



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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In the Matter of the Application of Pacific
Gas and Electric Company for Approval of
its Senate Bill 350 Transportation
Electrification Program

Application 17-01-022
(Filed January 20, 2017)

**RESPONSE OF CENTER FOR SUSTAINABLE ENERGY® TO THE
APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY FOR
APPROVAL OF ITS SENATE BILL 350 TRANSPORTATION
ELECTRIFICATION PROGRAM**

Center for Sustainable Energy®

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I. INTRODUCTION

The Center for Sustainable Energy® (CSE) is pleased to provide this Response to the California Public Utilities Commission (Commission) regarding the *Application of Pacific Gas and Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, filed with the Commission on January 20, 2017 (Application). As a mission-driven nonprofit organization, CSE is committed to accelerating the transition to a sustainable world powered by clean energy, including the diversification of transportation technologies focused on air quality improvements and greenhouse gas (GHG) emissions reduction.

CSE works with policymakers, public agencies, local governments, utilities, business and civic leaders to transform the energy marketplace and accelerate the transition to a clean energy future. Our clean energy future depends on a strong, low carbon economy that provides abundant jobs and business opportunities, a high quality of life, and a clean, healthy environment. This includes the accelerated adoption of Zero-Emission Vehicles (ZEVs) and transportation electrification (TE) technologies, renewable energy (RE), distributed generation (DG), energy efficiency (EE) and building performance (BP) technologies — all of which can work together to contribute to air quality improvements and GHG emissions reductions to meet our long term goals. CSE provides the following response:

RESPONSE TO ALL PROGRAMS:

- *Education and Outreach (E&O) programs with statewide touchpoints will require statewide coordination.*
- *Further guidance regarding anonymous and aggregated data is warranted.*
- *Evaluate the use of a single, neutral, third party program ombudsman to facilitate TE activities.*
- *Prioritize TE investments that complement statewide transportation and infrastructure policy initiatives.*

RESPONSE TO PG&E'S TE APPLICATION:

- *Support for PG&E's Priority Review Projects*
- *Support for PG&E's At-Scale TE Programs*
- *Leverage existing Program Advisory Councils (PACs).*
- *Quarterly, not annual, data reporting will be sufficient to evaluate program and project success.*
- *All proposed EVSE programs should have Vehicle-Grid Integration (VGI) functionality.*
- *Set 25% disadvantaged communities (DAC) benchmarks, and tailor goals to reflect PG&E's territory demographics.*

RESPONSE TO ALL PROGRAMS

II. EDUCATION AND OUTREACH (E&O) PROGRAMS WITH STATEWIDE TOUCHPOINTS WILL REQUIRE STATEWIDE COORDINATION.

CSE appreciates that two of the Applications (i.e., PG&E and SDG&E) contain E&O program elements, as consumer-focused engagement is a critical tool to accelerate clean technology adoption. CSE attests that establishing E&O, such as TE advisory services, is appropriate as the utility is uniquely positioned to manage and implement these types of fleet programs for their customer base.¹ However, to minimize duplicative efforts, encourage resource sharing, promote economies of scale, reduce redundancies, and ensure message uniformity and alignment with statewide transportation policy objectives, the Commission should direct coordination between certain, already-existing E&O programs, including:

- **ZEV Consumer E&O.** The Applications should coordinate with and support existing consumer education efforts, such as the Clean Vehicle Rebate Project (CVRP) E&O and

¹ *Response of the Center for Sustainable Energy to the Application of Southern California Edison Company (U 338-E) for Approval of its Charge Ready and Market Education Programs; December 5, 2014, pages 5-6.*

the Plug-In Electric Vehicle Collaborative's BestRideEver campaign, rather than create additional E&O under separate branding. CSE provided this same request in reviewing the original EV Applications, in support of SCE's² and PG&E's³ proposals, and continues to encourage this coordination in order to ensure uniform campaign messaging to the ZEV customer. CSE highly recommends that any ride-and-drive activities undertaken through these programs should be coordinated with CVRP and other statewide (e.g., ARB's Enhanced Fleet Modernization Program) and regional (e.g., San Joaquin Valley Air Pollution Control District's DriveClean rebate) consumer incentive projects.

- **ZEV Car Dealership E&O.** All three utilities recognize the opportunity to market, engage, and educate at car dealerships.⁴ CSE supports this dealer-facing approach and strongly suggests that these efforts operate in concert with CSE's CVRP statewide dealership outreach activities or other existing regional dealer education efforts.

III. FURTHER GUIDANCE REGARDING ANONYMIZED AND AGGREGATED DATA IS WARRANTED.

CSE appreciates that each utility plans to collect data and that SCE's⁵ and SDG&E's⁶ portfolios will be geared to provide "anonymous and aggregated data" for evaluation. CSE is especially supportive of SDG&E's focus on testing and measuring the flexibility of EV

² CSE Response, A.14-10-014, December 5, 2014, page 8-9.

³ Response of the Center for Sustainable Energy to Pacific Gas and Electric Company's (U 39 E) Electric Vehicle Infrastructure and Education Program Application, March 11, 2015, page 9.

⁴ PG&E proposes that it may market at local car dealerships; SCE may also engage with EV dealers to promote the pilot at the point of sale; SDG&E proposes to offer EV education and incentives to dealerships and their salespeople to increase EV sales and enhance the associated customer experience.

⁵ Application of Southern California Edison Company for Approval of its 2017 Transportation Electrification Proposals, January 20, 2017, page 92.

⁶ Application of San Diego Gas & Electric Company (U902E) for Approval of SB 350 Transportation Electrification Proposals; January 20, 2017, page LB-39.

charging loads,⁷ and its goal to study charging behavior at long-duration public locations.⁸ While these actions generally appear adequate to achieve the Commission's direction regarding measurable monitoring and evaluation criteria,⁹ CSE attests to the value and opportunity of a more robust data collection methodology, in which the Commission should consider:

- ***Development of a robust data collection plan.*** CSE recommends the creation of a data collection methodology to ensure uniform reporting across all projects and territories, which will maximize the learning from these investments. Data should be made publicly available, easily shared and accessible, and distributed as openly and widely as possible (while ensuring confidentiality and privacy where needed). Public-facing information provides key feedback on program success, informs policy decision-making processes, and is the basis for program evaluation and research, market characterization and strategic decision-making. Robust, transparent data collection methodologies and sources will inevitably strengthen the long-term design of the TE Programs. With this in mind, the Commission should require:
 - ***Uniform Data.*** Data requirements should be consistent and apply across all selected TE projects and programs. Uniformity supports data collection efficiencies, ensures the program metrics and evaluations are comparable, and promotes quality assurance and control of the data. CSE strongly encourages the

⁷ *Application of San Diego Gas & Electric Company (U902E) for Approval of SB 350 Transportation Electrification Proposals at 2*, states that goals include to “[p]rovide data that will help test and measure the flexibility of EV charging loads and the degree to which the efficient integration of EV loads can yield cost savings to all customers by avoiding future utility infrastructure additions”.

⁸ *Application of San Diego Gas & Electric Company (U902E) for Approval of SB 350 Transportation Electrification Proposals at LB-3*.

⁹ *Assigned Commissioner's Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350*, pages 14 and A1.

Commission to provide guidance on the data sources it plans to hold consistent across all TE programs.

- ***Data with a defined purpose.*** These programs provide the opportunity for pilots and experiments in a select market segment to accumulate experience that can inform the scale and design of future projects and targets. As such, collection of program data must enable researchers to assess the effectiveness of these programs, individually and collectively, across a broad set of metrics. Data collection should be oriented to address specific questions, such as cost-effectiveness, diffusion rates, low-income participation, technology/system performance, durability, and other qualitative and quantitative measures. While CSE recognizes that each proposal contains data with some these touchpoints, there will be added value by working across programs to share and communicate learnings from experiences.
- ***Streamlined Data Reporting.*** Data reporting requirements should be based on program requirements and should be easy for programs to track and easy for evaluators to understand. These efforts in turn reduce administrative costs and support the collection (and distribution) of good data.
- ***Deeply Granular Data.*** Data should be reported in the lowest census designation necessary to anonymize data. Reporting data in census designations makes it easier for researchers to associate program data with public data sources and aligns the data with the CalEnviroScreen Tool. Using such a threshold balances the need for data privacy, while reducing loss of information needed by researchers. This data approach will help support the goal to replicate and scale successful projects and initiatives.
- ***Geographical Data:*** The Commission should direct the use of a geographical information system (GIS) tool to track the locations of infrastructure installations, consistent with requirements adopted in the original EV infrastructure pilots.

Installation data should also be integrated into existing infrastructure datasets, such as the Department of Energy's Alternative Fueling Station Locator¹⁰ and should be compatible with the California Climate Investments Map.¹¹

- ***Categorical Data.*** Data reporting requirements should support measurement not only of basic program information, but also of other priorities, such as GHG emissions reductions and access to financial and health benefits of sustainable energy programs. Data standards should also enable improved market segmentation analyses.
- ***Easily Disseminated Data.*** The Commission should publish data via an easily-accessible online portal and provide the data in easily usable formats (such as Excel, Access) and standards GIS formats (such as Keyhole Markup Language/KMZ, ArcGIS shape files, etc.). This data should be updated often, either weekly or biweekly, to expeditiously inform stakeholders of program activity.

This type and level of public-facing information provides key feedback on program success, informs policy decision-making processes, serves as the basis for program evaluation and research, educates market characterization and strategic decision-making, and informs potential replication. Robust, transparent data collection methodologies and sources will inevitably strengthen all of the TE investments over the long-term, as well as inform program iterations. As such, CSE strongly encourages the Commission to direct the utilities to gather information consistent with these seven proposed tenets. Moreover, CSE encourages the Commission to prioritize the “anonymous and aggregated data” discussion as a priority topic

¹⁰ Department of Energy's Alternative Fueling Station Locator, Website Access: <http://www.afdc.energy.gov/locator/stations/>

¹¹ California Climate Investments Map; Website Access: <http://www.climateinvestmentmap.ca.gov/>

in the PACs, which would be consistent with Commission direction to the PACs regarding data advisory on all three previously approved EV applications.¹²

IV. EVALUATE THE USE OF A SINGLE, NEUTRAL, THIRD PARTY PROGRAM OMBUDSMAN TO FACILITATE TE ACTIVITIES.

CSE applauds the program diversity across the Applications. There are currently a total of 21 pilots and programs before the Commission, and 4 rate design proposals. Moreover, smaller electrical corporations will file TE applications by June 30, 2017, which will enlarge this program pool. This vast group of pilots and programs offers California a unique opportunity to learn from the significant rate-payer investment in TE. To maximize the potential impact of the investment, a concerted and expanded effort to harmonize the learnings with the directives of SB 350, the ZEV Action Plan, and other transportation policies, is recommended.

Without this recommended coordination role, CSE is concerned that the lack of uniformity in data collection and informational management across programs may make cross-comparing program activities and general data sharing challenging. This lack of uniformity may lead to “siloed” and disjointed program assessment approaches, which may ultimately lead to uncaptured data and information, resulting in California potentially losing a critical opportunity to learn from the pilots and programs. As such, CSE recommends that the Commission evaluate the use of a single, third-party, statewide ombudsman, to serve as an independent aggregator of program data, information, and lessons learned across all six utility transportation electrification applications and their respective programs. The Ombudsman would work with the utilities, the Commission, and other relevant state

¹² D.16-12-065, December 15, 2016, page 70; D.16-01-045, January 28, 2016, page 15; D.16-01-023, January 14, 2016, page 36.

agencies (e.g., Governor's Office of Planning and Research, Governor's Office of Business and Economic Development) to provide brand-neutral, unbiased support in areas such as:

- **Stakeholder Coordination.** The ombudsman could coordinate its activity with advisory committees and other stakeholders and serve as one of the liaisons between advisory committees, the utilities, the Commission, state agencies involved with executing the ZEV Action Plan, and other complementary and or/related programs, including the newly established California Energy Commission Block Grant for EV Chargers program.
- **Data and Information Aggregation.** The ombudsman could collect and aggregate data and information of various program activities. Through online, open-access portals and data dashboards, the ombudsman could manage a centralized and publicly-facing website designed to encourage information and data sharing.
- **Research and Information Sharing.** The ombudsman could facilitate discussions and activities (such as workshops and focus groups) that target stakeholder education and engagement to encourage information and idea-sharing. Topics of discussion could include emergent TE research and policy initiatives. This effort may spawn independent research and data analysis that informs the policy decision making processes related to TE, which would strengthen the TE ecosystem.

Broadly, the use of an ombudsman would strengthen the pursuit of the Commission's SB 350 TE Application Guidance by supporting all programs' trackable performance and accountability measures and continuing cost-effective support and alignment of statewide TE policy and investment.

V. PRIORITIZE TE INVESTMENTS THAT COMPLEMENT STATEWIDE TRANSPORTATION AND INFRASTRUCTURE POLICY INITIATIVES.

The utilities have presented a series of programs that satisfy Commission direction¹³ and current policy setting. Nonetheless, these programs would be strengthened by additional connectivity to statewide transportation and infrastructure initiatives, including, and not limited to, the following:

- **The California Energy Commission Block Grant for EV Chargers Program.** To encourage funding and partnership collaboration, the Commission should direct the utilities to prioritize ongoing coordination with the recently-approved Block Grant for EV Chargers Program initiative. This program will deploy \$200 million in grant funds through various EV charger incentive projects across California during the next five years. The Block Grant program investment has a high propensity to act as an accelerant for the deployment of EVSE and will likely provide opportunities for coordination with these TE programs. In addition, the EV Charger Block Grant Program will record EVSE geographical and locational characteristics, which will support data and research, as well as monitoring and evaluation activities that complement these TE programs. As such, CSE encourages the Commission to direct utility coordination with this emergent program.
- **The Transformative Climate Communities (TCC) Program.** No TE applications mention the TCC Program, yet the TCC Program scoping guidelines prioritize public transit and zero and near-zero emission transportation¹⁴ and discuss the use of smart-grid technologies and energy storage,¹⁵ which complement the innovative approaches of these applications. The TCC program also targets air pollution and GHG emissions

¹³ *Assigned Commissioner's Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350*, September 14, 2016.

¹⁴ *Transformative Climate Communities Draft Scoping Guidelines*, page 6. Website Access: <http://sgc.ca.gov/resource%20files/20161123-TCCDraftScopingGuidelines.pdf>

¹⁵ *Id.* at 6.

reductions and presents the opportunity to showcase targeted programs that support the State’s most disadvantaged, and low-and moderate-income households.¹⁶ This suggests well-aligned opportunities for collaboration. In addition, per AB 2722¹⁷ and the State Budget Act of 2016,¹⁸ this program has an established policy framework and an available \$140 million allocated across three target areas.

- **Mass Transit/TE Passenger Rail Investments.** Commission direction identifies rail as a potential TE program investment,¹⁹ yet no application plainly develops rail-targeted TE programs. In alignment with current policy, the 2016 ZEV Action Plan prioritizes zero-emission technologies for public transit and freight transport.²⁰ The State has shovel-ready projects, such as the Caltrain Modernization Program, which will convert Caltrain’s less efficient, diesel miles into 88,000,000 kWh of electricity for propulsion in 2020,²¹ which will lead to substantial emissions improvement in the corridor. The electricity to propel electrified rail can be supplied by innovative clean distributed and renewable energy technology investments, such as solar PV and wayside energy storage.²² There are also synergistic opportunities to share resources between projects, which complements Commission direction to “alleviate some of the financial burden

¹⁶ As referenced in policies, including AB 197, SB 1204, SB 1275, SB 535, and AB 1550.

¹⁷ Website Access:

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2722

¹⁸ AB-1613 Budget Act of 2016; Website Access:

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1613

¹⁹ *Assigned Commissioner’s Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350.*

²⁰ *2016 ZEV Action Plan*; Website Access:

https://www.gov.ca.gov/docs/2016_ZEV_Action_Plan.pdf

²¹ *Peninsula Corridor Electrification Project EIR; Volume I- Revised DEIR*; December 2014; page ES-11; Website Access:

http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/PCEP_FEIR_2014.html

²² Los Angeles Metro uses Wayside Energy Storage systems, which has resulted in the research, development, production, and installation of systems that use flywheel technology to recycle power generated from rail cars; Website Access: <https://www.calnetix.com/newsroom/press-release/vycon-technology-allows-los-angeles-metro-be-first-transit-agency-us-using>

on ratepayers.”²³ In addition, investments in passenger rail induce mode shift and maintain high participation rates by providing low barriers to access while providing very high capacity on a passenger per mile basis, which complement the Commission’s policy to maximize benefits and support “improvement of the energy efficiency of travel” in the interests of ratepayers.²⁴

From CSE’s perspective, prioritizing collaboration in these areas will encourage innovative techniques, promote best practices and resource sharing, and enhance information and idea sharing.

RESPONSE TO PG&E’S TE APPLICATION

VI. SUPPORT FOR PG&E’S PRIORITY REVIEW PROJECTS

CSE supports PG&E’s priority review projects and accordingly provides the following comments:

- **Medium/Heavy-Duty Fleet Customer Demonstration.** CSE supports the fleet customer demonstration project, recommends coordination with CARB’s AQIP programs (i.e., HVIP and demonstration projects), supports the use of rebates to encourage Electric Vehicle Supply Equipment (EVSE) adoption,²⁵ and agrees that PG&E should provide incentives to support increased adoption of commercial EVs by businesses in disadvantaged communities.²⁶ CSE also agrees with PG&E’s assessment of existing research that upfront costs of charging infrastructure can act as an adoption

²³ *Assigned Commissioner’s Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350*, page 27.

²⁴ Pub. Util. Code § 740.8

²⁵ *Application of Pacific Gas and Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 4-12.

²⁶ *Id.* at 3-6.

barrier.²⁷ That said, CSE encourages the Commission to direct the utility to clarify “points of shared compatibility”, where PEV charging can be used across all (i.e., light, medium, heavy duty) fleets. This approach would align well with the Commission’s direction to maximize program benefits.

In addition, it should be noted that Medium/Heavy-Duty vehicles will require more expensive (i.e., L2 or DCFC) charging infrastructure and, as such, may present additional cost barriers, making rebates that much more crucial. CSE can attest to this value specifically for charging station installations: the PEV Owner Survey results indicate that receiving an incentive significantly influenced adopters to install a Level 2 charging station, with approximately 60% indicating that this subsidy was either “very influential” or “extremely influential” in this decision.²⁸ Accordingly, CSE supports PG&E’s use of EVSE rebates as an accelerant to clean transportation technology adoption in the medium and heavy duty sector through this demonstration program. CSE also agrees that this demonstration will have policy touchpoints on the California Sustainable Freight Action Plan (CSFAP). As such, CSE strongly encourages the Commission to prioritize demonstration projects that align with the CSFAP’s priority project areas. In PG&E’s territory, this would include prioritizing San Joaquin Valley projects.²⁹ CSE also recommends that the Commission direct the utility to file customer demonstration program plans in specific areas, such as Fresno,³⁰ Stockton, and other rural areas that would benefit the most from investments aligned with the CSFAP’s policy objectives.

²⁷ *Id.* at 1-8.

²⁸ Center for Sustainable Energy; PEV Vehicle Owner Survey February 2014 Survey Report; Website Access: <https://cleanvehiclerebate.org/eng/vehicle-owner-survey/feb-2014-survey>

²⁹ The CSFAP prioritizes a Dairy Biogas for Freight Vehicles project in the San Joaquin Valley; Website Access: http://www.dot.ca.gov/casustainablefreight/documents/FINAL_07272016.pdf

³⁰ Note: investments in Fresno may also have touchpoints on the emergent TCC Program.

- **Idle-reduction TE Technology Customer Demonstration.** CSE supports this demonstration project's focus on truck stop electrification and electric truck refrigeration units³¹ and agrees that it will have policy touchpoints on the CSFAP.³² Idle reduction (and specifically replacing diesel consumption in vehicles with grid power) is a primary strategy as the state moves towards zero emissions. Again, CSE strongly encourages the Commission to prioritize project alignment with the CSFAP's priority project areas.
- **Electric School Bus TE Renewables Integration Pilot.** CSE supports this innovative pilot approach, which will likely produce key data on charging behaviors triggered by school bus duty cycles, which can be compared against similar projects underway in places such as the Kings Canyon Unified School District.³³ CSE also attests that, as a school-based project, this pilot will likely cultivate student curiosity, promote engagement and empowerment, and has the propensity to instill environmentally and community-focused values in the school of choice. This, in turn, supports the Commission's direction to create programs that "maximize benefits". CSE recommends that the Commission maximize learning from this pilot by directing PG&E to have compulsory E&O engagements with the school's administrators, faculty, staff, and students specifically regarding the pilot's activities and goals. PG&E should prioritize projects located in DACs to promote clean technology adoption in DAC and low-income communities. In addition, to promote clean technology adoption in low-income communities, the school(s) selected for this project should be located in a DAC.

³¹ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program, page 2-8*

³² *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program, page 2-9*

³³ Motiv's All-Electric; All-Electric Type-A School Bus; Website Access:
<https://motivps.com/portfolio/all-electric-type-a-school-bus/>

- **Home EV Charger Information Resource Project.** CSE supports this project’s information resource approach and the use of utility-specific call centers. That said, CSE encourages PG&E to coordinate in areas of overlap with CVRP, including (and not limited to) initiatives that target marketing at local car dealerships, which PG&E proposes.³⁴ In addition, in order to encourage the deployment of residential charging in multi-unit dwellings (MUDs), CSE recommends that this portal should contain MUD-specific information consistent with that which is provided through the PEVC’s information portal.³⁵
- **Open request for proposals (RFP) for TE projects by third parties.** CSE supports this approach, which may provide innovative initiatives. CSE encourages PG&E to prioritize (and not just include as a potential project³⁶) VGI projects. While CSE supports the proposed RFP approach, this process should be subject to stakeholder feedback. In this regard, CSE recommends that the Commission request the Program Advisory Councils (PACs) to provide recommendation on program and project types, as well as innovative ideas as part of this RFP process.

VII. SUPPORT FOR PG&E’S AT-SCALE PROGRAMS

CSE Supports the proposed at-scale programs and accordingly provides the following comments:

- **The “FleetReady” (non-light-duty make-ready) program.** CSE widely supports ZEV transit and especially appreciates PG&E’s focus on public transit and school bus investments as “beach head” sectors³⁷ and agrees that investments in ZEV school buses

³⁴ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 2-15.

³⁵ Plug-In Electric Vehicle Collaborative (PEVC); Charging Infrastructure at Multi-Unit Dwellings; Website Access: <http://www.pevcollaborative.org/MuD>

³⁶ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 2-18.

³⁷ *Id.* at 3-33.

will reduce child exposure to dangerous emissions.³⁸ In addition, ZEV investments in transit will also induce mode shift, expose a wide berth of community residents to ZEVs, maintain high participation rates by providing low barriers to access, and provide very high ZEV capacity on a passenger per mile basis. CSE agrees with the comments provided by Proterra at the February 8, 2017 TE Application Workshop that electric transit bus investments provide a “public good, in support of those that are disadvantaged”.³⁹ Regarding incentives, CSE agrees with the proposed use of a 75% rebate⁴⁰ and recommends that the Commission consider the use of a 100% rebate in DACs. Moreover, when used as a public good, CSE recommends that the Commission consider the use of a 100% rebate for transit and school buses for the related EVSE costs when a public agency acts as the primary project stakeholder. CSE also reiterates its recommendation that the Commission should direct the utility to clarify “points of shared compatibility” where PEV charging can be used across all (i.e., light, medium, heavy duty) fleets, which may provide a beneficial tactic to encourage charging at school and transit locations.

- **“Fast Charge” DC fast charger make-ready program.** CSE supports the installation of DCFCs in PG&E’s service area and agrees with PG&E that broader access to public charging, and specifically fast charging, is needed.⁴¹ Recognizing that PG&E’s recently approved utility programs aim to install charging infrastructure in workplaces and MUDs, CSE suggests that the Commission direct PG&E to prioritize DCFC deployment in high-density, highly-trafficked areas (such as airports, park-and-rides,

³⁸ *Id.* at 3-35.

³⁹ Comments by Kent Leacock, Proterra; Public Workshop Regarding Investor-Owned Utility Transportation Electrification Applications Pursuant to SB 350 and R.13-11-007.

⁴⁰ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*; presented in TABLE 3-13 Fleetready Program Charger Rebate Amounts for Disadvantaged Communities, pages 3-34.

⁴¹ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, page 4.

transit depots, passenger rail stations, and other intermodal hubs) as well as provide further analysis on appropriate use cases for each location. Such a policy has the potential to encourage seamless connections between ZEVs and public transit infrastructure, supports PEV drivers that may not have access to home charging, addresses range anxiety concerns, and promotes the deployment of public charging that can be used by complementary service providers — such as ZEV taxis and TNC operators — in and around public transportation facilities. In addition, this synergy is consistent with existing policy, including the development of “mobility hubs”,⁴² the prioritization of “infrastructure co-location opportunities” consistent with the 2016 ZEV Action Plan,⁴³ and the prioritization of more compact development patterns that reduce VMT and demand less energy per capita, consistent with the emergent 2030 CARB Scoping Plan.⁴⁴ As such, the Commission should direct DCFC construction in these locations.

VIII. LEVERAGE EXISTING PROGRAM ADVISORY COUNCILS (PACS).

CSE agrees with PG&E’s suggestion to use an “external advisory committee” to evaluate third-party EV Innovator projects.⁴⁵ Ensuring active public and stakeholder participation will help streamline program assessment and promote transparency. To avoid

⁴² As outlined in California Transportation Plan 2040; California Transportation Plan 2040; Website Access:

<http://www.dot.ca.gov/hq/tpp/californiatransportationplan2040/Final%20CTP/FINALCTP2040-Report-WebReady.pdf>

⁴³ *2016 ZEV Action Plan*, Goal to: “Consider infrastructure co-location opportunities that can support light-duty, medium-duty and heavy-duty electric vehicle charging and hydrogen fueling station applications in connector site stations (stations along major routes that connect distinct areas of high potential for PEV and FCEV adoption).” page 29; Website Access: https://www.gov.ca.gov/docs/2016_ZEV_Action_Plan.pdf

⁴⁴ *Discussion Draft, 2030 Target Scoping Plan*, Table IV-1. Cross-Sector Relationships, January 20, 2017, Website Access: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

⁴⁵ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*; “Upon approval of this project by the Commission, PG&E will form an external advisory committee to assist in the development of the RFP evaluation criteria and weighting, and evaluate submitted proposals.”, pages 2-19.

duplicative efforts while leveraging existing coalitions and stakeholders, CSE encourages the Commission to direct PG&E to use the existing PAC established under PG&E's Electric Vehicle Infrastructure and Education Program.⁴⁶ In addition, CSE recommends that the Commission ensure that the proposed advisory committee have discretion to provide feedback and guidance across all of PG&E's projects and programs, in addition to PG&E's proposed EV Innovator and Priority review projects. This feedback and guidance should include, and not be limited to, PG&E's proposed rebate amounts.

IX. QUARTERLY, NOT ANNUAL, DATA REPORTING WILL BE SUFFICIENT TO EVALUATE PROGRAM AND PROJECT SUCCESS.

While PG&E proposes a data collection and reporting plan⁴⁷ and will produce reports for each of the test programs,⁴⁸ an annual reporting interval will not be sufficient to capture and communicate key program data in a timely manner. In addition, the use of a one year interval for the evaluation of the proposed Fleet Ready Program⁴⁹ — its largest proposed program cost — seems incongruent with the need to expeditiously review and analyze program success while ensuring appropriate measures to evaluate and protect ratepayer investments. In order to create granular, transparent, and timely data reporting intervals to support the successful evaluation of TE programs, quarterly monitoring and evaluation reports are warranted. Notably, previous Commission decision directed quarterly reporting.⁵⁰

X. ALL PROPOSED EVSE PROGRAMS SHOULD HAVE VEHICLE-GRID INTEGRATION (VGI) FUNCTIONALITY.

⁴⁶ Decision 16-12-065, December 15, 2016.

⁴⁷ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 3-10.

⁴⁸ *Id.* at 2-7.

⁴⁹ *Id.* at 3-6.

⁵⁰ D.16-12-065, December 15, 2016.

CSE appreciates that PG&E suggests VGI as a potential project category under the third-party EV Innovators project.⁵¹ However, given the State’s prioritization of VGI, as embodied in the 2016 ZEV Action Plan,⁵² SB 350’s direction noting EVs as a tool to assist in grid management,⁵³ and the Commission’s recent California Distributed Energy Resources Action Plan, which notes the need to complete research critical to VGI,⁵⁴ programs with VGI compatibility as a prerequisite seem highly appropriate. CSE specifically recommends that the Commission prioritize the deployment of PEV charging technology with VGI capabilities, including networking, communication, demand response and bidirectional charging abilities. On VGI standards, CSE reiterates its former position,⁵⁵ that the Commission should evaluate these proposed programs based on, but not limited to, the program infrastructure’s ability to:

- React to dynamic pricing to encourage charging during optimal periods for the grid (thus reducing consumer costs);
- Allow for power level variation;
- Be easy-to-use by consumers and not pose unreasonable burden on the consumer when selecting when to charge;

⁵¹ *Application of Pacific Gas And Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 2-18.

⁵² *2016 ZEV Action Plan* states the goal to: “[S]upport state- and federally-funded VGI pilots that help commercialize applications that aggregate vehicles as distributed energy resources, enhance communication, and control functionality between vehicle and grid infrastructure”; Page 28. Website Access: https://www.gov.ca.gov/docs/2016_ZEV_Action_Plan.pdf

⁵³ Pub. Util. Code §740.12(a)(1)(G), pursuant to SB 350, states: “[D]eploying electric vehicles should assist in grid management, integrating generation from eligible renewable energy resources, and reducing fuel costs for vehicle drivers who charge in a manner consistent with electrical grid conditions.”

⁵⁴ *California’s Distributed Energy Resources Action Plan: “Aligning Vision and Action”*, November 10, 2016, page 7; states the goal to: “By 2018, complete research critical to vehicle-grid integration and incorporate results into transportation electrification policy.” Website Access: http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Commissioners/Michael_J._Picker/2016%20DER%20Action%20Plan%20FINAL.pdf

⁵⁵ *Opening Comments of the Center For Sustainable Energy to the Amended Scoping Memo and Ruling of the Assigned Commissioner and Administrative Law Judge*, May 18, 2016, page 4.

- Protect proprietary consumer, utility and OEM information; and
- Allow for communication and aggregation in the wholesale market.

Building infrastructure with VGI capability will likely prove to be an effective tactic to avoid future costs and/or negative impacts to ratepayers caused by potential stranded assets or investments that require retrofitting, minimizing cost. Accordingly, CSE encourages the Commission to direct PG&E to prioritize VGI compatible projects and programs.

XI. SET 25% DISADVANTAGED COMMUNITIES (DAC) BENCHMARKS, AND TAILOR GOALS TO REFLECT PG&E'S TERRITORY DEMOGRAPHICS.

CSE is pleased that PG&E provides an estimate of the anticipated DAC participants (25 percent)⁵⁶ and that PG&E plans to base fleet demonstrations in DACs.⁵⁷ To ensure direct investments to DACs, CSE suggests that the Commission specify the creation of the demonstration project within, rather than a project that “travels through” a DAC.⁵⁸ CSE also supports PG&E’s proposed use of DAC-specific rebates,⁵⁹ which can act as an adoption accelerant in California’s most burdened communities, while reducing pollution that causes climate change. CSE encourages the Commission to fortify this rebate design with specific DAC participation benchmarks that are set by the Commission.

In addition, the Commission should consider defining the eligible DACs as the top quartile of census tracts per the CalEnviroScreen scores on either a statewide or a utility-wide basis – whichever is broader. This would be consistent with the direction provided to SDG&E regarding the Electric Vehicle-Grid Integration Pilot Program⁶⁰ and SCE’s Charge Ready

⁵⁶ *Application of Pacific Gas and Electric Company for Approval of its Senate Bill 350 Transportation Electrification Program*, pages 3-33.

⁵⁷ *Id.* at 2-6.

⁵⁸ *Id.* at 2-6; States that: “PG&E envisions the creation of a project within or that travels through a DAC”.

⁵⁹ *Id.* at 3-33.

⁶⁰ D.16-01-045; January 28, 2016; page 138.

Program.⁶¹ The Commission should also set their benchmarks per AB 1550, which provides additional considerations regarding how to allocate expenditures to low-income households.⁶² Moreover, to avoid confusion and delay, the Commission should expeditiously provide clear direction on the version of CalEnviroScreen that it would like the utilities to use to define DACs [i.e., CalEnviroScreen 2.0 versus 3.0 (released January 30, 2017)⁶³].

XII. CONCLUSION

CSE appreciates the opportunity to provide this Response. CSE strongly supports the Commission's SB 350 rulemaking initiatives and appreciates the Commission's leadership. Efforts such as these strongly align with the Governor's Executive Order B-16-12, the State's 50/50/50 goals as codified in SB 350, the ZEV Action Plan, and SB 1275.

Respectfully Submitted,

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⁶¹ D.16-01-023; January 14, 2016; page 41.

⁶² AB 1550 requires that 25% of the Greenhouse Gas Reduction Fund (GGRF) be spent on projects located within disadvantaged communities (DACs) and requires that an additional 5% be spent on projects that benefit low-income households.

⁶³ CalEnviroScreen 3.0; Website Access:
<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>