

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Application of San Diego Gas & Electric Company
(U 902E) for Approval of SB 350 Transportation
Electrification Proposals.

Application 17-01-020
(Filed January 20, 2017)

And Related Matters.

Application 17-01-021
Application 17-01-022

**OPENING BRIEF OF THE OFFICE OF RATEPAYER ADVOCATES
ON THE PRIORITY REVIEW TRANSPORTATION ELECTRIFICATION
PROPOSALS FROM SAN DIEGO GAS & ELECTRIC,
SOUTHERN CALIFORNIA EDISON, AND PACIFIC GAS AND ELECTRIC**

(PUBLIC VERSION)

RICK TSE, PE
MATTHEW YUNGE
Utilities Engineers
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 355-5582; (415) 703-1667
Email: Rick.Tse@cpuc.ca.gov;
Matthew.Yunge@cpuc.ca.gov

TOVAH TRIMMING
Attorney
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-3309
Email: Tovah.Trimming@cpuc.ca.gov

THOMAS GARIFFO
NATHAN CHAU
BENJAMIN GUTIERREZ
Regulatory Analyst
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-1619; 415-703-4622; 415-
703-2874
Email: Thomas.Gariffo@cpuc.ca.gov;
Nathan.Chau@cpuc.ca.gov;
Benjamin.Gutierrez@cpuc.ca.gov

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SUMMARY OF RECOMMENDATIONS

The Office of Ratepayer Advocates (“ORA”) makes the following recommendations, summarized below:

1. Pacific Gas and Electric Company (“PG&E”)

Three of PG&E’s proposed priority review projects (“PRPs”) – the Electric School Bus Renewables Integration Pilot, the Medium/Heavy-Duty Fleet Customer Demonstration Pilot, and the Idle-Reduction Technology Demonstration Project – have unreasonable revenue requests that are inconsistent with the proposed project scopes. As a result, the Commission should reject these proposals or, alternatively, require that PG&E file a Tier 3 advice letter to provide a detailed cost breakdown and more accurate cost estimates.

Also, two other PRPs should be rejected without an opportunity to modify. PG&E’s Medium Duty and Heavy Duty (“MD/HD”) Fleet Customer Demonstration should be rejected because it is duplicative of and subsumed within the broad scope of PG&E’s standard review project, the Fleet-Ready Program. PG&E’s Open Request for Proposals also should be rejected because the scope is largely undefined and does not comply with the Assigned Commissioner’s Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to SB 350 (“ACR”) requirement that individual priority review projects are to be capped at \$4 million.

The estimated cost of \$1.75 million for PG&E’s Home Charger Information Project should be significantly reduced. The amount is too high considering that PG&E and other organizations already have similar web resources available for customers. Thus, there is no need to develop a “start from-scratch” type of project as PG&E has proposed.

Finally, the Commission should reject PG&E’s requests that any spending for the priority review projects that is at or below the forecast cost expenditure is deemed reasonable. Instead, the Commission should authorize PG&E to establish a memorandum account, and conduct a reasonableness review to ensure transparency and accountability.

2. San Diego Gas & Electric Company (“SDG&E”)

In general, SDG&E’s portfolio does not appear to encourage private investment in electric vehicle service equipment and transportation electrification infrastructure. SDG&E’s proposals also unfairly compete with non-utility enterprises because SDG&E proposes to install, own, operate, and maintain the necessary infrastructure and charging equipment. Furthermore,

SDG&E proposes to collaborate with only one electric vehicle service provider (“EVSP”) per project, thereby limiting customer choice. SDG&E’s ownership proposals should be rejected and the Commission should authorize only a make-ready approach whereby the utility will install and maintain the infrastructure necessary for EVSPs to build and install the electric vehicle service equipment. In addition, SDG&E’s Airport Ground Support Equipment project targets an already developed market segment. Therefore, the Commission should only authorize this project to the extent it includes work on EVSE retrofits and utilization of the 5.5 megawatt (“MW”) onsite solar photovoltaic (“PV”) system.

The Commission should reject SDG&E’s request for a two-way balancing account and instead authorize SDG&E to establish a memorandum account. A memorandum account would enable the Commission to conduct an after the fact reasonableness review of SDG&E’s expenditures before approving such expenditures for recovery by ratepayers. SDG&E also should be directed to continue to seek non-ratepayer funding for any CPUC-approved priority review project to reduce costs to ratepayers, and submit a summary report of any funds secured when the projects are completed.

In addition, SDG&E has included overhead loaders and cost escalation factors that significantly increase the costs of the programs to over \$4 million per each project, and over \$26 million for all the priority review projects. Since this request is inconsistent with the ACR’s requirements for priority review projects, SDG&E should be limited to \$4 million per project and the aggregated cost of the PRPs should not exceed \$20 million.

3. Southern California Edison Company (“SCE”)

This brief focuses primarily on SCE’s proposed Electric Driver (“EV”) Driver Rideshare Reward Pilot priority review project and SCE’s proposed cost recovery mechanisms. In general, the Driver Rideshare Reward Pilot lacks detailed information, analysis, and reasoning to demonstrate that it meets the statutory and regulatory requirements for TE projects. Therefore, the project should be rejected. Alternatively, SCE should be required to demonstrate, with the results of surveys or focus groups that customers would likely enroll in the program prior to implementation. If the Commission approves this project, then SCE also should be required to report the following to the Commission:

- A quantitative analysis of the cost-effectiveness of varying incentives used to increase EV rideshare vehicle miles traveled (“VMT”);

- Rideshare miles from conventional internal combustion engine vehicles that are displaced by EV VMT as a result of the program; and
- Whether or not rideshare customers' awareness of EVs and their possibility of EV adoption are influenced by the experience of using a rideshare-provided EV.

Regarding SCE's cost recovery proposals, SCE should not be exempt from an after-the-fact reasonableness review for costs incurred related to the priority review projects and should not be allowed to rate base its rebates. Instead, the Commission should authorize a memorandum account and conduct an after-the-fact reasonableness review. Rebates should be treated as expenses and recovered from ratepayers in the year in which they are incurred.

In addition, ORA's brief evaluates whether the priority review projects increase access to transportation electrification for disadvantaged communities and provide other benefits to disadvantaged communities ("DACs"). SCE's testimony does not include specific plans on how its priority review projects will benefit or target DACs. To ensure that the benefits of the priority review projects flow to the communities most impacted by pollution and climate change, the priority review projects should be modified to require at least a 10 percent carve out for DACs.

Lastly, it is unclear whether SCE's proposed priority review projects meet the ACR's requirement that each PRP is under \$4 million, with a maximum of \$20 million total because SCE does not provide a breakdown of capital expenditures and overhead loader costs for PRPs individually. Therefore, SCE should be required to demonstrate that the overhead loader costs are included in the cost estimates and that this does not result in project costs over the \$4 million cap.

4. Other Issues: SDG&E's Rate Design

SDG&E's proposal to recover 80% of distribution demand costs does not comport with the Commission's cost causation principles and is contrary to a number of goals outlined in the ACR. Therefore ORA's brief makes the following recommendations to improve SDG&E's rate design proposal: (1) SDG&E should move recovery of the aforementioned costs to time-of-use (TOU) and "base" energy rates; (2) SDG&E should design an equivalent rate for its small commercial customers; and (3) the dynamic hourly price component of SDG&E's residential Grid Integration Rate ("GIR") should be replaced with TOU pricing for residential and small commercial customers.

In accordance with Rule 13.11 of the California Public Utilities Commission (“CPUC” or “Commission”) Rules of Practice and Procedure (“Rules”), and the April 13, 2017 Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judges (“Scoping Memo”), the Office of Ratepayer Advocates (“ORA”) submits this opening brief on the priority review projects (“PRPs”) proposals filed by San Diego Gas & Electric Company (“SDG&E”), Southern California Edison Company (“SCE”) and Pacific Gas & Electric Company (“PG&E”) in Application (A.) 17-01-020, A.17-01-021, and A.17-01-022, respectively.

I. Introduction, Background, and Procedural History

On October 7, 2015, Senate Bill 350 (“SB 350”) was signed into law, establishing new goals for California in the areas of clean energy, clean air, and greenhouse gas reductions for 2030 and beyond.¹ The Legislature identified transportation electrification (“TE”) as one of several means for achieving the ambitious goals set forth in SB 350.² Indeed, the Legislature found that widespread transportation electrification will be *required* to meet SB 350’s target of reducing emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.³ In addition to TE’s role for meeting GHG targets, the Legislature also intended TE as a means to achieve the state’s ambient air quality standards, finding that light-, medium-, and heavy-duty vehicle electrification would result in “approximately 70 percent fewer greenhouse gases emitted, over 85 percent fewer ozone-forming air pollutants emitted, and 100 percent fewer petroleum used.”⁴

The electric and gas utilities have a central role in implementing SB 350’s TE goals. SB 350 modified California Public Utilities Code (“PU Code”) Section 701.1(a)(1) to declare that, in addition to other ratepayer protections, the “principle goal of electric and gas utilities’ resource planning and investments shall be to ... improve the environment and encourage the diversity of energy sources through improvements in energy efficiency, development of renewable resources, such as ... widespread transportation electrification.”⁵ To this end, SB 350 requires the Commission, in consultation with California Air Resources Board (“CARB”), and

¹ Senate Bill SB 350 (de León, 2015), Chapter 547, Statutes of 2015.

² See *generally* SB 350; see also Cal. Pub. Util. Code §§ 701.1(a)(1), 740.12.

³ Cal. Pub. Util. Code § 740.12(a)(1)(D).

⁴ Cal. Pub. Util. Code §§ 740.12(a)(1)(I) & (a)(2); see also Cal. Pub. Util. Code § 701.1(a)(1) .

⁵ Cal. Pub. Util. Code § 701.1(a)(1).

the California Energy Commission (“CEC”), to “direct electric corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, achieve the goals set forth in the Charge Ahead California Initiative . . . , and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”⁶

The laudable goals for TE are not without constraints to protect ratepayers and non-utility competitors. SB 350 specifically requires that programs proposed by electrical corporations shall seek to minimize overall costs and maximize overall benefits, include a reasonable cost recovery mechanism, be consistent with PU Code Section 740.12(b), do not unfairly compete with non-utility enterprises as required under PU Code Section 740.3, include performance accountability measures, and be in the interests of ratepayers as defined in PU Code Section 740.8.⁷ The Commission provided further guidance on the statutory requirements for TE applications and also developed regulatory requirements.

On September 14, 2016, the Assigned Commissioner’s Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350 (“ACR”) addressed the TE applications that were directed to be filed pursuant to SB 350. The ACR outlined the minimum statutory requirements for the applications, including the TE provisions of SB 350⁸ and sections of the PU Code defining ratepayer interest.⁹ The ACR also listed regulatory requirements such as addressing the multiple goals of widespread TE, seeking to leverage non-utility funding, and providing anonymous and aggregated data for evaluation, among others.¹⁰ Additionally, the ACR provided guidelines for priority review projects (“PRPs”).¹¹ The ACR required the three investor-owned utilities (“IOUs”) to submit their first TE applications by January 20, 2017. Each IOU timely submitted its TE application to the Commission.

On April 13, 2017, the assigned Administrative Law Judges (“ALJs”) issued a scoping memo and set the filing date of June 16, 2017 for opening briefs addressing the PRPs. Prior to

⁶ Cal. Pub. Util. Code § 740.12(b).

⁷ See Cal. Pub. Util. Code § 740.12(b).

⁸ Senate Bill 350 (De León, 2015) Chapter 547, Statutes of 2015.

⁹ Cal. Pub. Util. Code § 740.3 and § 740.8.

¹⁰ R.13-11-007, Assigned Commissioner Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350, pp. 15-16 (Sept. 14, 2016) (hereinafter “ACR”).

¹¹ ACR, pp. 31-33.

the filing date, on May 17, 2017, the Commission's Energy Division hosted a Workshop in which the Applicants addressed questions raised by the Commission and other stakeholders concerning the Applicants' PRPs. On May 24, 2017, the ALJs sent out an email to the service list including instructions on how to reference issues discussed during the workshop and in responses to data requests, and which materials could be cited.¹² The email also included a common briefing outline.

This brief follows the ALJ's May 24, 2017 briefing outline. Specific sections of this brief left unaddressed are not an admission by ORA that any of the IOUs' PRPs satisfy the stated statutory mandates, regulatory requirements, or any other criteria or objectives. ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

II. Statutory Requirements: *Do the utilities' proposed portfolios of priority review projects meet the Senate Bill 350 requirements for transportation electrification as detailed below? If not, what modifications to the utilities' proposals are necessary?*

1. *Will the portfolios accelerate widespread transportation electrification to reduce dependence on petroleum, improve air quality, and reduce greenhouse gas emissions?*

SB 350 requires that the "[C]ommission, in consultation with the CARB and CEC, direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, achieve the goals set forth in the Charge Ahead California Initiative."¹³ As discussed below, several of the IOUs' proposed PRPs either do not meet these requirements or do not include sufficient information to make this determination. Notably, because some of the PRPs are pilots or demonstration projects seeking to gather unknown information about particular aspects of TE, it may be too soon to assess whether those pilots or demonstration projects can eventually help accelerate widespread TE.

¹² ALJs' Ruling Summarizing Clarifications Made in May 25, 2017 E-Mail, Attachment A, clarified the following matters for opening briefs: (1) there is no page requirement, but briefs over 20 pages must comply with Rule 13.11; (2) parties should serve the May 22, 2017 regular service list; (3) parties may include in their briefs references to things discussed or handed out at the May 17, 2017 workshop (including a transcription of the portion of the cited discussion), responses to data requests in connection with the proceedings, and to the Program Advisory Committee reports issued in earlier TE pilots.

¹³ Cal. Pub. Util. Code § 740.12(b).

a. PG&E

At this time, it is unknown if PG&E’s proposed PRPs will accelerate widespread TE. A major objective of PG&E’s PRPs is the collection of sufficient data to inform the Commission and other stakeholders of the efficacy and scalability of the PRPs.

b. SDG&E

At this stage, it is unknown if SDG&E’s proposed PRPs will accelerate widespread TE. A major objective of SDG&E’s PRPs is the collection of sufficient data to inform the Commission and other stakeholders of the efficacy and scalability of the PRPs. Therefore, this brief will not focus on whether SDG&E’s PRPs fulfills this particular requirement, but whether SDG&E’s proposed PRPs are a cost-effective and prudent way of fulfilling other statutory requirements.

c. SCE

SCE has not adequately demonstrated that its EV Driver Rideshare Reward Pilot will accelerate TE adoption. SCE states that the pilot “is designed to encourage EV adoption by rideshare drivers,” but offers only scant details and a vague explanation of how this pilot will achieve such a goal. Specifically, SCE states:

SCE plans to leverage multiple communication channels to develop customer awareness about the pilot, including online advertising to target customers interested in EVs and rideshare services. SCE also intends to work with rideshare services to reach existing drivers and with EV dealers to promote the pilot at the point of sale. Finally, SCE may leverage the online Clean Fuel Reward program [citation omitted] and work with third-party low-income purchase incentives (e.g., CARB’s Enhanced Fleet Modernization Program and Plus Up Pilot Project [citation omitted]) to reach potential participants.¹⁴

In other words, SCE requests approval of an undefined marketing, education, and outreach (“ME&O”) program to encourage (1) existing rideshare drivers to switch from internal combustion engine vehicles to EVs, (2) SCE customers who own EVs to become rideshare drivers, and (3) SCE customers who ride with EV rideshare drivers to purchase, lease or rent new and used EVs. SCE’s testimony does not support any of these assertions with, for example, survey results of drivers or passengers, or provide any other type of data that could demonstrate the likelihood of success of the pilot. Rather, SCE only “engaged with leading rideshare

¹⁴ SCE Testimony in A.17-01-021, p. 36 (hereinafter “SCE Testimony”).

providers to discuss the *feasibility* of the proposed pilot.”¹⁵ Thus, there is no indication that the pilot will accelerate widespread TE adoption.

In addition, SCE claims that the “pilot may incent SCE’s customers to purchase, lease or rent new and used EVs or mobilize already owned EVs to participate in the rideshare economy.”¹⁶ However, SCE’s testimony supporting the pilot lacks detailed information, analysis, and reasoning that would demonstrate that this program would result in greater TE.

Notably, SCE does not provide a cost breakdown for the total cost of \$4 million, which is the cost cap set forth in the ACR for PRPs. Based on the pilot’s description, which does not define a reward amount, the ME&O may be a significant portion of the costs. Concentrating ME&O efforts in this rideshare market without use of surveys or other data to evaluate the pilot’s likelihood of success does not constitute a good use of ratepayer funds and is too uncertain to satisfy the statutory requirement that it will accelerate widespread TE adoption. Therefore, ORA recommends denying this project. If the Commission decides to approve this PRP, the Commission should require SCE to conduct surveys or focus groups to understand what will prompt consumers to purchase EVs prior to implementation.

2. *Will the portfolios increase access to transportation electrification for disadvantaged communities and provide other benefits to disadvantaged, low- and moderate-income communities, including increased employment opportunities?*

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

b. SDG&E

SDG&E’s Highway Electrification Project might provide increased access to TE charging if the locations are near disadvantaged communities (“DACs”). For this project, SDG&E proposes to partner with the California Department of Transportation (“Caltrans”) to install Level 2 and direct current fast chargers (“DCFCs”) at four Caltrans Park-and-Ride locations, each of which is located within or adjacent to a DAC.¹⁷ If the residents of DACs are

¹⁵ SCE Testimony, p. 35 (emphasis added).

¹⁶ SCE Testimony, p. 37.

¹⁷ SDG&E Testimony in A.17-01-020, pp. RS-18, RS-21 (hereinafter “SDG&E Testimony”).

interested in purchasing EVs, having charging stations in or near DACs may influence their decision to purchase EVs. Additionally, some programs, while not directly increasing access to EVs, might provide other benefits to DACs. For example, the airport and maritime port projects are located in or near DACs.¹⁸ It is possible that nearby residences might benefit from a reduction of emissions associated with the implementation of those particular priority review programs.

c. SCE

In general, SCE's PRPs that focus on the medium duty / heavy duty ("MD/HD") sector (i.e., the projects at the Port of Long Beach) may benefit DACs because, as SCE acknowledges, "[i]n SCE's service territory, the communities most heavily impacted by air pollution from medium- and heavy-duty transportation are Disadvantaged Communities, as defined by the Office of Environmental Health Hazard Assessment's (OEHHA's) California Communities Environmental Health's Screening Tool (CalEnviroScreen 3.0)."¹⁹ Specifically, SCE states that "accelerating TE adoption at Port of Long Beach (POLB) improves air quality and reduces GHG emissions for all neighboring communities[, including the]19 communities immediately surrounding the POLB [that] are considered disadvantaged communities as defined by CalEPA."²⁰

However, the other PRPs do not include specific plans on how they will benefit or target DACs. For example, although SCE states that it "will specifically target 10 disadvantaged communities when implementing ... [the Residential Make-Ready Rebate Pilot, EV Driver Rideshare Reward and Urban DCFC Cluster] programs, SCE does provide concrete proposals on how it will do so."²¹

To address this, ORA recommends the Commission should require that: (1) a specific amount of rebates for the Residential Make-Ready Rebate Pilot are set aside for customers in

¹⁸ See SDG&E Testimony RS-12 (estimating CO2 reductions for the Airport GSE Project); see also *id.* at RS-33 (estimating GHG reductions for the Port Project).

¹⁹ SCE Testimony, p. 13.

²⁰ SCE Testimony, p. 48.

²¹ SCE Testimony, p. 20; see also *id.* at p. 28 (stating that the reward in the EV Driver Rideshare Reward program will encourage EV ridesharing, especially in DACs); *id.* at p. 36 ("As part of its education and outreach efforts [for the Residential Make-Ready Rebate Pilot], SCE will 10 specifically target customers in disadvantaged communities to invite them to participate in the pilot.").

DACs, at a minimum 10%; (2) a specific amount of rewards for the EV Driver Rideshare Reward are reserved for participating drivers who complete the most rides in DACs; (3) at least 10% of the charging stations for the Urban DCFC Cluster are currently located in DACs; and (4) instead of opening enrollment for the Electric Transit Bus Make-Ready Program on a first-come, first-serve basis, SCE should reserve 10% of the rebates for transit agencies acquiring new electric or plug-in hybrid buses for routes that predominately travel in or near DACs.²²

3. *Will the portfolios enable consumer choice, encourage private investment, avoid stranded costs, and adequately mitigate any unfair competition with nonutility enterprises that might result from the proposed projects/investments?*

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

b. SDG&E

SDG&E's portfolio does not encourage private investment and unfairly competes with nonutility enterprises. SDG&E proposes six PRPs: Airport Ground Support Equipment ("GSE") Electrify Local Highways, MD/HD and Forklift Port Electrification, Fleet Delivery Services, Green Taxi/Shuttle/Rideshare, and Dealership Incentives programs.²³ For all of the PRPs that include the deployment of infrastructure, which excludes only the Dealership Incentives project, SDG&E proposes to install, own, operate, and maintain the necessary infrastructure (including load research meters and data loggers where applicable) and charging equipment.²⁴ SDG&E "recognizes concerns regarding competition" and states that these "sectors were selected, in part, because a robust market has not yet substantially develop[ed] in these areas."²⁵ SDG&E further states:

Moreover, one of the goals of these [PRP] projects is to jumpstart these segments by introducing relevant TE technology to serve as demonstrations and test which, if successful, should lead to further private sector market participation and vehicle

²² The 10 percent recommendation is consistent with the Commission's decisions in SCE's previous EV application. See D.16-01-023, pp. 38-41.

²³ SDG&E Application in A.17-01-020, pp. 6-7 (hereinafter "SDG&E Application").

²⁴ SDG&E Testimony, p. RS-5 (Airport GSE Project); RS-20 (Electrify Local Highways Project); RS-33 (Port Project); RS-48 (Fleet Delivery Services Project); RS-62 to RS-63 (Green Taxi/Rideshare/Shuttle Project).

²⁵ SDG&E Application, p. 8.

adoption. In conjunction with the oversight and support of the Commission, SDG&E believes the right balance between utility and private sector participation in the EV market can be achieved.²⁶

SDG&E provides no further analysis on how its PRPs would not unfairly compete. Even if targeted sectors are underdeveloped, this is not the only factor that must be assessed before the Commission can approve utility ownership.

When a utility proposes ownership of EV charging infrastructure, the Commission should, at a minimum, assess whether the proposal meets the requirements of PU Code Section 451, which provides that the charge to ratepayers must be just and reasonable, and whether the proposal satisfies the balancing test set forth in D.14-12-079.²⁷ The Commission has explained the origins and requirements of the balancing test as follows:

In D.14-12-079, the Commission set aside the prohibition adopted in D.11-07-029 that electric utilities could not own EV charging infrastructure. The Commission adopted rules in D.14-12-079 to expand the utilities' role in the development and ownership of electric vehicle infrastructure. These rules consist of using a case-specific approach to assess 'any proposed utility program based upon the facts of specific requests,' and a balancing test. (D.14-12-079 at 8.) The balancing test is based on the test that was adopted in D.11-07-079, which weighs the benefits of utility ownership of the EV charging infrastructure against the competitive limitation that may result from that ownership.

In applying the balancing test, the Commission stated in D.14-12-079 at 8, that the Commission will assess 'the likely competitive impact on the market segment targeted, and whether any anticompetitive impacts can be prevented or adequately mitigated through the exercise of existing rules or conditions.' In conducting such an approach, the Commission will examine, at a minimum, the following:

- 1) The nature of the proposed utility program and its elements; for example, whether the utility proposes to own or provide charging infrastructure, billing services, metering, or customer information and education.
- 2) Examination of the degree to which the market into which the utility program would enter is competitive, and in what level of concentration.
- 3) Identification of potential unfair utility advantages, if any.
- 4) If the potential for the utility to unfairly compete is identified, the commission will determine if rules, conditions or regulatory protections are needed to effectively mitigate the anticompetitive impacts or unfair advantages held by the utility. (D.14-12-079 at 8-9.)

²⁶ SDG&E Application, p. 8.

²⁷ See D.16-01-045, p. 88.

The Commission also stated that ‘the benefits analysis applied in the balancing test will rely heavily on the guidance from Pub. Util. Code § 740.8.’ (D.14-12-079 at 9.)²⁸

SDG&E did not conduct such an analysis to make the above conclusion and the record at this point is inadequate to evaluate these applicable considerations. Therefore, the Commission should reject SDG&E’s ownership proposal and instead only authorize SDG&E to own the make-ready infrastructure.²⁹ The make-ready approach is consistent with SCE’s previously approved Charge Ready pilot program³⁰ and SCE’s and PGE’s proposals in this proceeding.³¹

In addition, permitting utility ownership of the EVSE without requiring a demonstration that utility ownership was not the only option considered is inconsistent with the ACR, which states: “To address concerns about competition, utilities should not over-invest in utility-owned TE infrastructure if instead they could support the private sector or individuals in making these investments, while still receiving adequate compensation for their contributions to TE.”³² Instead of being responsive to the ACR’s guidance, all of the proposed projects involving the deployment of electric infrastructure include utility ownership and operation of that infrastructure, including customer-side EV chargers. Indeed, SDG&E admits that it only considered end-to-end ownership for its proposed PRPs.³³

Further, there is a record to support that utility ownership is not necessarily needed to encourage SDG&E’s PRPs and that it may impact competition. For example SDG&E supports utility ownership charging stations for the Electrify Local Highways Project by asserting that “Caltrans conveyed they do not currently have the resources to take on this effort [of installing L2 and DCFC stations] themselves, and that they have not been able to find the right end-to-end solutions with past third party charging installation programs, which could take on the installation, ownership, customer service, billing, maintenance, and operations efforts

²⁸ D.16-01-045, pp. 103-104.

²⁹ A make-ready model for deployment permits utility ownership of infrastructure up to, but not including, the EVSE.

³⁰ *See generally* D.16-01-023.

³¹ A.17-01-021; A.17-01-022.

³² ACR, p. 30.³³ SDG&E response to Energy Division Data Request ED-DR-01, question 10 . (*See* Attachment 1).

³³ SDG&E response to Energy Division Data Request ED-DR-01, question 10 . (*See* Attachment 1).

altogether.”³⁴ However, as stated by ChargePoint during the May 17, 2017 workshop, some EVSPs have a business model that can permit the EVSPs to operate and maintain charging stations in the case that a site host such as Caltrans does not want to participate in those aspects of electric vehicle charging.³⁵ Further, regardless of the scope of services that could be offered by an EVSP, SDG&E’s reliance on Caltrans’ desire for an end-to-end solution to justify its ownership of the charging stations does not seem to be the “creative solution(s)” the ACR envisioned to incentivize utilities “for undertaking TE projects and investment ... while at the same time minimizing the financial impact on utility ratepayers and encouraging competition in the TE marketplace.”³⁶

For the Airport Ground Support Equipment (“GSE”) Project, there is already a market for electric GSE at the San Diego International Airport and utility intervention could harm the competitive market.³⁷ Additionally, SDG&E’s proposed model could impede or even bar market participants from effectively engaging creatively with site hosts. Similarly, providing fuel credits³⁸ to the taxi/rideshare drivers of EVs incentivizes those drivers to utilize particular EVSE over others because participants must enroll in the public GIR, which will only be applicable at charging stations that are part of the project.³⁹ This may prove to be harmful to existing public charging station operators. Moreover, SDG&E’s portfolio provides little consumer choice because, as SDG&E admits, due to the limited nature of the priority review projects, SDG&E will not be collaborating with more than one EVSP per project.⁴⁰

³⁴ SDG&E Testimony, p. RS-19.

³⁵ Transcription from the May 17, 2017 Transportation Electrification Priority Review Projects Workshop in A.17-01-020 et al. (hereinafter “May 17, 2017 Workshop”). (Attachment 2).

³⁶ See ACR, p. 31.

³⁷ SDG&E Testimony, p. RS-4; see *id.* at RS-10 (stating that electric GSE is technically mature and has operational capabilities that would allow for greater penetration at SDIA); see also National Diversity Coalition Protest in A.17-01-020, pp. 5-6.

³⁸ SDG&E proposes to provide EV Taxi drivers a fueling credit of \$4,000 per EV for 12 months to be used at an SDG&E project charging facility. Similarly, TNC EV drivers would be provided with a “Zero Emissions Credit” on their SDG&E bill per every 1,300 kilowatt-hour (kWh) used as transportation fuel for the first 12 months. SDG&E Testimony, pp. RS-61 to RS-69.

³⁹ SDG&E Testimony, p. RS-63.

⁴⁰ May 17, 2017 Workshop. (Attachment 2).

c. SCE

ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

4. Are the proposed cost recovery mechanisms for the portfolios appropriate?

a. PG&E

PG&E's request for Commission approval of its forecasted amount to implement its PRPs should be rejected.

i. PG&E's request for a Commission finding of cost reasonableness for the PRPs should be rejected.

PG&E requests that the Commission establish a Transportation Electrification Balancing Account ("TEBA") for its TE proposals, including a subaccount for all of the PRPs, which would allow PG&E to recover actual revenue requirements up to the forecasted capital and expense expenditures.⁴¹ PG&E also requests that the Commission deem any spending for the PRPs that is at or below the forecast cost expenditure to be reasonable.⁴²

PG&E's request for a balancing account should be rejected by the Commission. Instead, the Commission may approve a memorandum account for PG&E to record its PRPs expenditures, not to exceed the PRPs budget cap, which would be subject to an after-the-fact reasonableness review before approval by the Commission for recovery by PG&E. In addition, the Commission should not deem any spending as reasonable until an after-the-fact reasonableness review is conducted by the Commission. If PG&E's proposal is approved, PG&E would have the discretion to spend up to \$20 million of ratepayer money on loosely defined pilot projects that target the nascent MD/HD sector. (*See* brief Section II.6.a discussing PG&E's School Bus, Medium/Heavy-Duty Fleet Demo, and Idle-Reduction Demo PRPs.)

Moreover, PG&E would be able to shift the funds among the different PRPs as long as the total costs do not exceed \$20 million.⁴³ Thus, there is no opportunity for the Commission and stakeholders to assess whether funds for a particular PRP were spent in a cost-effective manner and in a manner reflective of the goals of the program. Additionally, there is no certainty about how much funding an individual PRP may actually receive. This approach

⁴¹ PG&E Testimony in A.17-01-022, p. 6-1 (hereinafter "PG&E Testimony").

⁴² PG&E Testimony, p. 6-2.

⁴³ PG&E Application in A.17-01-022, p. 6, fn. 5 (hereinafter "PG&E Application").

would impede transparency and accountability. Since there are several areas of concern in each PRP proposal, as discussed in Section II.6.a, if approved, the Commission should require an after-the-fact reasonableness review to ensure that PG&E spent ratepayer dollars in a prudent manner.

The ACR lists the minimum statutory requirements that TE applications must meet. Among these requirements is that, “[c]onsistent with Pub. Util. Code § 740.12(b), each of the proposed TE projects and investments shall include performance accountability measures. Such measures are needed in order to track the progress of the proposed projects and investments in order to ensure that they are timely contributing to the adoption of TE.”⁴⁴ Elimination of after-the-fact reasonableness review is inconsistent with Section 740.12(b) because the Commission must be able to hold SCE accountable for the performance of its TE projects and track progress of these projects. While compliance review is appropriate in some contexts to avoid burdensome review of routine transactions, as explained above, doing so in this case would divest the Commission of its ability to meaningfully track “the progress of the proposed projects and investments in order to ensure that they are timely contributing to the adoption of TE.”⁴⁵ ORA recommends that the Commission reject PG&E’s request for elimination of after-the-fact reasonableness review, and require after-the-fact reasonableness review.

b. SDG&E

SDG&E proposes to record costs in a two-way balancing account to account for any uncertainties in implementing equipment and infrastructure for the priority review projects.⁴⁶ The Commission should reject SDG&E’s request because it does not provide sufficient ratepayer protections, especially if SDG&E’s utility ownership proposals are authorized. As explained above, it is also inconsistent with the ACR. A two-way balancing account would not incentivize SDG&E to keep costs within the forecasted amount. Instead, it would allow SDG&E to recover costs above the forecasted amount. The Commission, therefore, should require SDG&E to establish a memorandum account, which would enable the Commission to conduct an after the fact reasonableness review of SDG&E’s expenditures before approving such expenses for recovery by ratepayers. Any spending above the budget cap would be borne by SDG&E’s

⁴⁴ ACR p. 15.

⁴⁵ ACR, p. 15.

⁴⁶ See SDG&E Testimony, p. NGJ-1.

shareholders and SDG&E would only recover from ratepayers the revenue requirements associated with the actual costs and expenses incurred for the approved projects.

c. SCE

SCE requests that rebates be included in its rate base instead of treated as expenses, and recommends that there be no after-the-fact reasonableness review of its expenditures. These proposals are not appropriate and should be rejected by the Commission because SCE's PRPs target nascent markets with significant uncertainties that present a risk for ratepayers and allowing rebates to be rate based is not warranted considering the scope of SCE's TE proposals. Rebates are expenses and are not capital expenditures and, therefore, should not be included in rate base. Moreover, rebates are not a regulatory asset on which SCE should earn a rate of return. Thus, ORA recommends SCE rebates be expensed and pass through to ratepayers on a dollar for dollar basis, without a rate of return.

i. SCE's PRPs should not be exempt from after-the-fact reasonableness review.

SCE proposes that its PRPs expenditures be exempt from after-the-fact reasonableness review if the actual incurred costs are (1) consistent with the adopted scope of activities, and (2) within costs levels authorized by the Commission.⁴⁷ SCE explains that if these conditions are not met, then "SCE would file an application or other appropriate regulatory procedural mechanism to request approval of the activities and recovery of the additional costs through a traditional after-the-fact reasonableness review."⁴⁸ An after-the-fact reasonableness review is a standard of review that allows the Commission and interested stakeholders to assess whether ratepayer funds were spent in a cost-effective manner, and in a manner reflective of the goals of the program. Additionally, it allows the Commission to review, and stakeholders to submit evidence into the public record regarding the utility's spending to promote transparency and accountability.

Here, SCE has proposed a compliance standard of review, which would allow the Commission and stakeholders an opportunity to review costs only if SCE exceeds authorized limits or if costs were not properly recorded for accounting purposes. SCE's proposal requires the Commission to assume that SCE will responsibly spend nearly \$20 million of ratepayer funds, without any after-the-fact review by the Commission or interested stakeholders as to

⁴⁷ SCE Application, p. 9.

⁴⁸ SCE Testimony, p. 102.

whether these funds were prudently spent. There are potentially significant risks that should be considered with this proposal. First, most of SCE’s proposals target nascent TE markets or market segments with uncertainties and risks related to stranded costs.⁴⁹ Second, because collected data from the pilot may inform future full-scale EV deployment, its usefulness should be carefully weighted. An after-the-fact review, therefore, should be required to mitigate ratepayer risks and to assess the pilot program’s effectiveness.

In addition to being inconsistent with the ACR, as explained above, waiving after-the-fact reasonableness review would institute a compliance standard of review, which is not appropriate for untested programs or technologies. The compliance standard of review is applied in cases where costs are routine, well-established, and non-controversial. For example, the costs associated with short-term and frequent procurement transactions preapproved in the investor-owned electric utilities’ Bundled Procurement Plans have no after-the-fact reasonableness review because they “largely follow existing policies rather than making new policies.”⁵⁰ In comparison, the review for innovative programs requires a more rigorous and holistic approach, for the purposes of gathering data and applying lessons learned to future actions.

Here, SCE is requesting approval of three “pilots aimed at accelerating light-duty EV adoption.”⁵¹ Pilot programs are experimental in nature, typically small-scale projects to accumulate practical experience and data that “reduce costs and develop policy incentives”⁵² for future applications while minimizing financial risk. Further, SCE’s other three proposed PRPs target segments of the transportation sector that “are in various stages of technological

⁴⁹ See SCE Testimony, p. 38 (“DCFC has seen limited urban deployment and tends to support long distance travel near highways.”); *id.* at p. 43 (“[C]osts and complexities associated with electric buses are significant. From siting and deploying charging infrastructure to operational impacts (e.g., downtime for charging, training 6 maintenance technicians), transit agencies must overcome new challenges when they convert to electric fleets.”); *see also id.* at pp. 22, 46-51 (describing the barriers to the MD/HD EV technology and targeting the nascent MD/HD sector for the Port of Long Beach Rubber Tire Gantry Crane Electrification Project and POLB ITS Terminal Yard Tractor Project).

⁵⁰ See D.15-10-031, p. 6 (Decision Approving 2014 Bundled Procurement Plans) (Oct. 22, 2015); *see also id.* at p. 11 (“The review of the utilities’ conformed BPPs can reasonably be considered to be ministerial as it would not result in changes to existing policies.”).

⁵¹ SCE Testimony p. 1.

⁵² SCE Testimony p. 18.

development,”⁵³ especially the heavy-duty sector where technologies “are [in the] very early stage and it is unclear which technologies will be adopted on a large scale.”⁵⁴

Since the Application targets are new or underdeveloped markets, as SCE acknowledges, ORA recommends the Commission have all priority review projects be tracked in a memorandum account where expenditures undergo after-the-fact reasonableness review before approval by the Commission for recovery.

ii. SCE should not be allowed to rate base its rebates.

SCE requests to treat the costs of rebates for its Residential Make-Ready Pilot and the Electric Transit Bus Make-Ready Pilot⁵⁵ as regulatory assets to be included in rate base, earn a 7.90 percent rate of return, and recovered through amortization.⁵⁶ The Commission should reject this request. Rejecting SCE’s proposal is consistent with the Commission’s decision in A.14-10-014, where the Commission ordered SCE to “treat the rebates as expenses, to be recovered from ratepayers in the year in which they are incurred.”⁵⁷ ORA recommends the Commission follow the approach taken in D.16-01-023 and treat rebates as expenses to be recovered from customers in the year in which the expense is incurred.

5. *Do the portfolios include adequate performance accountability measures for the projects?*

For the PG&E, SCE and SDG&E projects, ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

6. *Are the proposed projects in the interest of ratepayers as defined in Public Utilities Code Section 740.8? Do the projects minimize costs and maximize benefits?*

Public Utilities Code Section 740.8 defines “interests of ratepayers,” whether short- or long-term, to mean direct benefits that are specific to ratepayers, consistent with both of the following:

- (a) Safer, more reliable, or less costly gas or electrical service, consistent with Section 451, including electrical service that is safer, more reliable, or less costly due to either

⁵³ SCE Testimony p. 18.

⁵⁴ SCE Testimony p. 23.

⁵⁵ SCE’s application does not make clear whether its EV Driver Rideshare Reward Pilot’s monetary incentive would also be considered as a “rebate” subject to SCE’s request. *See* fn. 98, *infra*. If so, the Commission should also reject SCE’s request to rate base the reward in that pilot.

⁵⁶ SCE Testimony, pp. 107-108.

⁵⁷ D.16-01-023, p. 19.

improved use of the electric system or improved integration of renewable energy generation.

(b) Any one of the following:

- (1) Improvement in energy efficiency of travel.
- (2) Reduction of health and environmental impacts from air pollution.
- (3) Reduction of greenhouse gas emissions related to electricity and natural gas production and use.
- (4) Increased use of alternative fuels.
- (5) Creating high-quality jobs or other economic benefits, including in disadvantaged communities identified pursuant to Section 39711 of the Health and Safety Code.⁵⁸

In addition, Public Utilities Code Section 740.12(b) requires that “[p]rograms proposed by electrical corporations shall seek to minimize overall costs and maximize overall benefits.”⁵⁹

As discussed below, many of the IOUs’ proposed PRPs are either not in the interest of ratepayers or do not minimize overall costs and maximize overall benefits. The Commission should either reject or modify the proposals discussed in this section to ensure that ratepayers are not unfairly burdened by unsupported or imprudent costs.

a. PG&E

i. PG&E’s School Bus, Medium/Heavy-Duty Fleet Demo, and Idle-Reduction Demo are not in the interest of ratepayers and do not minimize costs and maximize benefits because PG&E’s revenue requirements are unreasonably high.

PG&E has not demonstrated that its proposed PRPs meet PU Code Section 740.12(b) requiring that these projects “shall seek to minimize overall costs and maximize overall benefits.”⁶⁰ Specifically, three of PG&E’s proposed PRPs have unreasonable high revenue requests and are inconsistent with their project scopes.

For the Electric School Bus Renewables Integration Pilot, PG&E proposes to partner with a school district to deploy make-ready infrastructure to support charging of 2 to 5 electric school buses at a cost of \$3.35 million.⁶¹ ORA supports the concept of a pilot program that focuses on electric school buses. However, assuming PG&E achieves full deployment, this revenue request amounts to \$670,000 per charger (\$3.35 million/5 chargers). This is

⁵⁸ Cal. Pub. Util. Code § 740.8.

⁵⁹ Cal. Pub. Util. Code § 740.12(b).

⁶⁰ Cal. Pub. Util. Code § 740.12(b); *see* ACR, p. 14.

⁶¹ This estimate covers make-ready infrastructure only and excludes chargers and vehicles cost.

significantly and disproportionately higher than the average charger cost for PG&E's recently-approved light-duty EV pilot.⁶² In December 2016, the Commission authorized \$130 million for PG&E to install charging infrastructure to support up to 7,500 charging ports, which amounts to approximately \$17,000 per charger. In comparison, PG&E's School Bus Pilot, as proposed, costs nearly 40 times as much per charger.

Similarly, PG&E requests \$3.35 million for its Medium/Heavy-Duty Fleet Customer Demonstration Pilot to deploy make-ready infrastructure to support charging of 2 to 10 vehicles. The difference between 2 to 10 vehicles is a factor of 5. This wide range undermines costs reasonableness. Irrespective, assuming PG&E reaches full deployment of 10 vehicles, this revenue request essentially equates to \$335,000 per charger, which is about 20 times higher than that of PG&E's light-duty pilot of \$17,000 per charger.

This argument also holds true for PG&E's off-road Idle-Reduction Technology Demonstration Project. PG&E requests \$3.35 million to install make-ready infrastructure to support approximately 15 electrified parking spaces at truck stops.⁶³ Table 1 illustrates the large cost disparity between the IOUs' proposed PRPs versus their approved light-duty counterparts.

⁶² In Decision D.16-12-065 (Ordering Paragraph 1), the Commission authorized PG&E to implement a three-year Electric Vehicle Pilot Program to deploy make-ready infrastructure to support up to 7,500 EV Level 2 charging ports for \$130 million at an average cost of \$17,000 per charger.

⁶³ At truck stops, refrigerated trucks often stay idle simply to keep their refrigerators running. This demo will test the feasibility of deploying chargers at truck stops to power the trucks' refrigerators so that their engines don't have to stay idle, and thereby, reduce emissions.

Table 1: IOUs’ Average Cost-per-Charger for Currently-Proposed PRPs and Recently-Approved Light-Duty Pilots.

	Currently - Proposed PRPs	Revenue Request	Average Cost-per-Charger	Recently-Approved Light-Duty Pilots	Average Cost-per-Charger
PG&E	Electric School Bus Pilot	\$3.35M / 5 stations	≈\$670,000	\$130M / 7,500 ports ⁶⁴	≈\$17,000
	MD/HD Fleet Demo	\$3.35M / 10 stations	≈\$335,000		
	Idle-Reduction Demo	\$3.35M / 15 electrified spaces	≈\$223,000		
SCE	Electric Transit Bus Program	\$4 M / 20 ports	≈\$200,000	\$22M / 1,500 stations ⁶⁵	≈\$15,000 ⁶⁶
SDG&E	Fleet Delivery Services Project	\$3.7 M / 90 stations	≈\$41,000	\$45M / 3,500 stations ⁶⁷	≈\$13,000

PG&E did not provide a detailed cost breakdown for these PRPs as it did for its standard-review programs. In the May 17th PRPs Public Workshop, ORA asked the IOUs to explain the charger cost disparity between the PRPs and that of their light-duty pilots.⁶⁸ The IOUs responded citing technology differences and site-specific constraints, such as available source of connection or trenching dirt versus concrete, that predominantly account for the cost difference.⁶⁹

⁶⁴ PG&E’s EV Charge Network Program (formerly Charge Smart and Save) as approved in Decision D.16-12-065.

⁶⁵ SCE’s Charge-Ready Program as approved in Decision D.16-01-023.

⁶⁶ SCE’s May 19, 2017 Charge-Ready Program Advisory Council (“PAC”) Meeting informed that infrastructure costs are higher than estimated in SCE’s original testimony. Average cost based on 57 executed agreements as of 3/27/2017 came in at \$15,920 per port. This is slightly, but not *significantly* or *disproportionally*, higher than the original estimate.

⁶⁷ SDG&E’s Power Your Drive Program as approved in Decision D.16-01-045.

⁶⁸ See May 17, 2017 Workshop. (Attachment 2).

⁶⁹ On May 23, ORA submitted a Data Request ORA-PGE-03 to PG&E to further pursue an explanation on the cost disparity questions raised at the May 17, 2017 Workshop. The due date was June 7, 2017. PG&E did not respond until 3:53 pm on June 15, 2017, the day before the filing deadline for opening briefs. Since PG&E’s response was late, ORA did not have adequate opportunity to analyze PG&E’s responses. ORA reserves the rights to address PG&E’s data responses either by filing supplemental opening briefing or in its reply brief. ORA has included the data request and responses as attachments. (Attachment 3.)

The technology difference, which the IOUs cite as a cost driver, resides mostly in the chargers themselves. The infrastructure that supports them, however, is largely the same cost. While it is apparent that power demand (in kilowatt) for fleet vehicles is much greater compared to light-duty vehicles, a 40-fold increase in the average cost-per-charger as proposed in PG&E's School Bus Pilot is unreasonable and unjustified. From an engineering and construction perspective, the higher power demand would only necessitate the installation of higher-rated equipment in the form of a larger conductor, bigger conduit, higher-capacity transformer, higher-rated circuit breaker and distribution panel, with the possibility of upstream circuit upgrade, all of which are not distinctly different from that for light-duty applications (at least not to the point that would cause a 40-fold cost differential). For example, trenching, which accounts for a major part of a typical installation's cost, is irrespective of the back-end power demand. Saw-cutting, trenching, and backfilling is the same regardless of heavy or light-duty applications. Notably, PG&E's PRPs are make-ready only projects, which makes PG&E's cost proposals even more unreasonable because the estimates exclude the costs for the chargers themselves.

Further, PG&E states its Fleet Demo Pilot will utilize technology solutions to lower charging costs for customers, such as charge management software or energy storage.⁷⁰ These technologies, in addition to lowering charging cost, "may allow PG&E to *avoid* upstream infrastructure costs by allowing utility infrastructure to be sized for lower peak demand than would otherwise be needed."⁷¹ In other words, PG&E may be able to use technologies to mitigate, or in some cases negate, the need for upstream circuit upgrade to reduce cost. In regards to site-specific constraints, while various site conditions may create additional costs, these costs are typically mitigated by cost-contingencies as in any major infrastructure projects, thus rendering PG&E's cost estimates unreasonable. Thus, to address cost uncertainties due to site constraints, PG&E should, file a Tier 3 advice letter to provide the Commission a detailed cost breakdown and more accurate cost estimates to implement its proposed PRPs. Buffering them, however, on an over-inflated and unreasonable upfront cost estimate does not minimize costs.

For this reason and all reasons stated above, the disproportionality of average cost-per-charger for PG&E's fleet proposals is not justified or consistent with the project scope. As such,

⁷⁰ PG&E Testimony, pp. 2-4 to 2-5.

⁷¹ PG&E Testimony, p. 2-5 (emphasis added).

PG&E's PRPs do not meet PU Code Section 740.12(b), which requires that overall costs are minimized and overall benefits are maximized. Therefore, the Commission should reject these projects. If the Commission does not reject these projects, then ORA recommends requiring PG&E to file a Tier 3 advice letter that provides a detailed cost break-down and explanations relating PRPs cost estimates for site locations and other project elements before authorizing PG&E to incur costs related to these three proposed PRPs.

In addition to not meeting Public Utilities Code Section 740.12(b), these three PRPs are not in the interest of ratepayers as defined by PU Code Section 740.8. While these projects may provide long-term benefits in the form of reduced greenhouse gas ("GHG") emissions, they will also result in significantly more costly, but not necessarily safer or more reliable, electric service for PG&E's ratepayers. For example, as discussed previously, all three PRPs (Electric School Bus Renewables Integration Pilot, Medium/Heavy-Duty Fleet Customer Demonstration Pilot, and Off-road Idle-Reduction Technology Demonstration Project) are significantly and unreasonably costly and will subject ratepayers to electric rates that are not just and reasonable. In particular, none of the PRPs contain any rate design component to incentivize off-peak charging; which would lead to higher demand on the grid and would impose costly and unnecessary network upgrades. Such a scheme is counter to ratepayers' interest of using TE to improve the use of the electrical system or to better integrate renewable generation.⁷²

ii. PG&E's request for \$1.75 million for the Home Charger Information Project is too high, considering PG&E has already developed an online resource for its EV Charge Network Program.

PG&E requests \$1.75 million for its Home Charger Information Project to develop a web portal for customers to use as a resource to research residential chargers in their neighborhoods and to lookup licensed installers. This portal aims to provide customers information to better-understand their own charging needs should they choose to electrify and will serve as a marketing tool for prospective customers.

While this web portal may be a useful resource to help accelerate the adoption of TE, PG&E's revenue request to develop such a website does not leverage existing web resources and, therefore, is unreasonably high. As part of its Commission-approved EV Charge Network Program (formerly Charge Smart and Save), where the Commission approved up to \$10 million

⁷² See Cal. Pub. Util. § 740.8(a).

for education and outreach activities,⁷³ PG&E has already developed a website⁷⁴ that it can and should leverage for this project. For example, the EV Charge Network Program would generate its list of residential chargers and licensed installers in the dataset which does not need to be replicated.⁷⁵ Further, EV educational resources are already available for customers on PG&E's website.⁷⁶ Moreover, organizations like Plugin America and Drive Clean California have existing EV awareness and education resources for customers interested in information regarding home charging.⁷⁷ Therefore, the resources needed to implement this project can utilize and leverage other existing websites.

In summary, this project does not reasonably amount to a \$1.75 million develop-from-scratch type of project as PG&E has proposed and should be significantly reduced in cost in order to meet Public Utilities Code Section 740.12(b) to minimize overall costs and maximize overall benefits.

iii. PGE's MD/HD Fleet Customer Demonstration is duplicative of PG&E's Fleet-Ready Program and should therefore be rejected.

The Commission should reject PG&E's MD/HD Fleet Customer Demonstration ("Fleet Demo") because it targets the same nascent market in a similar fashion as the Fleet-Ready Program and therefore does not maximize benefits and minimize costs for ratepayers.

For the Fleet Demo, PG&E states that it will identify and partner with one customer who is currently operating a MD or HD fleet (e.g., transit agencies, technology companies, and last-mile delivery fleets), and assist this customer in deploying EVs instead of fossil-fueled fleet vehicles.⁷⁸ Specifically, the program will: (1) deploy utility make-ready infrastructure; (2) provide an incentive for EV chargers; (3) include technical assistance; (4) produce a lessons-learned summary handbook.⁷⁹ PG&E states that while several customers have already expressed

⁷³ D.16-12-065.

⁷⁴ PG&E, *EV Charge Network*, https://www.pge.com/en_US/residential/solar-and-vehicles/options/clean-vehicles/charging-stations/ev-charging-infrastructure-program.page (last visited June 14, 2017).

⁷⁵ See National Diversity Coalition Protest in A.17-01-022, p. 7.

⁷⁶ PG&E, *Learn About Plug-in Electric Vehicles and PG&E*, https://www.pge.com/en_US/residential/solar-and-vehicles/options/clean-vehicles/electric/electric.page?WT.mc_id=Vanity_electricvehicles (last visited June 14, 2017).

⁷⁷ The Utility Reform Network Protest in A.17-01-022, p. 9.

⁷⁸ PG&E Testimony, p. 2-2.

⁷⁹ PG&E Testimony, p. 2-3.

interest in the demonstration, “PG&E expects that a public transit agency may provide the most appropriate candidate ... given the sector’s maturity in terms of commercial availability of vehicles, external funding sources for vehicle purchases and charging infrastructure, and EV adoption.”⁸⁰

Regardless of whether PG&E partners with a transit agency, a technology company, which would presumably target commuter buses, or a last-mile delivery fleet, these potential partners/fleets are already included in the broad scope of PG&E’s Fleet-Ready Program, which targets everything from light-heavy-duty trucks to buses and commuter buses to off-road vehicles.⁸¹ Indeed, PG&E’s Fleet-Ready Program targets sectors with commercial scale original equipment manufacturers (e.g., transit and school buses and forklifts) and sectors limited to up fitters and low volume experimental and demonstration projects and “aims to accelerate widespread TE in all these sectors.”⁸² As shown in Table 2 below, it is unclear why PG&E needs to have both a \$3.35 million MD/HD demonstration and the \$210.8 million Fleet-Ready Program. Furthermore, under the estimated implementation timelines for the Fleet Demo of 1-year of operation following the infrastructure design and construction phase, there is no guarantee that any of the lessons learned can be applied to the Fleet-Ready Program.⁸³

The MD/HD sector is a nascent market and PG&E is requesting millions of ratepayer dollars to fund the MD/HD priority review project and its MD/HD standard review project. The Commission should reject the Fleet Demo because it is subsumed in and duplicative of the Fleet-Ready Program; therefore it does not maximize benefits and minimize costs to ratepayers. Table 2 below is a comparison of PG&E’s MD/HD PRP and Fleet-Ready SRP.

⁸⁰ PG&E Testimony, p. 2-3.

⁸¹ PG&E Testimony, pp. 2-2, 3-5.

⁸² PG&E Testimony, p. 3-9.

⁸³ See PG&E Testimony, p. 2-7.

Table 2: Comparison of PG&E’s MD/HD PRP and Fleet-Ready SRP.

	MD/HD Fleet Demo (PRP)⁸⁴	Fleet-Ready (SRP)⁸⁵
Market Segment	Medium/heavy-duty	Medium/heavy-duty; off-road
Implementation Timeframe	1-year	5-year
Vehicle Goals	2-10 vehicles	Deploy approx. 8,800 charging ports
Cost	\$3.35M	\$210.8M

b. SDG&E

SDG&E’s proposed PRPs are inconsistent with PU Code Section 740.12(b), which requires that these projects seek to minimize costs and maximize benefits for ratepayers. SDG&E proposes to own the necessary infrastructure, including the charging stations. A more beneficial approach would be to utilize a make-ready model that excludes SDG&E from installing and owning the EVSE. A make-ready approach in conjunction with EVSP services would have a smaller financial impact on ratepayers.

In addition, the Airport GSE Project does not minimize cost and maximize benefits because it targets an already developed market that lacks data, not charging infrastructure and GSE deployment. The GSE Project proposes to install charging ports, metering equipment, and data loggers for 45 new charging stations and to retrofit 15 existing charging stations at the San Diego International Airport (“SDIA”).⁸⁶ The project will also include integration and utilization of SDIA’s 5.5 megawatt (“MW”) photovoltaic (“PV”) solar system “to the fullest extent possible.”⁸⁷ SDG&E claims that its PRP proposals target certain sectors in part “because a robust market has not yet substantially developed in these areas.”⁸⁸ However, GSE at the SDIA is already substantially developed. SDG&E acknowledges that as of October of 2016, SDIA had approximately 50 existing EV charging ports for GSE and 120 pieces of electric GSE.⁸⁹ Further, GSE has mature technical and operational capabilities.⁹⁰ Although the project could support approximately 210 pieces of GSE at SDIA, more data can and should be collected using the

⁸⁴ PG&E Testimony, p. 2-7 (Table 2-2).

⁸⁵ PG&E Testimony, p. 3-5 (Table 3-1).

⁸⁶ SDG&E Application, pp. 6-7.

⁸⁷ SDG&E Testimony, p. RS-4.

⁸⁸ SDG&E Application, p. 8.

⁸⁹ SDG&E Testimony, p. RS-10.

⁹⁰ See SDG&E Testimony, p. RS-4.

current inventory before new infrastructure and equipment is deployed that could have a detrimental impact on the local grid.

SDG&E states that a “major component to this project is data collection and analysis by SDG&E to better understand GSE charging load patterns and support electric GSE.”⁹¹ The project will utilize a “combination of chargers, metering and enabling technology to advance grid integration of *additional* electric GSE.”⁹² It is not clear why ratepayers should fund this new infrastructure when, as SDG&E acknowledges, that although the data “lack[s] granularity in certain areas,” and “must be pulled manually before it gets overwritten,”⁹³ the data “was not consistently or periodically collected to provide more robust results.”⁹⁴ Much of the information SDG&E seeks can already be obtained through less costly means. For example, SDG&E states that “the electricity usage by GSE at SDIA is not separately metered ... [and therefore] it has not been possible at a granular level to identify how electric GSE affects overall electricity consumption patterns.”⁹⁵ However, instead of pricing out the costs of additional meters or submeters and integrating into and maximizing the current infrastructure, SDG&E simply proposed new infrastructure. SDG&E should obtain and review the existing data before any new infrastructure is authorized.

For the purpose of this pilot, the Commission should only authorize the airport PRP to the extent it includes work on EVSE retrofits and utilization of the 5.5 MW onsite solar PV, and not to exceed the allowable amount of \$4 million set forth in the ACR for PRPs. Moving forward with the solar PV aspect of the project is consistent with SB 350’s goal for TE to integrate renewable energy because it “provides a unique opportunity to incorporate renewable energy.”⁹⁶ In addition, allowing retrofits will provide SDG&E with the data it is seeking while avoiding the more costly investment of new infrastructure.

⁹¹ SDG&E Testimony, p. RS-4.

⁹² SDG&E Testimony, p. RS-7 (emphasis added).

⁹³ SDG&E Testimony, p. RS-10.

⁹⁴ SDG&E Testimony, p. RS-14.

⁹⁵ A.17-01-020, SDG&E Reply to Protest, p. 11 (Mar. 13, 2017).

⁹⁶ See SDG&E Testimony, p. RS-10; see, e.g., Pub. Util. Code §§ 701.1, 740.1, 740.8; ACR, pp. 16, 31.

c. SCE

i. SCE's EV Driver Rideshare Reward Pilot does not meet Public Utilities Code Section 740.12(b) requiring it 'to minimize overall costs and maximize overall benefits'.

SCE does not meet its statutory burden because it does not demonstrate that its EV Driver Rideshare Reward Pilot minimizes costs and maximizes benefits. SCE offers only scant details and a vague description of what the pilot will actually entail and indeed leaves the pertinent details to SCE's discretion. SCE states that it "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."⁹⁷ Importantly, SCE has not informed the Commission of the proposed reward amount or stated how these rewards will be treated in terms of cost recovery.⁹⁸ Despite this lack of detail and transparency, SCE somehow estimates the costs of the pilot at \$4 million and then requests waiver of after-the-fact review if the Commission approves the scope and cost of this pilot.⁹⁹

Moreover, even with more details of the implementation of the pilot, SCE's asserted benefits of the pilot will not be maximized for the fact that the direct benefits will accrue entirely only to a certain segment of rideshare drivers and rideshare companies, as opposed to explicitly benefiting all ratepayers. Therefore, the Commission should not allow ratepayers to bear the costs of this pilot without SCE clearly identifying explicit benefits of the pilot program.

Further, the pilot is not in the interest of ratepayers as defined by Public Utilities Code Section 740.8. To meet the statutory requirements, the pilot must, in part, provide "direct benefits that are specific to ratepayers" consistent with "[s]afer, more reliable or less costly gas or electrical service...."¹⁰⁰ SCE's EV Driver Rideshare Reward Pilot would provide monetary incentives to rideshare drivers who use an EV and exceed a specified number of rides during a

⁹⁷ SCE Testimony, p. 35.

⁹⁸ SCE's testimony on its EV Driver Rideshare Reward Pilot states that the pilot includes a "reward." However, the testimony also states that the "pilot's budget includes the cost of rewards ... and rebate processing." SCE Testimony, p. 37. This is important because SCE requests that rebates be amortized as regulatory assets, thereby earning a rate of return. If SCE does consider the pilot's rewards as rebates, the Commission should reject this request for the reasons stated in Section II.4.c.ii of this brief.

⁹⁹ SCE Testimony, pp. 6, 102.

¹⁰⁰ Cal. Pub. Util. Code § 740.8.

given time period.¹⁰¹ This project objective does not lend itself to safer, more reliable or less costly electric service.

SCE did not provide analysis on how the reward would offset the cost of gasoline to become less than or competitive with the price of gasoline or improve renewable integration. Indeed, the pilot will only “evaluate the charging needs of EV rideshare drivers”, but does not include any rate design component or requirement that participants be on a particular rate (e.g., a time of use rate).¹⁰² Because the pilot program is devoid of any type of rate design component or other type of incentive to charge EVs off-peak or during periods of high renewable production, the pilot could actually adversely impact the grid if participants are charging during peak hours, and increase participants’ electric bills. Moreover, SCE’s testimony did not explain how the pilot serves ratepayer interest and does not provide any analysis of how the pilot meets Public Utilities Section 740.8 requirement SCE merely states that its portfolio meets Section 740.8 “through either improved use of the electric system or improved integration of renewable energy generation.”¹⁰³ SCE’s statement is inadequate to support this pilot since more details of its program should be provided and SCE’s reasoning and analysis for why this program meets Public Utilities Code Sections 470.8 and 740.8.

Lastly, SCE states that the “[a]ctual requirements will be described in the implementation advice letter.”¹⁰⁴ SCE would essentially use the advice letter process to seek implementation approval of this pilot, thereby limiting stakeholder review in the application process. This approach contravenes the ACR, which states: “If future Commission orders establish specific criteria for priority review projects and investments, *subsequent TE projects and investments could conceivably be authorized through advice letter filing until the total priority review funding limit is reached.*”¹⁰⁵ The Commission should reject SCE’s attempt to circumvent the ACR’s guidance, especially considering that SCE proposes, inappropriately, that this pilot be deemed reasonable and, thereby, be precluded from after-the-fact reasonableness review.

¹⁰¹ SCE Testimony, p. 34.

¹⁰² SCE Testimony, p. 35.

¹⁰³ SCE Testimony, p. 99.

¹⁰⁴ SCE Testimony, pp. 34, fn. 78, 35.

¹⁰⁵ ACR, p. 32 (emphasis added).

Targeting rideshare services to accelerate widespread TE adoption may be promising given that these services are expected to “cover 40 percent of the vehicle miles traveled in high-density urban markets and 10 percent of the vehicle miles traveled in less dense markets by 2025.”¹⁰⁶ However, to be considered for approval, the pilot must meet statutory and regulatory requirements set forth in SB 350. Since SCE’s EV Driver Rideshare Reward Pilot falls short of meeting these requirements, the Commission should reject SCE’s proposal unless SCE can demonstrate prior to implementation, for example with the results of surveys or focus groups, that these program would promote customers’ interest in purchasing EVs.

III. Regulatory Criteria: *Do the utilities’ proposed portfolios of priority review projects meet the criteria set forth in the September 14, 2016 Assigned Commissioner’s Ruling, as detailed below? If not, what modifications are necessary?*

1. *Do the proposed portfolios align with CPUC and utilities’ core competencies and capabilities and focus on a variety of transportation sectors?*

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

b. SDG&E

The core competencies of electric utilities include “delivering safe, reliable, affordable, and clean electricity to [their] customers and managing effective customer programs.”¹⁰⁷ Specific to TE, the core competencies could include expanding infrastructure in a manner conducive to accelerating adoption, establishing rates that accelerate EV adoption and ease the burden of charging on the grid, and developing marketing, education, and outreach programs to inform customers about available TE programs. However, providing incentives to car salespeople and dealerships at the expense of ratepayers is not within the core competencies of the utilities. Incentivizing good salesmanship is best left to car dealership management as well as the original equipment manufacturer (“OEM”),¹⁰⁸ whose business is to market and sell EVs.

¹⁰⁶ SCE Testimony, pp. 37-38 (citing McKinsey & Co., Bloomberg New Energy Finance, *An Integrated Perspective on the Future of Mobility*, (Oct. 2016), available at https://data.bloomberglp.com/bnef/sites/14/2016/10/BNEF_McKinsey_The-Futureof-Mobility_11-10-16.pdf).

¹⁰⁷ See SCE Testimony, p. 84.

¹⁰⁸ OEMs are manufacturers who resell another company’s product under their own name and branding.

c. SCE

SCE's EV Driver Rideshare Reward Pilot does not align with SCE's core competencies. SCE defines its core competencies as "delivering safe, reliable, affordable, and clean electricity to [its] customers and managing effective customer programs."¹⁰⁹ Unlike the Rideshare Pilot, all the other PRPs proposed in SCE's portfolio, in some way, involve easing access to electricity as a vehicular fuel through make-ready infrastructure. Consistent with SCE's statement, such activities represent the business of an electric utility and are among its core competencies. On the other hand, the Rideshare Pilot is an incentive-based ratepayer funded program that directly benefits participants of a private industry with no nexus to any infrastructure or safe, reliable and/or affordable service. This type of program is far from the core competencies of a regulated electric utility.

2. *Do the proposed projects align with local, regional and state policies, including the CPUC's Integrated Resource Plan, the Distributed Energy Resources (DER) Action Plan, the state's Zero-Emissions Vehicle Action Plan, and the Air Resources Board's Scoping Plan and Mobile Source Strategy?*

ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

3. *Do the portfolios promote safety?*

ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

4. *Are the utilities sufficiently leveraging nonutility funding, partnerships, and the results of previous pilots? If not, how could leveraging be increased?*

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties' opening briefs in its reply brief.

b. SDG&E

Regardless of whether SDG&E sufficiently leveraged non-utility funds, SDG&E should be directed to continually seek non-utility funding and report any obtained funding in a report summarizing the results of the PRPs. For the Green Taxi/Shuttle/Rideshare project, SDG&E mentions that it is leveraging the rebates and tax credits provided by state and federal

¹⁰⁹ SCE Testimony, p. 84.

agencies.¹¹⁰ Those sources of funds do not provide additional funding for the development of additional electric vehicle infrastructure, but rather the procurement of electric vehicles in general, and are already available to the general public.

Additionally, for its airport project, SDG&E notes that SDIA and United Airlines were unable to procure additional funding.¹¹¹ The only financial commitment in the Leveraged Funding section of this particular project is the promise that SDG&E will seek out additional funding.¹¹² At this point, SDG&E has no additional funding source to leverage for this project. For the highway electrification project, SDG&E notes that it will be cooperating with Caltrans to “develop a collaborative installation and operation plan that minimizes costs.”¹¹³ However, the collaboration from Caltrans does not include funding for the installation or procurement of EV infrastructure and are instead focused on Caltrans’s efforts to expand and renovate its Park-and-Ride locations. In one site, Caltrans has already started construction.¹¹⁴ SDG&E also notes that Caltrans has agreed to provide land and easements, but in the existing Power Your Drive program, the site hosts also provide an easement to their property.¹¹⁵ Therefore, it is debatable if SDG&E can claim to have leveraged funding for the purposes of deploying this particular project.

For the Dealership project, SDG&E mentions that it will continue to implement best practices learned from previous pilots.¹¹⁶ However, there is no additional funding that is being leveraged in the deployment of this particular program. Regardless of whether SDG&E could have better leveraged non-utility funding or not, approval of any PRP should include a requirement that SDG&E continually seek non-utility funding to support authorized PRPs. SDG&E should also be directed to report any obtained funding in a report summarizing the results of the PRPs.

¹¹⁰ SDG&E Testimony, pp. RS-72 to RS-73.

¹¹¹ SDG&E Testimony, p. RS-9.

¹¹² SDG&E Testimony, p. RS-9

¹¹³ SDG&E Testimony, p. RS-26.

¹¹⁴ SDG&E Testimony, p. RS-26.

¹¹⁵ See SDG&E Sample Easement, *available at* https://www.sdge.com/sites/default/files/documents/1226919912/Sample_Easement_With%20Watermark_5-16-17.pdf?nid=20126.

¹¹⁶ SDG&E Testimony, p. RS-85.

c. SCE

Some of SCE's PRPs are leveraging partnerships in a manner beneficial to ratepayers. For example, the two projects partnering with the Port of Long Beach ("POLB") to electrify shipping and drayage processes that currently rely on diesel fuel have the potential to create multiple benefits, namely lower GHG emissions for ratepayers on the whole as well as lower localized and criteria pollutants for neighboring communities. In addition, ratepayers would benefit more from these PRPs because their costs are relatively lower cost than SCE's other PRPs.¹¹⁷ POLB will administer the projects that have procured additional outside funding.

Unlike the POLB projects, the partnership element in SCE's proposed EV Driver Rideshare Reward Pilot is too undefined and uncertain and does not leverage nonutility funding. Contrasting with the POLB projects, the duties and expectations SCE and respective rideshare companies will commit to are not outlined in SCE's application. Rather, the specifics of any partnerships with rideshare companies are to be determined by SCE and rideshare companies at a later date *after* the Commission's approval of the pilot in this proceeding.¹¹⁸ SCE admits that it has not secured any commitment from rideshare companies.¹¹⁹ In addition, SCE's testimony lacks any discussion of funding sources that rideshare companies are or could be leveraging. Moreover, SCE admits that it "does not plan to ask rideshare companies to contribute funding for the proposed pilot, but intends to require them to provide support for implementing this initiative, including promoting the pilot to rideshare drivers and providing data to verify eligibility of rideshare driver applicants."¹²⁰ Notably, SCE's intention to require rideshare companies to promote the pilot further calls into question SCE's proposed cost of \$4 million for the pilot if the pilot includes high ME&O costs as discussed in Section II.1.c, *supra*.

In addition, while SCE's pilot would directly benefit each participating rideshare company, it would only directly benefit a few SCE customers who are drivers, leaving the vast

¹¹⁷ See SCE Testimony, p. 51 (listing estimated cost for all PRPs in millions of dollars as: Residential Make-Ready \$4.00; EV Drive Rideshare Reward \$4.00; Urban DCFC Cluster \$3.98; Make Ready & Rebate for Transit Buses \$3.98; POLB, Rubber Tire Gantry Crane Electrification \$3.04 POLB; ITS Terminal Yard Tractor \$0.45).

¹¹⁸ SCE Testimony, pp. 35-36, p. 36, fn. 82.

¹¹⁹ SCE Response to ORA Data Request ORA-SCE-001, question 2.a.i. (See Attachment 4).

¹²⁰ SCE Response ORA Data Request ORA-SCE-001, question 2.a.iii. (Attachment 4).

majority of ratepayers' benefits indirect (e.g., lower overall emissions).¹²¹ A rideshare company stands to benefit from the proposed plan in at least two ways. First, the company would benefit from increased overall vehicle miles traveled (“VMT”) from EV drivers, which translates to more revenue generation. Second, the company benefit from the avoidance of paying incentive payments to the drivers since the costs of these payments are borne by ratepayers. Third, the company may benefit from potentially greater ridership due to publicity about the project and resulting positive brand associations.

In sum, SCE has not sufficiently leveraged its partnerships with rideshare companies or non-utility funding. On the contrary, the pilot provides greater direct benefits to private rideshare companies than it does to ratepayers responsible for funding the pilot. Therefore, the Commission should reject SCE's EV Driver Rideshare Reward Pilot proposal unless SCE can demonstrate prior to implementation, for example, with the results of surveys or focus groups, that the program would promote customers' interests in purchasing EVs.

5. *Do the proposed projects meet the timeline and budget limitations: one-year projects with a budget of \$4 million or less for a total of \$20 million for each utility's portfolio?*

a. **PG&E**

i. PG&E's Open Request for Proposals does not comply with regulatory requirements, lack sufficient details, and grants PG&E too much discretion.

PG&E proposes to issue Request for Proposals (“RFPs”) to third parties to solicit project ideas to encourage widespread TE adoption. ORA recommends that the Commission reject this proposal for several reasons. First, this project does not comply with regulatory requirements because it is not limited to \$4 million budget cap per program as required in the ACR.¹²² PG&E requests to use the remainder of the \$20 million authorized for, but not dedicated to, the other priority review projects for this RFP project.¹²³ Further, PG&E requests for the “flexibility to shift funds among the different [priority-review] projects as long as the total costs incurred do

¹²¹ See SCE Testimony, p. 38 (claiming indirect benefits from the pilot include “potential environmental benefits, such as replacing gasoline-fueled trips with zero-emissions miles ... [which] reduces pollutants and GHG emissions”).

¹²² ACR, p. 31.

¹²³ PG&E Testimony, k p. 2-19 (“PG&E requests that the remainder of the \$20 million authorized for priority review that is not dedicated to the four PG&E identified projects (Projects 1-4) be made available for additional projects to be identified through the open RFP process.”).

not exceed \$20 million.”¹²⁴ Both of these requests mean that this RFP project could potentially exceed the \$4 million per project cost cap set forth in the ACR.

Second, while this project aims to promote innovation and competition among non-utility enterprises, its scope is largely undefined beyond that it “could include such things as testing of novel approaches to vehicle-to-grid integration, demonstrating advanced technologies, and piloting strategies to increase uptake of EVs by ride-sharing services.”¹²⁵ In essence, this project amounts to a proposal by PG&E to solicit proposals. The project has no actual project ideas for the Commission to review and to authorize ratepayer funds. Approval for this blanket request would essentially delegate oversight responsibility to PG&E and allow it to self-regulate and to act as the Commission.¹²⁶

Finally, this proposed project does not include criteria upon which PG&E will evaluate third-party proposals. Instead, if and after the Commission approves this project, PG&E would form a committee to develop criteria to weigh and evaluate RFP proposals. In short, PG&E requests the Commission to approve projects without knowing their scope or the standards upon which they will be selected. The Commission should reject this vaguely defined project that provides PG&E broad discretion on everything from funding amount to project selection. If the Commission does not reject this project, then PG&E should file a Tier 3 Advice Letter to provide details of the projects and associated costs.

b. SDG&E

SDG&E has included overhead loaders and cost escalation factors that increase the costs of the programs to over \$4 million per project and over \$26 million for all the priority review projects.^{127,128} These overhead loaders and escalation factors are not included in SCE’s applications for their respective PRPs.¹²⁹ The costs proposed by SDG&E clearly exceed the

¹²⁴ PG&E Application, p. 6, fn. 5.

¹²⁵ PG&E Testimony, pp. 2-18, 2-19.

¹²⁶ See PG&E Testimony, 2-19 (providing PG&E discretion to select projects without further Commission review and proposing that an advisory committee to assist in the development of the undefined RFP evaluation criteria and weighing).

¹²⁷ Utility Consumers’ Action Network Protest in A.17-01-020, p. 5.

¹²⁸ SDG&E Testimony, Ch. 6, MAC-7 to MAC-10.

¹²⁹ PG&E used escalation rates to develop nominal dollar forecasts for its priority-review programs. However, even with escalation, its PRPs budget request still meets the \$20 million cap per the ACR (PG&E Testimony at p.. 5-5). On the other hand, like SDG&E, SCE’s direct capital expenditures refers

bounds set by the ACR, which explicitly states that PRPs should be “limited to no more than \$4 million in costs per project, with a total funding limit of \$20 million for each utility.”¹³⁰ SDG&E argues that the ACR does not include a mandate for overhead loaders and that cost escalation needs to be calculated in the project costs and that the ACR’s language was “intentionally flexible in order to allow the utilities the ability to propose projects that were sufficient in size to meet the project goals.”¹³¹ SDG&E’s interpretation of the ACR is inconsistent with the ACR, which is intended to provide strict guidelines on the cost cap for PRP proposals. Therefore, ORA recommends that the cost for SDG&E’s PRPs should be limited to \$4 million per project and the aggregated cost of the PRPs should not exceed \$20 million per the Assigned Commissioner’s Ruling.

c. SCE

Similar to SDG&E, SCE’s “[d]irect capital expenditures refers to project-related spend[ing], controllable by program managers, and does not include Allowance for Funds Used During Construction or overhead loaders.”¹³² SCE does not provide a breakdown of capital expenditures and overhead loader costs for PRPs alone. However, comparing the 2 tables of capital expenditures SCE provides (III-3¹³³ and V-7¹³⁴) the direct capital expenditures for PRPs would seem to be factored into “Direct Expenditures” 2019 in Table V-7 for the entire portfolio of projects.¹³⁵ The table separately quotes Overhead Loader for the entire portfolio in 2019. This would seem to indicate that Overhead Loader costs are not factored into the PRPs estimated per-project costs, and for those already stated to be \$4 million, the actual cost is likely higher. If this is not the case, ORA recommends that SCE provide evidence otherwise.

to project-related spend and does not include AFUDC or overhead loaders. SCE Testimony, p. 103, fn. 200.

¹³⁰ ACR, p. 31.

¹³¹ A.17-01-020, SDG&E Reply to Protest, p. 10.

¹³² SCE Testimony, p. 103, fn. 200.

¹³³ SCE Testimony, p. 58.

¹³⁴ SCE Testimony, p. 106.

¹³⁵ The figures for Total Capital and Capital Direct Expenditures in Tables III-3 and V-7, respectively, are identical except for V-7’s 2019, which is \$14.1 million higher, presumably to account for the capital expenditures in the 1-year duration priority review projects.

For all the reasons stated in Section III.5.b, above, the cost for SCE’s PRPs should be limited to \$4 million per project and the aggregated cost of the PRPs should not exceed \$20 million per the ACR.

6. *Do the proposals include reasonable data collection and reporting plans for evaluating programs’ success and future research and program development? If not, what are your recommendations for improving data collection and reporting plans?*

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

b. SDG&E

ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

c. SCE

SCE’s PRPs include reasonable data collection and reporting plans, except for SCE’s EV Driver Rideshare Reward Pilot. The stated data collection and reporting metrics produce little in the way of new information. Specifically, “volume of participants by vehicle type and by community” and “miles traveled”¹³⁶ in EVs are datasets that rideshare companies must already have or could readily produce. Additionally, “volume and amounts of rewards issued” would be a function of miles traveled, and a survey of the qualitative benefits and challenges of using an EV for rideshare services can be done in-house through channels already made to EV-owning customers in the existing Charge Ready pilot. At a minimum, such a pilot would need to produce:

- A quantitative understanding of the cost-effectiveness of varying incentives used to increase EV rideshare VMT, both through current EV drivers giving more rides than the status quo and bringing in new EV drivers that otherwise would not participate in ridesharing,
- Rideshare miles from conventional internal combustion engine vehicles that are displaced by EV VMT as a result of the program, and
- A better understanding of whether or not rideshare customers’ awareness of EVs and their possibility of EV adoption is at all influenced by the experience of sitting in a rideshare-provided EV.

¹³⁶ SCE Testimony, p. 37.

Importantly, although SCE intends to share non-confidential aggregated data gathered in the pilot as part of the close-out report, there is no guarantee about what the rideshare companies will consider non-confidential.¹³⁷ And, as explained in SCE’s testimony, the terms and conditions for rideshare companies to provide relevant data are to be developed by SCE and the rideshare companies after Commission’s approval in this proceeding.¹³⁸ Therefore, it is uncertain whether a rideshare company would assert, for example, confidentiality under competitively sensitive information (trade secret privilege) or unfair business disadvantage to prevent public disclosure.¹³⁹

IV. Other Issues

Discuss other issues that parties may have with the utilities’ proposals.

a. PG&E

ORA reserves the right to respond to any arguments and points raised by other parties’ opening briefs in its reply brief.

b. SDG&E

SDG&E proposes a residential and commercial Grid Integration Rates (“GIR”) for several of its PRPs. For the reasons stated below, the proposals should be modified.

i. Summary of Recommendations

ORA respectfully submits the following analysis and recommendations to SDG&E proposed grid integration rate (“GIR”) for residential and small commercial customers.¹⁴⁰ After evaluating SDG&E’s proposed GIR rates in the context of the guidance put forth in the ACR of Commissioner Peterman issued on September 14th, 2016, ORA recommends that:

¹³⁷ SCE Response to ORA Data Request ORA-SCE-001, question 2.a.ii. (Attachment 4).

¹³⁸ SCE Testimony, p. 36.

¹³⁹ *See, e.g.*, GO 66-C § 2.2(b); Cal. Evidence Code § 1061, Cal. Civil Code § 3426.1 and Cal. Penal Code § 499c(a)(9).

¹⁴⁰ SDG&E’s residential GIR is applicable to both its standard review project, the proposed Residential Charging Program, and the Green Taxi/Shuttle/Rideshare priority review project because “[d]rivers with L2 home charging stations will also be enrolled in [the residential GIR]”. (SDG&E Testimony, pp. RS-63, CF-1.) The commercial GIR is applicable to participants of the Fleet Delivery Services priority review project. SDG&E Testimony, CF-1.

- A. The Commission deny SDG&E's proposal to recover 80% of distribution demand costs, which does not comport with the commission's cost causation principles and is contrary to a number of goals outlined in the ACR;
- B. SDG&E should instead move recovery of the aforementioned costs to time-of-use ("TOU") and "base" energy rates;¹⁴¹
- C. SDG&E should design an equivalent rate for its small commercial customers;
- D. The dynamic hourly price component of SDG&E's GIR should be replaced with TOU pricing for residential and small commercial customers.

A comparison of the rate structures of ORA's and SDG&E's GIR proposals is presented in Table 3 below. ORA also presents proposed illustrative rates for its Residential GIR that reflect its recommendations in Table 4.¹⁴²

¹⁴¹ In practice, the base energy rates would become part of the TOU rates.

¹⁴² Because ORA lacked data on demand levels and usage by TOU period, ORA was unable to develop illustrative rates for small commercial.

Table 3. Comparison of ORA’s Proposed Residential and Small Commercial GIRs to SDG&E’s Proposals

	SDG&E Proposed Residential GIR	ORA Proposed Residential GIR	SDG&E Proposed M/L Commercial GIR	ORA Proposed Small Commercial GIR
Grid Integration Charge (GIC)	100% customer access costs 80% distribution demand costs	None	100% customer access costs 80% distribution demand costs	Equivalent to fixed charges for schedule TOU-A for Small Comm. Customers
CAISO Day Ahead Pricing	100% energy costs	None	100% energy costs	None
Time-Of-Use (TOU) Rates	None	100% energy costs 50% gen. capacity costs 50% distribution demand costs	None	100% energy costs 50% gen. capacity costs 50% distribution demand costs
Base Rate	50% gen. capacity costs and other remaining costs.	100% Customer costs, 30% of distribution demand costs, and all other costs.	50% gen. capacity costs and other remaining costs.	Remaining customer costs not collected in customer charge, 30% or remaining distribution demand costs, and all other costs.
Commodity-CPP Adder	50% gen. capacity costs	50% gen. capacity costs	50% gen. capacity costs	50% gen. capacity costs
Distribution-CPP Adder	20% distribution demand costs	20% distribution demand costs	20% distribution demand costs	20% distribution demand costs

Table 4. Comparison of ORA’s Proposed Illustrative¹⁴³ Residential GIR to SDG&E’s Proposed Residential GIR and Current EV-TOU-2

		ORA Proposed Illustrative GIR	SDG&E Proposed GIR		EV-TOU-2
Grid Integration Charge \$/Month					
(kW)					
0 to 3		\$0.00		\$29.49	\$0.00
3 to 6		\$0.00		\$48.05	\$0.00
6 to 9		\$0.00		\$66.61	\$0.00
9 +		\$0.00		\$94.45	\$0.00
D-CPP Hourly Adder (\$/kWh)		\$0.1878		\$0.1878	\$0.00
C-CPP Hourly Adder (\$/kWh)		\$0.6935		\$0.6935	\$0.00
		Base Rate ¹⁴⁴ +	CAISO Day Ahead Adder	Base Rate	TOU Base Rate
		TOU Rate ¹⁴⁵			
Summer	Peak	\$0.3423	Varies (\$/kWh) +	\$0.1354	\$0.4998
	Off-Peak	\$0.2039	Varies (\$/kWh) +	\$0.1354	\$0.2434
	Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.1938
Winter	Peak	\$0.2273	Varies (\$/kWh) +	\$0.1354	\$0.2350
	Off-Peak	\$0.1798	Varies (\$/kWh) +	\$0.1354	\$0.2308
	Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.2059
	Spring Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.2059

*Includes the additional hours of 10am-2pm, weekdays and weekends, in March and April.

¹⁴³ These rates were designed using SDG&E proposed marginal costs in A.15-04-012 and the TOU periods adopted in the A.15-04-012 PD.

¹⁴⁴ The base rate is a flat \$0.1287/kWh across all TOU periods.

¹⁴⁵ For these illustrative rates, ORA matched the Base TOU Periods adopted in the Proposed Decision of SDG&E’s GRC Phase 2 (A.15.04.012), i.e. a Peak period of 3–9pm year-round, Super Off-Peak of 12am–5am weekdays and 12am–2pm weekends (plus 10am–2pm in March and April) and all other hours in the Off-Peak. The final TOU periods of the Residential GIR should match those that are adopted in SDG&E’s GRC Phase 2, which is still pending a Final Decision.

ii. Background

The ACR set forth a set of guiding principles for TE planning going forward with regards to what kind of TE applications should be filed and the criteria that these applications must meet. The ACR referenced the following concerns and guidelines concerning TE rate design¹⁴⁶:

- A. Some parties indicated that demand charges disincentivize use of electricity as transportation fuel.
- B. Public Utilities Code § 740.12(a)(1) states that rate design should reasonably afford customers the opportunity to reduce fuel costs who charge in a manner consistent with electrical grid conditions. Senate Bill 350I says that deploying electric vehicle (“EV”) charging infrastructure “should provide the opportunity to access electricity as a fuel that is cleaner and less costly than gasoline or other fossil fuels in public and private locations.”
- C. Shifting costs to other ratepayer classes does not comport with cost causation rate design.
- D. Rate design proposals should encourage TE charging to maximize the use of renewable energy or to charge at times that resolve conflicting capacity constraints at the transmission and distribution levels.

In accordance with the ACR, SDG&E filed in the priority review portion of its application a rate design including three GIRs for residential, commercial, and public charging with which to bill customers electing to participate in their proposed pilots. These rates include a Grid Integration Charge (“GIC”),¹⁴⁷ (i.e., a fixed monthly charge that includes 100% of customer access costs and 80% of distribution demand costs.)¹⁴⁸ The size of the GIC is evaluated based on a customer’s highest annual non-coincident demand (i.e., the highest 15 minute interval of usage over the course of a year for commercial and 1 hour usage period for residential).¹⁴⁹ The rates also include a volumetric “base rate” that is differentiated only between super off-peak¹⁵⁰ and non-super off-peak, and a California Independent System Operator (“CAISO”) day ahead

¹⁴⁶ ACR, pp. 20, 21.

¹⁴⁷ The public charging option does not include a GIC.

¹⁴⁸ SDG&E Testimony, p. CF-14.

¹⁴⁹ SDG&E Testimony, p. CF-26.

¹⁵⁰ 12am-6am weekdays and 12am-2pm weekends, both for summer and winter. SDG&E Testimony, p. CF-20.

(“DA”) hourly pricing component that recovers 100% of energy costs. Finally, the rates have a commodity-critical peak pricing (“C-CPP”) adder that recovers 50% of generation capacity costs and a distribution-critical peak pricing (“D-CPP”) adder that recovers 20% of distribution demand costs.¹⁵¹ There is also a 5 year phase-in period for the GIC during which it increases from 33.9% to 100% of “full cost” for residential¹⁵² and 75% to 100% for commercial.¹⁵³

1. SDG&E’s GIC Does Not Reflect Cost Causation and Should be Replaced with TOU Rates and Base Rates

a. SDG&E’s proposed GIC aligns poorly with cost-causation principles and should be rejected.

SDG&E’s proposal to collect 80% of distribution capacity costs through the fixed charge is inconsistent with the manner by which those costs are incurred. Peak demands at the circuit and substation level are inherently time-dependent (varying with the timing of circuit or substation peak). This observation is echoed in a recent SDG&E 2016 General Rate Case (“GRC”) Phase 2 proposed decision (“PD”) and Decision (“D.”) 14-12-080, which found that a significant portion of distribution costs are driven by coincident peak demand and not by individual customers’ maximum non-coincident demands.¹⁵⁴ Due to the benefits of load diversity, the capacity needed to reliably serve customers at the higher levels of the electric grid is determined by average demands of individual customers during coincident peaks, rather than each customer’s single highest interval of demand.¹⁵⁵ Regarding this issue, SDG&E also contradicts itself when it states that “the distribution system is designed to have adequate capacity to serve the *combined peak demand* of all customers served off of a distribution circuit,

¹⁵¹ See CF-15. The C-CPP adder applies to the top 150 system peak hours of the year and the D-CPP adder applies to the top 200 *circuit* hours of the year.

¹⁵² Table 5-3 at CF-27.

¹⁵³ Table 5-2 at CF-25.

¹⁵⁴ D.14-12-080, Finding of Fact 8 “The need for additional generation, transmission, and primary distribution capacity are driven by customers’ coincident peak demands.”

¹⁵⁵ D.14-12-080, Finding of Fact 9. Also, D.14-12-080, Finding of Fact 10 states, “At lower levels of electric distribution infrastructure, the capacity needed to serve customers is driven more by individual customers’ non-coincident maximum demands or the coincident demands of a small group of customers that may not coincide with system peak demands.” SDG&E’s proposal to recover 20% of distribution capacity costs via the D-CPP dynamic adder seems to sufficiently reflect this more localized cost relationship. Circuits that primarily connect residential and small commercial service exhibit more of this load diversity than those serving very large customers. Thus, a fixed customer charge that collects distribution usage-driven costs in the manner proposed by SDG&E perpetuates distortions between costs and revenues collected from these customers.

without regard to when that demand occurs (non-coincident peak).”¹⁵⁶ Clearly, the first and second parts of the sentence contradict each other, as circuit peak demand (i.e. the highest combined demand of all customers on a circuit *at a single point in time when demand is peaking*) cannot be measured using non-coincident demands (which do not take any time factor into account). Moreover, SDG&E provided ORA with circuit level data which showed that the sum of non-coincident demands exceeds the combined peak demand of a circuit by an average ratio of 1.56 for the 71.4% of its circuits without data errors.¹⁵⁷ Therefore, a fixed customer charge like that which SDG&E proposed misaligns revenue collection with cost causation and is contrary to the Commission’s findings on this matter. Because peak demands at the circuit and substation level are inherently time-related, a significant portion of distribution demand costs would best be collected by volumetric TOU rates and/or the proposed D-CPP adder.¹⁵⁸

b. SDG&E’s proposed GIC based on non-coincident demand is an inflexible tool that will be punitive for many residential customers.

Though SDG&E did not necessarily propose a non-coincident demand charge, its GIC is similar in application. SDG&E would charge a customer based on the customer’s highest 15 minute interval of demand in the year regardless of when that occurs with the exception of the super off peak period. So in essence, SDG&E’s GIC behaves like a non-coincident demand (“NCD”) charge. However, because it is evaluated based a customer’s maximum *annual* demand instead of monthly maximum demand, it is less flexible and more punitive as a price

¹⁵⁶ SDG&E Testimony, p. CF-20 (emphasis added).

¹⁵⁷ For 28.6% of the circuits, the sum of non-coincident demands was *lower than* the circuit’s peak demand, which is a physical and mathematical impossibility. SDG&E responded that this can occur for several reasons, including customers whose demands are not registered as NCP’s (e.g., lighting), Circuit ID’s that do not exactly match in the two workpapers, load transfers from one circuit to another and the fact that the March data in the two workpapers was from different years (2016 and 2017). See attachments to SDG&E Response to ORA Data Request ORA-SDGE-DR-02 (Attachment 5); SDG&E Response to ORA Data Request ORA-SDGE-DR-02, question 5A1 (Confidential) (Attachment 6); SDG&E Response to ORA Data Request ORA-SDGE-DR-02, question 5B (Confidential) (Attachment 7); see also SDG&E Response to ORA Data Request ORA-SDGE-DR-02, question 1(Confidential) (Attachment 8). ORA compared the annual peak demand and sum of non-coincident demands of each circuit in the two confidential workpapers.

¹⁵⁸ The D-CPP adder should collect those costs that reflect more localized distribution facilities as they peak at different times than the system. Volumetric TOU sufficiently captures the higher correlation between timing of peaks on the system and at higher levels of the distribution system (i.e., peak-related portion of distribution demand costs).

signal than monthly NCD charges.¹⁵⁹ In addition, the vast majority of residential customers have never experienced demand charges and therefore likely have no concept of demand or how to manage their maximum annual non-coincident demand. For these customers, a mistake leading to a single hour of high load could set their demand level (and the level of their GIC) for the entire year.

In addition, SDG&E's proposed GIC is an inflexible rate design tool because customers cannot easily avoid it by shifting or reducing their load. Without a modification, SDG&E's GIC would incentivize customers to flatten their load, but given the high penetration of solar resources, solar-following loads are becoming more desirable to avoid curtailing renewable resources and may be less costly to serve than customers with flat loads.¹⁶⁰ This is contrary to the ACR's recommendation that "rate design proposals should encourage TE charging to maximize the use of renewable energy."¹⁶¹

Fixed charges, especially of this size, have the effect of depressing volumetric rates which dilutes the incentive to charge in a manner consistent with grid needs. Lower avoided costs means customers are rewarded less for following TOU price signals. Additionally, rates with this kind of fixed charge are contrary to the Commission's goals of encouraging conservation and energy efficiency.¹⁶²

¹⁵⁹ For instance, one mistake is punished for the rest of the 12 months regardless of whether the customer manages to successfully charge during the super off-peak period in the other 11 months. For an example of a rate schedule with a *monthly* NCD charge. *See* schedule AL-TOU. Schedule AL-TOU, General Service - Time Metered.

¹⁶⁰ The PD in A.15-04-012 (SDG&E) at 44 states: "Non-coincident demand charges incentivize customers to flatten their load, but given the high penetration of solar resources, solar-following loads are becoming more desirable to avoid curtailing renewable resources and may be less costly to serve than customers with flat loads."

¹⁶¹ ACR, p. 0

¹⁶² *See* Cal. Pub. Util. Code § 739.9(e) ("The commission shall ensure that any approved changes (to fixed charges) do all of the following: ... 2) Not unreasonably impair incentives for conservation and energy efficiency.").

c. For the Residential GIR, the Commission should shift all costs from the GIC into TOU rates and base rates.

ORA consistently has argued against any fixed customer charge being applied to residential customers and continues to make its case in the ongoing fixed charge proceeding.¹⁶³ For all of the above reasons, the Commission should reject inclusion of a fixed charge for the Residential GIR. Instead, these costs should be recovered through TOU rates and the base rate, which is differentiated between super off-peak and non-super-off peak for residential and is a flat base rate for commercial. Implementing TOU pricing of the peak-related portion of distribution demand costs would encourage charging “at times that resolve conflicting capacity constraints at the distribution levels.”¹⁶⁴ Because the split between the portion of SDG&E’s distribution demand costs that are peak-related vs. non-peak related is currently unknown, the Commission should require SDG&E to recover 50% of its total distribution demand costs through TOU rates¹⁶⁵ and 30% through base rates (for a total of 30% through base rates + 20% through D-CPP = 50% in non-peak related rates). This allocation will result in a simple 50/50 split between peak-related and non-peak related recovery of distribution demand costs.¹⁶⁶

In addition, SDG&E should update apportionment of such costs pending Commission approval of the outcome of its study on peak demand charges vs. non-coincident demand charges for medium and large commercial customers in its next GRC Phase 2.¹⁶⁷

¹⁶³ Some of the arguments against a residential fixed charge have been made here but a more exhaustive discussion is included in the Joint Parties Fixed Cost Report in A.16-06-013. The Joint Parties include The Utility Reform Network, Solar Energy Industries Association and ORA.

¹⁶⁴ See footnote 154, *supra*.

¹⁶⁵ These costs should be recovered primarily through the TOU *peak* rates since they represent the peak-related demand costs.

¹⁶⁶ This is a conservative estimate of the allocation of distribution demand costs between peak-related and non-peak related costs. For instance, SCE estimates this split to be 60/40 between its peak-related and non-peak related distribution demand costs. See SCE Response to ORA Data Request ORA-SCE-002, question 10a. (Attachment 9).

¹⁶⁷ In the Proposed Decision of SDG&E’s GRC Phase 2, the Commission ordered SDG&E to conduct a study on what proportion of distribution demand costs should be charged via system peak demand charges versus non-coincident demand charges for Medium & Large Commercial customers. Since this study will essentially determine the split between peak-related versus non-peak related distribution demand costs for SDG&E, it is appropriate to use for setting the distribution demand allocation between TOU rates vs. base rates and D-CPP for the Residential and Small Commercial GIRs. This study is to be completed in time for SDG&E’s next GRC Phase 2. Ordering Paragraph 33 of the SDG&E GRC Phase 2 Proposed Decision.

2. SDG&E Should Create a Small Commercial Grid Integration Rate and Limit the GIC to the Same Level as the Default Small Commercial Tariff

SDG&E should design a separate GIR that is revenue neutral to the small commercial class, defined as those with annual maximum demands less than 20 kW. While SDG&E only intended its GIR for its medium/large (“M/L”) industrial commercial class,¹⁶⁸ there is some merit in offering similar opportunities to small commercial customers. That is, SDG&E should design a standard TOU rate featuring the dynamic commodity and distribution dynamic price overlays as proposed for the M/L customers. The TOU periods should follow whatever “base” TOU periods are finally adopted in SDG&E’s GRC Phase 2 in addition to a spring super-off-peak of 10am-2pm during March and April.¹⁶⁹ The inclusion of a spring super-off-peak will leverage EVs’ unique capability to rapidly increase loads over short periods of time, including during periods of renewable over-generation.¹⁷⁰ SDG&E should apply the same level of fixed charges applicable to the default small commercial tariff, TOU-A, which is currently pending in SDG&E’s GRC Phase 2.¹⁷¹ The remainder of the distribution costs not included in the GIC should be split between TOU rates and base rates using the same split as for the Residential GIR. As described in the preceding section on fixed charges, small commercial customers impose costs on the utility differently than medium and large commercial customers, which is why there is a distinction between the small commercial and M/L commercial classes in revenue allocation and rate design in GRC Phase 2 proceedings. ORA’s proposed Small Commercial GIR will differ from the current default TOU-A rate¹⁷² because it will include C-CPP and D-CPP adders

¹⁶⁸ As evidenced by SDG&E’s workpapers supporting the TE rate design proposal. SDG&E Response to ORA Data Request ORA-SDGE-DR-02, question 1 (Confidential) (Attachment 8).

¹⁶⁹ SDG&E, A.15.04-012 PD at 24. Currently the PD does adopt a spring super-off-peak period. However, on the small chance that this period is excluded from the base TOU periods, SDG&E should include one in the volumetric TOU component of the final residential and small commercial GIRs.

¹⁷⁰ D.17-01-006.

¹⁷¹ A.15-04-012. At this time, the schedule features a \$7, \$12, \$20, and \$50 monthly fixed charge for customers who fall within <5kW, 5kW-20kW, 20kW-50kW and >50kW of demand respectively. Pending a final decision, we expect the new fixed charge levels to be \$10, \$16, \$30 and \$75 charge for customers who fall within <5kW, 5kW-20kW, 20kW-50kW and >50kW of demand respectively.

¹⁷² TOU-A is a time-of-use rate with three TOU periods in summer and winter and a monthly fixed charge based on maximum annual non-coincident demand. *See* http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_TOU-A.pdf.

(which, in addition to sending dynamic pricing signals during capacity-constrained hours, enable it to have a lower super off-peak rate¹⁷³ than TOU-A) and a spring mid-day super off-peak.

3. The Commission Should Make the Residential and Small Commercial GIRs Only Available to Electric Vehicle Customers to Minimize Potential Revenue Shortfalls

Another important point of consideration is the bill impacts of SDG&E's proposed GIRs. Due to time and data limitations it was not possible to run a full bill impacts analysis of SDG&E's proposed rates.¹⁷⁴ Instead, ORA used the "bill calculator" tool that SDG&E developed in response to a TURN data request,¹⁷⁵ and ORA inputted the average annual hourly load profile for schedule EV-TOU-2, which is an existing EV rate schedule,¹⁷⁶ into the tool.¹⁷⁷ Thus, ORA calculated the annual bill of a residential customer with the average residential EV load profile under both EV-TOU-2 and SDG&E's proposed Residential GIR. While this method is not as robust as a full bill impacts analysis that uses the unique load profiles for every customer, it offers a proxy, or an important first step, by understanding the bill impacts of a proposed rate on the average customer. The Table 5 shows the results of the analysis.

¹⁷³ SDG&E's proposed Commercial GIR has a flat base rate of ¢9.69/kWh. TOU-A, which in reality comprises schedules EECC-TOU-A-P (commodity) and TOU-A (distribution), has no super off-peak period and its lowest rates are during the summer and winter off-peaks—¢19.676/kWh and ¢18.833/kWh, respectively. See http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_TOU-A.pdf;

https://www.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_EECC-TOU-A-P.pdf

¹⁷⁴ SDG&E Response to ORA Data Request ORA SDGE-DR-04, question 6 (Attachment 14). SDG&E responded by providing the bill calculator tool that it developed in response to a data request by TURN, and ORA agreed that this was sufficient given the limited time and SDG&E's difficulty dealing with hourly pricing data for a large number of customers for bill impacts.

¹⁷⁵ SDG&E Response to TURN Data Request TURN-SDGE-DR-01, question 14 Bill Calculator (Attachment 10).

¹⁷⁶ EV-TOU-2 is SDG&E's most popular residential EV rate, with 9,211 customers. SDG&E Response to ORA Data Request ORA-SDGE-DR-04, question 5 (Attachment 14).

¹⁷⁷ The average EV-TOU-2 load profile has an annual usage of 10,897 kWh. Obtained from attachment to SDG&E's Response to NRDC Data Request NRDC-SDG&E-DR-01 (Attachment 11), question 9 (Attachment 12). ORA inputted the average hourly load profile (8760 hours) of EV-TOU-2 into the bill calculator's "Energy Calc tab." See SDG&E Response to TURN Data Request TURN-SDGE-DR-01, question 14 Bill Calculator (Attachment 10)

Table 5. Bill Comparison using the Average EV-TOU-2 Load Profile under EV-TOU-2 and SDG&E’s Proposed Residential GIR

Circuit	Total Annual Bill under <i>EV-TOU-2</i>	Total Annual Bill under <i>Proposed Residential GIR</i>	Grid Integration Charge \$ (% of annual bill)	Annual Bill Savings: <i>EV-TOU-2 to Res. GIR</i>
Circuit A	\$2,563.50	\$2,384.23	576.60 (24.8%)	\$179.27
Circuit B	\$2,563.50	\$2,364.46	576.60 (24.4%)	\$199.04
Circuit C	\$2,563.50	\$2,353.31	576.60 (24.5%)	\$210.19
Circuit D	\$2,563.50	\$2,410.16	576.60 (23.9%)	\$153.34
Circuit E	\$2,563.50	\$2,322.21	\$576.60 (22.5%)	\$241.29
Average				\$196.63

The bill calculator tool allows the user to calculate annual bills on different representative circuits recognizing that the timing of the Residential GIR’s distribution-CPP adder varies by circuit.¹⁷⁸ The results show that a customer with an average residential EV load profile would experience around \$196.63 in annual savings (or \$16.39 in monthly savings) by switching from EV-TOU-2 to the proposed Residential GIR without changing their energy usage. These “structural benefiter” would receive bill reductions without making any change to their usage, thus creating a revenue shortfall.¹⁷⁹ Because SDG&E proposes that its Residential and Commercial GIRs be open to all customers,¹⁸⁰ ORA also ran the bill comparison between the residential tiered rate (Schedule DR) and the Residential GIR using the monthly load of an “above average” non-EV residential customer of 750 kWh/month (see Table 6)¹⁸¹

¹⁷⁸ The D-CPP adder applies to the top 200 hours of each circuit. Therefore, a given load profile will result in different overall bills depending on the circuit on which it occurs. SDG&E included five representative circuits in its bill calculator tool, which are supposed to show the range of possible bills under the proposed GIR.

¹⁷⁹ Typically, the revenue shortfall equals the sum of all structural benefiter’s bill reductions minus the sum of all structural non-benefiter’s bill increases

¹⁸⁰ SDG&E Testimony, p. CF-4.

¹⁸¹ This is the pre-defined level of “above average” load (150% of avg.) in the bill calculator. Also, for comparison to the Residential GIR rate ORA took the proportions of the seasonal billing determinates for schedule EV-TOU-2 and then shifted 90% of the super off-peak usage into “except super off-peak.” This

Table 6. Bill Comparison of “Above Average” Non-EV Residential User under Schedule DR and SDG&E’s proposed Residential GIR¹⁸²

Total Annual Bill under <i>Schedule DR</i>	Total Annual Bill under <i>Proposed Residential GIR</i>	Grid Integration Charge \$ (% of annual bill)	Annual Bill Savings: <i>Schedule DR to Res. GIR</i>
\$2,653.20	\$2,053.33	353.88 (17.24%)	\$599.87

A representative residential large user (non-EV customer) would experience even larger annual savings (\$599.87/yr.) by switching to the Residential GIR than an average EV-TOU-2 customer,¹⁸³ even without changing behavior. This “free-ridership benefit” is likely the result of a high residential GIC (i.e. fixed charge) and the absence of a baseline credit, both of which depress the average volumetric rate for large users. These attributes open up the possibility of significant revenue shortfalls due merely to free riders. If left unmitigated, these shortfalls will unfairly increase rates for non-participants. Therefore, the Commission should restrict eligibility for the Residential and Small Commercial GIR to EV customers only.¹⁸⁴ The Commission should also require SDG&E to track the revenue shortfalls resulting from existing EV customers switching to the Residential, Small Commercial and M/L Commercial GIRs.¹⁸⁵ If the revenue shortfalls grow to unacceptably high levels, it may be necessary to modify the rate.

is meant to be more representative of a non-EV residential customer’s load profile, since most residential customers use very little energy from midnight to 5am. *See* SDG&E Response to TURN Data Request TURN-SDGE-DR-02, question 20 Bill Calculator (Attachment 13).

¹⁸² The results in all the columns have been averaged across all five circuits. The annual bills only differ by a maximum of \$63.42 between the five circuits, so there is little benefit in presenting results for all five circuits.

¹⁸³ This is even though the above average Residential customer’s annual load is only 750 x 12 = 9000 kWh compared to the average residential EV customer’s annual load of 10,897 kWh. *See* footnote 177, *supra*.

¹⁸⁴ SDG&E’s schedules EV-TOU and EV-TOU-2 require customers to have a Department of Motor Vehicles-registered EV to join the rate. ORA proposes the same treatment for SDG&E’s Residential GIR, although the rate should also be open to those with registered electric vessels, trains, boats or other equipment that are mobile sources of air pollution and greenhouse gas emissions. *See* SDG&E Response to ORA Data Request ORA-DR-04 (Attachment 14); *see also* D.15-07-001, p. 21.

¹⁸⁵ In the event that collection of revenue shortfalls falls on all customer classes, the Commission should require SDG&E to track revenue shortfalls for all three GIRs. However, if the collection of revenue shortfalls is confined to the same customer class that caused the shortfall, it is only necessary to track

4. CAISO Hourly Day Ahead Pricing is Inappropriate for Residential Customers and Small Commercial Customers.

SDG&E's proposal of using CAISO hourly DA prices is highly experimental with uncertain outcomes in terms of customer reception and responsiveness. This is not appropriate for a rate that is supposed to encourage the rapid uptake of EVs and help meet the state's ambitious goal of deploying 1.5 million zero emissions vehicles on the road by 2024.¹⁸⁶ The proposed Residential GIR is a whole-house rate, which will expose residential customers to the uncertainty and volatility of spot-market prices for their entire house's energy usage (which includes non-discretionary usage). Similarly, small commercial customers often do not have the same knowledge or resources dedicated to managing their energy use as M/L customers, which may leave them vulnerable to fluctuations in spot market prices or apprehensive to joining a rate with uncertain hourly DA pricing. The proposal for hourly day ahead pricing is also duplicative of SDG&E's Vehicle Grid Integration rate and its Residential Opt-In TOU Pilot Rate 3,¹⁸⁷ both of which are experimental and for which we do not yet have results.

The hourly DA pricing should be replaced with TOU rates. TOU rates send a more consistent, pre-defined price signal and thus encourage regular and prolonged behavior modification for the times of consistently higher or lower prices. The C-CPP and D-CPP adders fill in the gaps where TOU periods fall short by sending capacity signals during those few hours when system components are stressed. The Commission should require SDG&E to put 100% of energy costs, 30% of distribution costs and 50% of generation costs into the TOU rates, which will enable sufficient price differentiation to send customers actionable price signals.¹⁸⁸ The TOU periods for the Residential and Small Commercial GIRs should match those eventually adopted in SDG&E's GRC Phase 2, with the exception that SDG&E should ensure the super off-peak period is extended to include 10am-2pm during March and April, on weekdays and weekends. Time differentiation of the portions of the distribution and generation costs reflected

shortfalls for the Res. and Sm. Commercials GIRs. These shortfalls should be tracked separately for each customer class.

¹⁸⁶ California Executive Order B-16-2012.

¹⁸⁷ D.16-01-045 in A.14-04-014; Resolution E-4769 pursuant to D.15-07-001 (March 17, 2016).

¹⁸⁸ The 50% of generation costs would need to be shifted away from the base rate to the TOU rates. This would have the additional benefit of lowering the base rate (and the super off-peak rate), although this would be offset by ORA's proposal to put 30% of distribution demand costs into the base rate.

in the volumetric component of the GIR results in more actionable price signals for small customers who are less sophisticated than larger customers and have fewer resources dedicated to energy management.

5. ORA's Proposed Illustrative Residential GIR

ORA calculated proposed illustrative Residential GIR. Because ORA did not have all the data¹⁸⁹ necessary to allocate costs between TOU periods, these rates should merely be regarded as illustrative. Also, while it is not entirely clear how SDG&E calculated its super off peak base rate,¹⁹⁰ ORA set the total super off-peak energy rate equal to a “price floor” that covers the sum of the marginal costs of service and the non- bypassable costs.¹⁹¹ This is to make sure that customers would pay at minimum the incremental costs that SDG&E would incur, and the costs that everyone has to pay per legal requirement. This is also a standard practice for setting economic development rates.¹⁹² Consistent with this standard, the super off-peak rate is set low enough to encourage charging during the hours it covers but not so much so that it increases the risk of revenue under collection resulting from customers charging their EVs during these times. In the future, it is possible that the Commission might find transmission costs to be time-dependent,¹⁹³ but there was nothing on the record to make this assumption. Due to data limitations ORA was unable to develop illustrative Small Commercial Grid Integration Rates,

¹⁸⁹ For illustrative purposes, ORA used the distribution and generation allocation factors from SCE's A16.-09-003 RDW tool to allocate the time-related distribution and generation capacity costs to the TOU energy rates.

¹⁹⁰ Based on SDG&E's rate design workpaper (SDG&E's Response to ORA's DR 2, question 1 (confidential) (Attachment 8)), SDG&E took the base rate for TOU-DR-E3 (its Opt-In TOU Pilot rate 3) and subtracted all distribution costs to create the base rate. However, it is not entirely clear how SDG&E developed the super off-peak base rate for TOU-DR-E3, or whether it covers the price floor that ORA recommends.

¹⁹¹ ORA's super off-peak base rate includes all non-time-related costs which include non-bypassable costs, marginal customer costs, the non-time related portions of distribution demand costs (30%), and full transmission costs. To the extent that they are allocated to the super off-peak periods, the time-related portion of marginal distribution demand costs (50%) and marginal energy costs are included in the TOU rate. No generation capacity costs are allocated to this period.

¹⁹² D.13-10-019, Appendix A: “The discounts given to EDR customers are reasonably expected to generate revenue sufficient to exceed the sum of distribution and generation marginal costs of providing service to the customer and cover the payment of non-bypassable charges (“NBC's”) on a program wide basis.”

¹⁹³ Thus, these costs could be shifted entirely or in part to the TOU rates, lowering the base rate. (The base rate is still part of the TOU, except that the transmission costs are spread over all hours equally.)

but SDG&E should develop these rates using ORA’s recommendations and using the same price floor concept for the super off-peak.

Table 4. Comparison of ORA’s Proposed Illustrative¹⁹⁴ Residential GIR to SDG&E’s Proposed Residential GIR and Current EV-TOU-2

		ORA Proposed Illustrative GIR	SDG&E Proposed GIR		EV-TOU- 2
Grid Integration Charge \$/Month					
(kW)					
0 to 3		\$0.00	\$29.49		\$0.00
3 to 6		\$0.00	\$48.05		\$0.00
6 to 9		\$0.00	\$66.61		\$0.00
9 +		\$0.00	\$94.45		\$0.00
D-CPP Hourly Adder (\$/kWh)		\$0.1878	\$0.1878		\$0.00
C-CPP Hourly Adder (\$/kWh)		\$0.6935	\$0.6935		\$0.00
		TOU + Base Rate ¹⁹⁵	CAISO Day Ahead Adder	Base Rate	TOU Base Rate
Summer	Peak	\$0.3423	Varies (\$/kWh) +	\$0.1354	\$0.4998
	Off-Peak	\$0.2039	Varies (\$/kWh) +	\$0.1354	\$0.2434
	Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.1938
Winter	Peak	\$0.2273	Varies (\$/kWh) +	\$0.1354	\$0.2350
	Off-Peak	\$0.1798	Varies (\$/kWh) +	\$0.1354	\$0.2308
	Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.2059
	Spring Super Off-Peak	\$0.1287	Varies (\$/kWh) +	\$0.0701	\$0.2059

*Includes the additional hours of 10am-2pm, weekdays and weekends, in March and April.

c. SCE

Despite criticisms of the EV Rideshare Rewards program, the rideshare industry is a rapidly expanding part of the transportation sector, and encourages continued efforts to electrify

¹⁹⁴ These rates were designed using SDG&E proposed marginal costs in A.15-04-012 and the TOU periods adopted in the A.15-04-012 PD.

¹⁹⁵ The base rate is a flat \$0.1287/kWh across all TOU periods.

rideshare vehicles while supporting ratepayer interests and the goals of SB 350. ORA does not support the EV Rideshare Rewards program as it is currently structured by SCE, but makes the following high-level suggestions for IOU involvement in electrification of the rideshare industry:

- Partnerships between IOU's and rideshare providers to build charging stations reserved for rideshare drivers, tailored to their unique charging needs;
- Increased education and outreach on the part of rideshare companies on the benefits of EVs as rideshare vehicles and fuel cost savings using time-of-use charging rates; Electricity bill rebates for EV rideshare drivers who apply to enter the program.

V. Conclusion

The electric and gas utilities have a central role in accelerating transportation electrification. However, as the Commission acknowledged, “utility ratepayers will not be able to bear all of the costs of accelerating TE in California.”¹⁹⁶ To protect ratepayers, all TE applications should be well-designed, adequately supported, and pursue non-utility funding. Although the amounts at issue for the PRPs are relatively small, the statutory and regulatory requirements remain and the principle of ratepayer protection is equally as applicable. Therefore, the Commission should consider the arguments presented in this brief and adopt the recommendations therein.

Respectfully submitted,

/s/ TOVAH TRIMMING
TOVAH TRIMMING
Attorney

Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-3309
Email: Tovah.Trimming@cpuc.ca.gov

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¹⁹⁶ ACR, p. 31.