

27. If SCE's Rubber Tire Gantry Crane Electrification project performs as expected, it will improve air quality and reduce GHG emissions in DACs surrounding the Port of Long Beach.

28. Diesel powered gantry cranes are the second largest source of NOx emissions at the Port of Long Beach.

29. The electrification of rubber tire gantry cranes could significantly reduce emissions if similar projects are adopted by other port operators in California.

30. The Port of Long Beach's Clean Air Action Plan sets aggressive goals to accelerate TE technology development.

31. SCE's Port Electrification project is consistent with the 2016 California Sustainable Freight Action Plan.

32. Ratepayers in SCE's service territory are the direct beneficiaries of the potential environmental and economic benefits associated with SCE's Rubber Tire Gantry Crane Electrification project.

33. Ratepayers in SCE's service territory are the direct beneficiaries of the potential environmental and economic benefits associated with SCE's Yard Tractor project.

34. PG&E's MD/HD Fleet Customer Demonstration pilot addresses two critical barriers within the HD and MD fleet vehicle sectors, upfront infrastructure costs and the potential for managing ongoing fuel costs of electricity compared to gasoline or diesel fuel.

35. By focusing on cutting the use of fossil fuel by HD vehicles, PG&E's MD/HD Fleet Customer Demonstration project will reduce NOx pollution, thereby improving air quality and public health, and achieving GHG reduction goals.

36. PG&E's report on the MD/HD Fleet Customer Demonstration pilot, focusing on customer's success and willingness to expand a fleet of EVs, will help to shape the future expansion of the MD/HD EV market. This data, coupled with statistics on this MD/HD customer's savings, will help future MD/HD fleet customers make an informed choice as to whether or not to convert to an all EV fleet.

37. PG&E's Electric School Bus Renewable Integration project will test the value of incentives provided to school bus fleet operators in exchange for shifting the time of vehicle charging.

38. PG&E's plan to report on the effects of charging buses during periods of peak renewable generation will provide new information on managed charging

of electric school buses, in addition to bus fleet driving patterns and charging needs.

39. There is insufficient data to determine whether long-haul trucks are already adopting Idle Reduction Technology.

40. As proposed, PG&E's Home EV Charger Information Resource project is duplicative of pre-existing resources already offered by PG&E, such as the EV Charge Network program authorized by D.16-12-065.

41. One of the objectives of deploying pilots is to gather information and share lessons learned in nascent sectors.

42. The purpose of standardized reporting is to ensure that each utility collects the necessary data to analyze each project upon its completion to show how well it has met the goals of SB 350.

43. Standardizing the data collection and reporting process will enable the greatest sharing of information across utilities and with interested stakeholders.

44. Ensuring utilities provides safe and reliable service is an overarching focus in the emerging TE industry.

Conclusions of Law

1. Increasing access for disadvantaged and low and moderate income communities to enhanced air quality and lower GHG emissions promotes the overall benefits of TE to these communities, consistent with § 740.12(a)(1).

2. To better align with the goals of SB 350, SDG&E should implement a two-phase approach for its SDIA GSE project that includes additional study of the market prior to providing installation incentives from the approved budget of $2,839,738.

3. SDG&E should first collect additional information about the existing equipment and understand why SDIA has not expanded its electric GSE fleet before providing incentives to support expansion of the fleet.

4. Placement of L2 charging stations in DACs for SDG&E's Electrify Local Highways project will have the most direct impact to improving air quality in DACs by incentivizing drivers to increase their utilization of electric vehicles in and around these Park-and-Ride locations.

5. SDG&E's Port Electrification project will introduce more zero-emission vehicles in the MD/HD and forklift markets; this will increase EV adoption and encourage widespread TE in the MD/HD and forklift markets.

6. To better align with the goals of SB 350 and the regulatory objectives outlined in the ACR, SDG&E's Green Taxi/Shuttle/Rideshare project should be modified to focus solely on shuttle services serving fixed routes.

7. SDG&E's proposal to offer $10,000 per electric shuttle does not fall within investor-owned utilities' core responsibilities.

8. SCE's Residential Make-Ready Rebate Pilot aligns with the goals of SB 350 because it will encourage widespread transportation electrification, help to achieve GHG reduction goals, and aims to produce data concerning the current and future transportation electrification market.

9. Through the provision of rebates to offset permitting and licensed-electrician fees associated with installing electric vehicle chargers, SCE's Residential Make-Ready Rebate Pilot will incentivize customers to take the step toward EV ownership.

10. SCE's plan to use targeted advertising, as part of its Residential Make-Ready Rebate Pilot, to prospective customers in DACs will allow benefits

from EV adoption, including improved air quality and lower transportation fuel costs, to accrue near or adjacent to DACs.

11. As proposed, it is unclear how SCE's EV Rideshare Reward pilot aligns with the goals of SB 350 and the regulatory objectives outlined in the ACR or provides economic or TE related environmental benefits to DACs.

12. Deploying five DCFC sites in urban areas, under SCE's DCFC Cluster Pilot, will increase access to EV charging, and measure whether or how fast charging in urban areas encourages adoption of EVs.

13. In order to widen exposure and interest in EVs within DACs, SCE should position all of its proposed DCFC sites in or adjacent to DACs.

14. SCE's Electric Transit Bus Make-Ready pilot aligns with the goals of SB 350 because it will encourage widespread transportation electrification, help to achieve GHG reduction goals, and aims to produce data concerning the current and future TE market.

15. In order to maximize the reduction of health and environmental impacts from air pollution, SCE's Electric Transit Bus Make-Ready pilot should be deployed in DACs.

16. As proposed, SCE's Rubber Gantry Crane Electrification Project aligns with the goals of SB 350 because it will encourage widespread transportation electrification, help to achieve GHG reduction goals, and aims to produce data concerning the current and future TE market.

17. As proposed, SCE's Yard Tractor Project aligns with the goals of SB 350 because it will encourage widespread transportation electrification, help to achieve GHG reduction goals, and aims to produce data concerning the current and future TE market.

18. PG&E's Medium/Heavy Duty Fleet Customer Demonstration aligns with the goals of SB 350 because it will encourage widespread transportation electrification, help achieve GHG emission reduction goals, and will produce data concerning the current and future TE market.

19. PG&E should deploy its Medium/Heavy Duty Fleet Customer Demonstration and Electric School Bus Renewable Integration projects in one or more Disadvantaged Community.

20. PG&E's Electric School Bus Renewable Integration project aligns with the goals of SB 350 because it will encourage widespread TE and will produce data concerning the current and future TE market.

21. Because there is little known of the current market status in the Idle Reduction Technology Sector, PG&E should demonstrate how its Idle Reduction Technology Project provides any incremental EV or idle reduction technology adoption.

22. In order to align with the goals of SB 350, PG&E should use the Home EV Charger Information Resource's authorized budget to establish maximum outreach in DACs and to build-out its current website.

23. As proposed, it is unclear how PG&E's Open RFP aligns with the goals of SB 350 and the regulatory objectives outlined in the ACR.

24. Data gathered from these projects should be made available on an aggregated basis to parties, including Community Choice Aggregators, so that they may perform their own analyses.

25. Pub. Util. Code § 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.

26. The utilities should ensure the approved projects comply with the Safety Requirements Checklist developed by Commission staff to meet their obligations under § 740.8 and § 451.

ORDER

IT IS ORDERED that:

1. The funding for Priority Review Projects as summarized in Table 1 in Section 6 is approved. Costs incurred for each project up to the authorized level will be considered *per se* reasonable subject only to the utility's prudent administration of the project. Costs above authorized level must be borne by shareholders.

2. San Diego Gas & Electric Company's Port Electrification, Airport Ground Support Equipment, Electrify Local Highways, Fleet Delivery Services, Green Shuttle Priority Review Project, and Dealership Incentives projects are approved with modifications described in Sections 3.1 through 3.6 and Ordering Paragraphs 3 through 14.

3. San Diego Gas & Electric Company (SDG&E) must implement a two-phase approach to its Airport Ground Support Equipment Project. In the first phase, SDG&E must upgrade any existing EVSE that needs retrofitting, install load research meters on the existing electric GSE and assess the existing fleet's charging behavior and duty cycles. After the load management plan in the first phase, SDG&E shall to submit a Tier 2 Advice Letter with the Commission's Energy Division outlining its plans for the remaining budget and, based on the first phase results, may install new charging ports, after identifying specific SDIA tenants that agree to procure additional electric ground support equipment.

4. San Diego Gas & Electric Company must implement its Electrify Local Highway Project in conjunction with the California Department of Transportation to ensure the installation sites are in or adjacent to a Disadvantaged Community, and to produce data on the overall air quality and other environmental benefits occurring in the Park-and-Ride locations selected for this project.

5. San Diego Gas & Electric Company must install load research meters to collect consumption and charging data when implementing its Port Electrification Project to allow for an analysis of energy consumption relative to time and demand, operational and EV-specific charging patterns, and to help inform development of an optimized grid integration solution for MD/HD and forklift EVs that promotes EV adoption in these market segments.

6. San Diego Gas & Electric Company (SDG&E) must partner with a locally-owned business(es) or a Minority-owned Business Enterprise/Woman-owned Business Enterprise(s) in selecting any additional fleets for charging infrastructure in its Fleet Delivery Services project. SDG&E should discuss its selection criteria and its choice of any additional fleet partner(s) with its Program Advisory Council.

7. San Diego Gas & Electric Company must deploy its Green Shuttle Project to focus solely on shuttle services serving fixed routes and may cover the cost of installing charging platforms that include Level 2 charging infrastructure and up to one DCFC for use by shuttle companies, and any partners the site host approves, that agree to participate in this pilot.

8. In implementing its Green Shuttle Priority Review Project, San Diego Gas & Electric Company (SDG&E) must work with program participants to design charging stations that best meet the shuttle companies' charging needs and

ensure sufficiently high utilization rates. SDG&E may install a solar array and energy storage at one project facility to test the use of stored renewable energy to reduce a facility's demand during critical peak hours. To facilitate data collection, SDG&E may offer its proposed Public GIR at the charging stations SDG&E owns and operates for its authorized Green Shuttle Priority Review Project. SDG&E must not use any of the funds approved for this project for vehicle incentives.

9. San Diego Gas & Electric Company's (SDG&E) Dealership Incentives project is modified such that SDG&E may only offer the $250 incentives to the dealership and salesperson if the electric vehicle buyer or lessee enrolls in one of SDG&E's electric vehicle time-of-use rates (EV-TOU or EV-TOU-2) or any new residential electric vehicle rate that is available at the time of purchase/lease. SDG&E must provide dealers with information on safe EVSE installation with incentive information.

10. San Diego Gas & Electric Company must work with participating customers in the Fleet Delivery Services Program to determine the most appropriate available electric rate at the time of implementation.

11. San Diego Gas & Electric Company may not offer its proposed dynamic Public Charging Grid-Integration Rate through its Electrify Local Highways project as described in Section 3.2.

12. When implementing the Electrify Local Highways project, San Diego Gas & Electric Company must apply an approved time-of-use rate, and submit a Tier 2 Advice Letter detailing how it will pass through a portion of the sites' demand charges to the drivers charging at the public stations.

13. San Diego Gas & Electric Company is encouraged to develop a time-of-use rate for public charging sites that provides more pricing predictability for drivers than its proposed Public Charging Grid-Integration Rate.

14. San Diego Gas & Electric Company may offer its Public Charging Grid-Integration rate at the charging stations SDG&E owns and operates for its Green Shuttle Priority Review Project adopted in Section 3.5.

15. San Diego Gas & Electric Company (SDG&E) is authorized to establish a new one-way balancing account to record the actual Operations and Maintenance expenses, payroll taxes, and capital revenue requirement (i.e., depreciation, return on rate base, property taxes, and income taxes) associated with the approved Priority Review Projects as summarized in Table 1. SDG&E may use its existing regulatory accounts and procedures to ensure that any under- or over-collections associated with the authorized transportation electrification projects are amortized annually in distribution rates.

16. Southern California Edison Company's Rubber Tire Gantry Crane Electrification Project and Yard Tractor Project for the Port of Long Beach are approved as proposed.

17. Southern California Edison Company's Residential Make-Ready Rebate Project, Urban Direct Current Fast Charge Clusters, and Electric Transit Bus Make-Ready Projects are approved with modifications as described in Sections 4.1, 4.3 and 4.4 and Ordering Paragraphs 19 through 22.

18. Southern California Edison Company's Electric Vehicle Rideshare Incentives Project is denied.

19. Southern California Edison Company's (SCE) Residential Make-Ready Rebate may only be offered to customers who have purchased or leased an electric vehicle within six months of applying for this rebate. SCE must collect

data to determine what groups are most influenced by a home charging rebate to purchase an electric vehicle in order to measure the project's impact on electric vehicle adoption.

20. Consistent with Decision 16-12-065, Southern California Edison must treat the proposed rebates in its Residential Make-Ready Rebate Pilot as expenses and not as regulatory assets.

21. Southern California Edison Company's must place its proposed cluster sites for its Direct Current Fast Charge Clusters Pilot in or adjacent to disadvantaged communities, and, consistent with Decision 16-12-065, must work with site hosts to develop load management plans and ensure charging is not cost-prohibitive.

22. Southern California Edison Company's (SCE) Electric Transit Bus Make-Ready Project is approved. SCE must seek to maximize electric transit bus routes in disadvantaged communities.

23. Southern California Edison Company (SCE) is authorized to establish a new one-way balancing account to record the actual Operations and Maintenance expenses, payroll taxes, and capital revenue requirement (i.e., depreciation, return on rate base, property taxes, and income taxes) associated with the approved Priority Review Projects as summarized in Table 1. SCE may use its existing regulatory accounts and procedures to ensure that any under- or over-collections associated with the authorized transportation electrification projects are amortized annually in distribution rates.

24. Pacific Gas and Electric Company's Medium Duty/Heavy Duty Fleet Customer Demonstration, Electric School Bus Renewables Integration, Idle Reduction Technology, and Home Electric Vehicle Charger Information Resource

projects are approved with modifications described in Sections 5.1 through 5.4 and Ordering Paragraphs 26 to 29.

25. Pacific Gas and Electric Company (PG&E) Open Request for Proposals is denied but PG&E may present a future application to support innovative and entrepreneurial projects after the details of the projects have been further developed with third party partners. Any project proposed through a future application should be reviewed with the utility's Program Advisory Council and detailed enough to provide assurance the project(s) will accelerate transportation electrification and meet the state's emissions reduction goals.

26. Pacific Gas and Electric Company must implement its Medium/Heavy Duty Fleet Customer Demonstration Project in one or more disadvantaged community.

27. Pacific Gas and Electric Company must implement the Electric School Bus Renewables Integration Project and deploy this pilot in one or more Disadvantaged Communities.

28. Prior to implementing its Idle Reduction Technology Project, Pacific Gas and Electric Company (PG&E) must file a Tier 2 Advice Letter with the Commission's Energy Division identifying: (1) commitments from both truck stops and fleet operators; (2) PG&E's efforts to engage and educate these partners throughout the duration of the pilot; (3) how PG&E will design this pilot to collect the necessary data to inform future rate designs that can make these idle reduction technologies economically feasible; and (4) whether PG&E plans to support truck stop electrification, transport refrigeration units, or both. Prior to filing, PG&E must present its Idle Reduction Technology Project before the California Freight Advisory Committee and report any feedback as part of its Tier 2 Advice Letter.

29. Prior to implementing its Home EV Charger Information Resource Project, Pacific Gas and Electric Company (PG&E) must file a Tier 2 Advice Letter with the Commission's Energy Division outlining details on how it will spend the $500,000 authorized budget to achieve maximum outreach of its website to individuals living in disadvantaged communities. Alternatively, PG&E may withdraw its Home EV Charger Information Resource Project by filing a Tier 2 Advice Letter with the Commission's Energy Division.

30. Pacific Gas and Electric Company (PG&E) is authorized to establish a new one-way balancing account to record the actual Operations and Maintenance expenses, payroll taxes, and capital revenue requirement (i.e., depreciation, return on rate base, property taxes, and income taxes) associated with the approved Priority Review Projects as summarized in Table 1. PG&E may use its existing regulatory accounts and procedures to ensure that any under- or over-collections associated with the authorized transportation electrification projects are amortized annually in distribution rates.

31. Within 15 days of the effective date of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company must each file a Tier 2 Advice Letter to establish the one-way balancing accounts approved in Ordering Paragraphs 15, 23, and 30.

32. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company must each form its own Program Advisory Council (PAC) to provide feedback and guidance as implementation details are finalized and during implementation of the 15 approved Priority Review Projects. The utilities may combine a preexisting PAC with the PAC required by this decision if that facilities stakeholder participation. Each PAC must develop the format and template for attestation and other necessary logistical details to

support compliance with the Safety Requirements Checklist, made available at http://www.cpuc.ca.gov/sb350te/.

33. Each utility's Program Advisory Council (PAC) must meet quarterly following today's approval of Priority Review Projects and throughout the implementation and design phase of the projects. The utilities may continue PAC meetings at their discretion once project construction or implementation has begun. The PACs shall include a diverse set of stakeholders with expertise relevant to the Priority Review Projects, including Community Choice Aggregators. Each utility shall, at a minimum, solicit participation through the service list for this proceeding.

34. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company must submit a final report for each of their approved Priority Review Projects, and serve the report on the service list for this proceeding. If a utility has not completed any Priority Review Project within one year of the adoption of this decision, the utility shall file an interim report and data template detailing accomplishments to date. Energy Division staff, in consultation with the utilities and the Program Advisory Councils, will develop final report templates.

35. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company must utilize the current data gathering template available on the Commissions' website (http://www.cpuc.ca.gov/sb350te/) under the "reporting requirements" section of this page.

36. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company must 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 approve Priority Review Projects.

37. San Diego Gas & Electric Company, Southern California Edison Company, and Pacific Gas and Electric Company shall collectively fund a budget equal to four percent of their total approved Priority Review Project (PRP) budgets from all ratepayers, and issue a Request for Proposal to select a third-party evaluator. The evaluator should conduct an assessment of each PRP to determine the success of each project and determine if and how each PRP could be scaled for the future.

38. The evaluator shall commence evaluation efforts by early 2019 and submit a final evaluation report on all the Priority Review Projects by December 31, 2019. San Diego Gas & Electric Company, Southern California Edison Company, and Pacific Gas and Electric Company may seek to extend this deadline through a letter to the Commission's Executive Director.

39. No later than 18 months after the effective date of today's decision, the sponsoring utility for each project 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/. The sponsoring utility must maintain all compliance documentation available should the Commission determine an inspection or audit is necessary.

40. Application (A.) 17-01-020, A.17-01-021, A17-01-022 remain open.

This order is effective today.

Dated January 11, 2018, at San Francisco, California.

MICHAEL PICKER
President
CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners

APPENDIX A

Glossary	
Acronym	Meaning
ACR	September 14, 2016 Assigned Commissioner's Ruling in R.13-11-007
Amended Scoping Memo	R.13-11-007 March 30, 2016 Amended Scoping Memo
ARB	Air Resources Board
CAISO	California Independent System Operator
CARB	California Air Resources Board
Caltrans	California Department of Transportation
CCAs	Community Choice Aggregator(s)
CCUE	Coalition of California Utility Employees
CEC	California Energy Commission
EFAC	California Freight Advisory Committee
ChargePoint	Charge Point Inc.
CPUC	California Public Utilities Commission or Commission
D.	Commission Decision
DAC	Disadvantaged Communities
DCFC	DC Fast Charger
DRAM	Distribution Revenue Adjustment Mechanism
EDF	Environmental Defense Fund
EPIC	Electric Program Investment Charge
ePTO	Electric poser takeoff
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
EVSP	Electric Vehicle Service Provider
GHG	Greenhouse gas
GIC	Grid integrated rate
GIR	Grid integrated rate
GM	General Motors
GRC	General rate case
Greenlining	Greenlining Institute
GSE	Ground support equipment
HD	Heavy Duty
IRT	Idle Reduction Technology

Joint Environmental Groups	East Yard Communities for Environmental Justice, Center for Community Action and Environmental Justice, Sierra Club, and Union of Concerned Scientists
L2	Level 2
MBE/WBE	Minority-owned business enterprise/woman-owned business enterprises
MD	Medium Duty
MUD	Multi-unit dwelling
MW	megawatt
NDC	National Diversity Coalition
NOx	Nitrous oxide
NRDC	Natural Resources Defense Council
O&M	Operation and maintenance
ORA	Office of Ratepayer Advocates
PAC	Program Advisory Council
PEV	Plug-in electric vehicle
PG&E	Pacific Gas and Electric Company
PHC	Prehearing Conference
PRP	Priority Review Project
PV	photovoltaic
R.	Rulemaking
RFP	Request for Proposals
SB	Senate Bill
SBUA	Small Business Utility Advocates
SCE	Southern California Edison Company
Scoping Ruling	April 13, 2017 Scoping Memo and Ruling in A.17-01-20 et al.
SDG&E	San Diego Gas & Electric Company
SDAP	San Diego Airport Parking
SDIA	San Diego International Airport
SED	Safety and Enforcement Division
SRPs	Standard review projects
TE	Transportation Electrification
TEBA	Transportation Electrification Balancing Account
TEPBA	Transportation Electrification Portfolio Balancing Account
TNC	Transportation Network Company
TOU	Time of Use
TURN	The Utility Reform Network

UPS	United Parcel Service
VGI	Vehicle Grid Integration
ZEV	Zero Emission Vehicle

(End of Appendix A)

PUBLIC UTILITY ECONOMICS

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a system peak will develop, even if the rates charged during such times include nothing for demand costs. Thus, as the Association states, this method ". . . allocates the cost to all customers whose decisions to consume more or less are liable to affect the undertaking's expenses, and only to such consumers."[38] Accordingly, no demand costs would be allocated to off-potential peak periods, although the E.R.A. Method provides that any amount could be allocated to such periods as judgment might indicate. Proponents of this method have suggested that it could be refined by zoning the potential peak periods to reflect differing degrees of peak potentiality.

More specifically, the E.R.A. Method is based upon consumption and the highest thirty-minute peak demand during potential peak periods. The symbols and equations employed are similar to those in Greene's Consumption and Demand Method, except that they apply only to the potential peak period. Like Greene's method, the E.R.A. Method takes into consideration the factors of demand and use. By largely excluding from consideration all periods in which no peak potentiality is judged to exist, the E.R.A. Method is superior to the Consumption and Demand Method from the standpoint of the time-of-use factor.

F. Some Tests of Demand-Cost Allocation Methods. Standards for testing the reasonableness of methods of allocating demand costs have been developed by Dr. Henry Herz, consulting economist. These standards are intended to apply generally, rather than to any one of the public utility industries. Dr. Herz would judge the reasonableness of an allocation method in terms of its capacity to meet the following principles:

(1) All utility customers should contribute to capacity costs.

(2) The longer the period of time that a particular service pre-empts the use of capacity, the greater should be the amount of capacity costs allocated to that service.

(3) Any service which makes exclusive use of a portion of capacity should bear all the demand costs assignable to that portion of capacity. Thus, a 100 per cent load-factor service should be allocated the entire demand costs associated with the portion of capacity pre-empted, but no more.

(4) The allocation of capacity costs should change gradually with changes in the pattern of sales as the market develops. As noted previously, the original Peak Responsibility Method is prone to produce erratic results with changes in the timing of systems peaks.

(5) The capacity costs allocated to one class of service should not be affected by the way in which the remaining capacity costs are allocated to other classes.

(6) More demand costs should be allocated to a unit of capacity pre-empted during a peak period than to one pre-empted off peak.

(7) Service that can be restricted by the utility should be allocated less in demand costs as the degree of restriction increases. This principle goes to the difference between firm service (assured availability) and interruptible and other forms of restricted-availability service. Interruptible service is supplied under agreements which permit curtailment or cessation of delivery by the supplier. There are differing priorities of possible curtailment of deliveries. This seventh principle states, in effect, that a unit of firm demand for service should be allocated a greater share of capacity costs than a unit of demand which cannot

[38] As quoted in: Cost Allocation Committee of the Engineering Committee of the National Association of Railroad and Utilities Commissioners, "Comparison of Methods of Allocating Demand Costs (Electric Utilities)" June, 1955, p. 47.