DOCKETED	
Docket Number:	19-IEPR-04
Project Title:	Transportation
TN #:	229198
Document Title:	Center for Sustainable Energy Comments of the Center for Sustainable Energy on the IEPR Staff Workshop on Clean Transportation
Description:	Comments of the Center for Sustainable Energy on the California Energy Commission's July 18, 2019 IEPR Staff Workshop on Clean Transportation Program Benefits Report and Successes for 2019 IEPR
Filer:	System
Organization:	Center for Sustainable Energy
Submitter Role:	Public
Submission Date:	8/1/2019 4:49:44 PM
Docketed Date:	8/1/2019

Comment Received From: Center for Sustainable Energy
Submitted On: 8/1/2019
Docket Number: 19-IEPR-04

Comments of the Center for Sustainable Energy on the IEPR Staff Workshop on the Clean Transportation Program

Additional submitted attachment is included below.

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August 1, 2019

California Energy Commission
Docket Unit
RE: Docket No. 19-IEPR-04
1516 Ninth Street, MS 4
Sacramento, CA 95814-5512

Comments of the Center for Sustainable Energy®
on the California Energy Commission's July 18, 2019 IEPR Staff Workshop on Clean Transportation Program Benefits Report and Successes for 2019 IEPR

The Center for Sustainable Energy® (CSE) is a mission-driven, national nonprofit dedicated to decarbonizing the transportation sector and the built environment. CSE believes that the 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. CSE empowers customers to participate in the achievement of their clean energy goals by providing them with information, incentives, and opportunities to help make these choices easier. We work with policymakers, public agencies, local governments, utilities, business and civic leaders, and consumers to transform the energy marketplace and beyond.

CSE commends 2019 Integrated Energy Policy Report (IEPR) Lead Commissioner Janea A. Scott, Transportation Lead Commissioner Patty Monahan, and California Energy Commission (Commission) staff for their work in identifying and highlighting the successes of the Commission's Clean Transportation Program (previously known as the "Alternative and Renewable Fuel Vehicle Technology Program" or "ARFVTP"). This program has funded numerous initiatives to decarbonize California's transportation sector and finance innovative transportation technologies. CSE is pleased to participate in this program as the implementer for the

California Electric Vehicle Infrastructure Project (CALeVIP) and appreciates the opportunity to provide comments that showcase the successes of this program and identify opportunities for improvement. CSE's comments are organized around the eight questions discussed at the July 18, 2019 workshop, which are categorized in the following sections:

- Organizational Background and Project Successes
- Significance of Program Success in Terms of Technology Advancements, Market Update, and Business Model Formation
- Potential to Replicate Program Successes
- Recommended Government and Energy Commission Actions to Address Transportation Challenges
- Proposals to Spur Private Investment
- Grid Integration Benefits of EVs and EV Charging Infrastructure
- Conditions Necessary to Continue Growth of Charging System Installations
- ZEV Infrastructure Cost Reductions

I. ORGANIZATIONAL BACKGROUND AND PROJECT SUCCESSES

As a nonprofit administrator and advisor, CSE serves as a trusted resource to help government agencies utilize public funds to implement successful technology programs. CSE has 23 years of experience in program administration, technical assistance, and policy advisement services. CSE has experience administering plug-in and fuel-cell electric vehicle (EV) rebate programs across four states: California; Connecticut; Massachusetts; and New York (with Oregon soon to follow). In California, CSE implements CALeVIP and the Clean Vehicle Rebate Project (CVRP).

Using funding from the Commission, CSE implements CALeVIP to install Level 2 and Direct Current (DC) fast chargers in targeted regions. In under two years of

operation, CALeVIP has launched four major regional projects in Fresno County, Southern California (including Los Angeles, Orange, Riverside, and San Bernardino Counties), Sacramento County, and the Northern California region (including Humboldt, Shasta, and Tehama Counties). The Fresno County Incentive Project (FCIP) was designed and launched in under five months and has already allocated over 20% of its incentive funds, putting the project ahead of schedule. Within 12 weeks of launch, the Southern California Incentive Project (SCIP) had reserved 99% of funding in Los Angeles County, 93% in Orange County, and 97.5% in San Bernardino County. SCIP has also reserved nearly 40% of program funds in disadvantaged communities (DACs), while FCIP has reserved 60% of funds in DACs. Moreover, an additional $16 million in incentives from SCIP has been requested beyond available funding.

II. SIGNIFICANCE OF PROGRAM SUCCESS IN TERMS OF TECHNOLOGY ADVANCEMENTS, MARKET UPTAKE, AND BUSINESS MODEL FORMATION

CALeVIP is an efficient and cost-effective model for deploying charging infrastructure. Of the approximately $30 million that is provided to CALeVIP annually from the Energy Commission, 93% of funding supports rebates for the purchase and installation of public EV chargers, whereas 7% is used for program administration, technical assistance, and stakeholder outreach and education.

The successes of CALeVIP to date have included the rapid rollout of regional projects, high consumer uptake of incentive funds, and above-target reservation of incentive funds in DACs. Future projects are expected to achieve similar or greater levels of success, given improvements in project design and additional funding from local partner agencies.

The CALeVIP business model is customizable and scalable. For example, FCIP was originally designed to provide incentives for Level 2 chargers in Fresno County;

however, there are plans to expand the region across the Central Valley and include incentive funding for DC fast chargers in the future. This transition will require minimal adjustments to the CALeVIP incentive project platform but will enable greater EV infrastructure deployment and market transformation across the region. In addition, the Sacramento Incentive Project includes a partnership and shared revenue stream with Sacramento Municipal Utility District (SMUD), which allows for more effective utilization of funds. This model has been cited as a potential framework for a future project in the San Diego region, which would include partnerships with the San Diego Association of Governments (SANDAG) and the regional Air Pollution Control District (APCD). This framework would consolidate three separate revenue streams into a single program and thereby maximize public benefits. This business model has also generated interest from utilities and community choice aggregators (CCAs), including Silicon Valley Power and Monterey Bay Community Power. Finally, several CCAs in the Silicon Valley have committed to co-funding future CALeVIP projects in the region, resulting in matching investments of over $27 million.

III. POTENTIAL TO REPLICATE SUCCESS

The CALeVIP model can be replicated across California. Successful projects have already been launched in four regions, with plans for an additional two regions by the end of 2019 and an additional three regions in 2020. Furthermore, CALeVIP's business model can be tailored to distinct geographic regions and modified to suit varying populations and equity requirements.

Moreover, the project has improved with each successive project launch. SCIP launched after FCIP and had substantially greater incentive uptake. The subsequent CALeVIP projects in Sacramento and Northern California had even greater incentive uptake. For future projects in the South Bay and Silicon Valley area, CALeVIP has been

working with local stakeholders to identify co-funding partnership opportunities to increase the project's impact and streamline incentive distribution.

CSE is actively working with the Commission to develop plans for the future and identify strategies to engage key stakeholders. Specifically, CSE is committed to engaging with community-based organizations in DACs and low-income communities (LICs). In addition to prioritizing installations in DACs, CSE is striving to ensure that CALeVIP charging infrastructure benefits the residents of these communities and not just EV drivers commuting from elsewhere. CSE also appreciates the feedback and recommendations of the Disadvantaged Communities Advisory Group (DACAG) and is excited to work with the DACAG and the Commission to implement best practices from this collaboration.

Finally, we encourage the Commission to consider increasing funding for charging infrastructure for medium- and heavy-duty vehicles. These vehicles represent a substantial share of the State's greenhouse gas (GHG) emissions and criteria air pollutants. While programs exist to replace older and more pollution-intensive vehicles, there are comparatively few programs to fund charging infrastructure for these vehicles. Specifically, the Commission should consider expanding the scope of CALeVIP to include charging infrastructure for medium- and heavy-duty electric vehicles. The CALeVIP platform, and the operational infrastructure behind the program, is well-situated to accommodate this expansion. Applications for EV charging for these vehicle classes could easily be incorporated into the existing CALeVIP rebate processing platform. The Commission's recently released Revised Lead Commissioner Report on the 2019-2020 Investment Plan Update for the Clean Transportation Program identifies and funds medium- and heavy-duty infrastructure as a distinct funding category, which is a crucial first step in prioritizing this technology area.

IV. RECOMMENDED GOVERNMENT AND ENERGY COMMISSION ACTIONS TO ADDRESS TRANSPORTATION CHALLENGES

CSE commends the Commission's efforts to ensure the continued success of CALeVIP and the Clean Transportation Program. These strategies will be critical, as the potential phase-out of the federal EV tax credit will impact uptake of EVs and the deployment of EV infrastructure. California constitutes a significant portion of the EV market and has already been instrumental in driving growth in this industry. Sustained growth will rely on continued State leadership in presenting models that advance access and equity in this market.

One key strategy is to extend and expand funding for EV infrastructure incentives. Extending incentive funding will provide market stability to industry stakeholders and ensure long-term investment. Expanding funding will accelerate market transformation by achieving greater efficiencies of scale. The efficiencies will both provide operational benefits, including the ability to distribute incentives at a greater rate, and will help achieve State goals, including the target of reaching 250,000 EV chargers by 2025. As the Commission has indicated in its Revised Lead Commissioner Report on the 2019-2020 Investment Plan Update for the Clean Transportation Program, there is an estimated shortfall of approximately 78,000 Level 2 chargers and 3,600 DC fast chargers by 2025.[1] Additional funding for EV infrastructure incentives would help address this shortfall.

Another strategy is for the Commission to host additional workshops to highlight successes and identify barriers in the EV infrastructure market. For example, the Commission could host a series of workshops to promote strategies on streamlining

[1] *Revised Lead Commissioner Report on the 2019-2020 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program*, July 26, 2019, page 51, Table 11. https://efiling.energy.ca.gov/getdocument.aspx?tn=229103

local permitting practices for electric vehicle charging, leveraging findings from the best practices guidebook recently released by the California Governor's Office of Business and Economic Development.[2] Similarly, we encourage the Commission to consider holding workshops to identify policy and administrative barriers preventing the adoption of chargers in multi-unit dwellings (MUDs) and to solicit feedback on potential strategies to address those barriers. MUDs constitute a difficult sub-market to penetrate because these properties often have assigned parking and are therefore ineligible to receive CALeVIP incentives. CSE, with funding from the U.S. Department of Energy (DOE), is launching a nationwide project on this subject and welcomes the Commission's input and collaboration.

The Commission could also consider funding additional regional roadmap projects, which had been funded by the Clean Transportation Program (ARFVTP) in previous years. These roadmaps help local governments identify which potential EV infrastructure sites would provide the greatest public benefits and can help drive interest in incentives before they are available for distribution. New roadmaps would also be able to incorporate the benefits of recent technological advancements and more precise charger utilization data.

V. PROPOSALS TO SPUR PRIVATE INVESTMENT

Additional incentive funding for EV infrastructure will be critical to provide market stability, attract private capital, and transform the EV market. CALeVIP has already attracted additional co-funders for future projects in the San Diego and Silicon Valley regions, with potential matching investments of over $30 million. Although these matching investments are from public funding sources, there are important

[2] *Electric Vehicle Charging Station Permitting Guidebook,* July 16, 2019. http://businessportal.ca.gov/wp-content/uploads/2019/07/GoBIZ-EVCharging-Guidebook.pdf

lessons learned that can be applied toward efforts to attract private investment. For example, deploying EV chargers in a streamlined manner will depend on robust partnership with local agencies, extensive outreach to businesses and the community, and the capacity to provide technical assistance on permitting and installation practices.

VI. GRID INTEGRATION BENEFITS OF ELECTRIC VEHICLES AND ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

CSE commends the Commission's efforts to ensure that EVs and EV infrastructure are integrated with the electrical grid. Grid integration is a key consideration for EV chargers because the widespread deployment of EVs can have significant grid impacts and can exacerbate challenges in managing peak load. In the future, it will be important for State agencies, grid operators, utilities, electric vehicle service providers, and other stakeholders to coordinate on managing charging to promote grid benefits.

The Commission's leadership in developing the Vehicle-Grid Integration (VGI) Roadmap Update will be a valuable framework in addressing this challenge. The process of developing this Update included collaboration across the Commission, California Public Utilities Commission (CPUC), California Air Resources Board (CARB), and other agencies. This type of interagency collaboration is critical to ensuring that new technologies are deployed in a manner consistent with State policy objectives. CSE encourages the Commission to consider similar interagency processes to explore other grid integration issues, including the potential adoption of the ISO 15118 interoperability standards. Public workshops will also be necessary to solicit stakeholder feedback and reach consensus. As a program administrator for all three agencies mentioned above, CSE is willing to assist in facilitating interagency coordination and public workshops on these issues.

VII. CONDITIONS NECESSARY TO CONTINUE GROWTH OF CHARGING SYSTEM INSTALLATIONS

Continued funding will be necessary to ensure the growth of charging infrastructure. California has established a goal of 250,000 chargers by 2025, but as mentioned above, the Commission estimates that there is an expected shortfall of approximately 80,000 chargers between the State goal and the number of chargers estimated to be installed by 2025.[3] It is notable that this projected shortfall is lower than the shortfall estimated by the California Assembly Budget Subcommittee on Resources and Transportation, which estimates a gap of 97,000 to 147,000 chargers by 2025.[4] In any case, significant additional funding will be required to address any shortfall and meet the State goal.

VIII. ZEV INFRASTRUCTURE COST REDUCTIONS

One of the most significant drivers of cost reduction for new technology is scale. Increasing the number and distribution of chargers will help transform the market and achieve efficiencies of scale, resulting in lower costs across the industry. This could include reduction in permitting costs, improved stocking and distribution practices, and better-trained workforces to develop and install charging infrastructure. State investment will accelerate the scaling up of the ZEV infrastructure market and help California achieve its decarbonization objectives.

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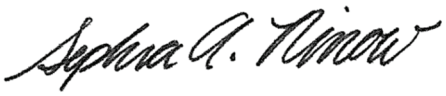
[3] *Revised Lead Commissioner Report on the 2019-2020 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program*, July 26, 2019, page 51, Table 11. https://efiling.energy.ca.gov/getdocument.aspx?tn=229103

[4] *Assembly Budget Subcommittee No. 3 on Resources and Transportation*, April 3, 2019, page 25. https://abgt.assembly.ca.gov/sites/abgt.assembly.ca.gov/files/April%203%20-%20Sub.%203%20Energy%2C%20C%26T%2C%20ARB.pdf

IX. CONCLUSION

CSE appreciates the opportunity to provide these comments on the July 18, 2019 IEPR Staff Workshop on the Clean Transportation Program Benefits Report and Successes for 2019 IEPR and looks forward to continued collaboration with the Commission and other stakeholders in the transportation sector. Continued investment in the Clean Transportation Program will ensure that California remains a leader in the development and deployment of zero-emission vehicle technologies.

Sincerely,



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