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November 17, 2017

Commissioner Janea A. Scott
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Comments on the 2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program – Draft Staff Report

Dear Commissioner Scott and ARFVTP Staff:

Thank you for the opportunity to provide comment on the 2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program ("ARFVTP") – Draft Staff Report ("Staff Report"). The Greenlining Institute ("Greenlining") acknowledges the hard work staff put into this draft report. It provides an excellent summary and analysis of the state of alternative and renewable fuels and vehicles available in California. It also provides a detailed account of why the Energy Commission ("Commission") staff supports the funding levels proposed.

We commend the Commission's continued commitment and emphasis to elevate issues of diversity, inclusion, and equity within all aspects of its work as discussed in the "Program Outreach and Inclusion" section of the Staff Report and throughout other Commission documents and presentations. Greenlining sees the Commission as a leader among state agency's in its explicit support for these values.

We reiterate the following points raised by Greenlining in the ARFTVTP advisory committee workshop on November 17, 2017 and provide additional recommendations:

- Tracking and reporting of ARFVTP investments in "disadvantaged communities" as defined by the California Environmental Protection Agency ("CalEPA") pursuant to SB 535.[1]
- In light of the growing trend around minimum investments in disadvantaged communities, the Commission should require that a at least 25 percent of its ARFVTP investments go to projects in disadvantaged community census tracts as defined by CalEPA.
- The Commission should require an equity program or component in CALeVIP program to maximize EV equity funds from the California Air Resources Board pursuant to SB 1275, the Charge Ahead California Initiative.

[1] See, https://oehha.ca.gov/calenviroscreen/sb535.

- The Commission should require "high road" agreements in its "Manufacturing" investment category to ensure companies receiving funds promote fair, equitable, and inclusive economic opportunities for workers, trainees, and small diverse-owned businesses (more info below).
- In light of growing income inequality, the Commission and interested stakeholders in the "Workforce Training and Development" investment category should work to ensure projects funded through this program maximize equity outcomes (more info below).[2]
- The Commission should explore the possibility of using ARFVTP funds to support a tariffed on-bill financing project for the procurement of electric buses (please see attachments for more information).

I. Disadvantaged Communities

Across California, programs and policies are enshrining the value of equity by ensuring minimum investments in disadvantaged and low-income communities:

- AB 1550, which requires at least 25% of cap-and-trade investments to be spent in disadvantaged communities with an additional 10% benefiting low-income communities and households.[3]
- AB 523, which requires the CEC to spend at least 25% of the moneys in the fund for technology demonstration and deployment at sites located in, and benefiting, disadvantaged communities, and additional 10% to fund projects located in and benefiting low-income communities.[4]
- Recently announced CPUC equity program that directs 25% of funds for distributed energy storage to low-income households and environmentally burdened communities throughout the state.[5]
- SB 92, which requires that the Air Resources Board strive to ensure at least 35% of funds from VW's ZEV Investment plan benefits low-income and disadvantaged communities. In fact, VW anticipates exceeding the 35% minimum investment in low-income and disadvantaged communities across all its investment categories.[6]

Recommendation: As a result, Greenlining recommends that a at least 25 percent of its ARFVTP investments go to projects in disadvantaged community census tracts as defined by CalEPA.

Additionally, Greenlining commends the Commission for disadvantaged community preferences in ARFVTP solicitations and is pleased to hear that "about 40 percent of site-specific ARFVTP projects are located in or benefitting disadvantaged communities."[7] Because AB 1550 updated

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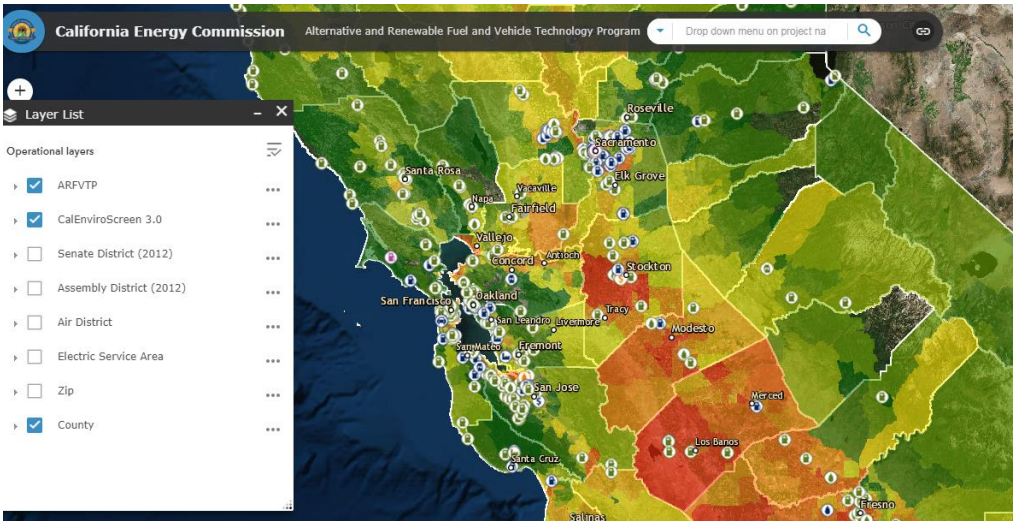
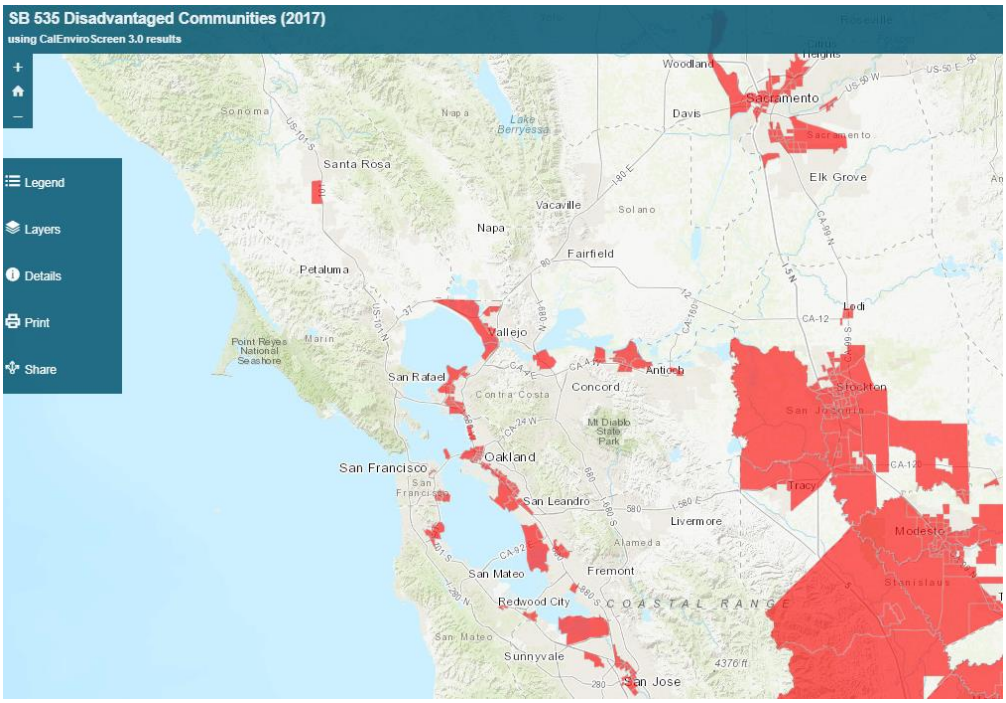
[2] "Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California", at: http://www.ucsusa.org/sites/default/files/attach/2016/10/UCS-Electric-Buses-Report.pdf.
[3] See, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1550.
[4] See, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB523.
[5] See, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M197/K258/197258268.PDF.
[6] See, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB92; see also, https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/california_zev_investment_plan_supplement_062917.pdf.
[7] Staff Report at 15.

the targets set by SB 535, Greenlining recommends that the Commission continue to explore ways it can target and prioritize investment of zero-emission technologies like battery electric and fuel cell technologies in disadvantaged community census tracts who can benefit the most from the improved local air quality. Moreover, we recommend the Commission provide public access to view ARFVTP investments in disadvantaged communities as defined by CalEPA. Currently, the ARFVTP website only allows filtering using the CalEnviroScreen 3.0 tool but it does not provide an option to look at the top 25 percent highest scoring census tracts, which are determined to be disadvantaged communities.



Source: CEC



Source: CalEPA

II. Natural Gas Vehicles and Natural Gas Fueling Infrastructure

Greenlining has grave concerns for the environmental justice impacts of natural gas extraction and for the continued use of natural gas and other fossil fuels in our transportation sector. We are especially alarmed when you consider that nearly 90 percent of residents in California's most polluted regions are people of color, despite making up 60 percent of the state's population.[8] Emissions reductions from new diesel and natural gas vehicles will not be enough to meet California's clean air standards and new diesel and natural gas emissions will continue to hurt low-income communities and communities of color the most.

In fact, the *National Association for the Advancement of Colored People* just released a report finding that black individuals are "exposed to 38 percent more polluted air" than their white counterparts and "are 75 percent more likely to live in fence-line communities i.e. communities located next to a company or industrial facility and impacted by operations, whether it's from noise, odor, traffic, chemical emissions.[9] The result is an environmental health gap where "13.4 percent of African American children have asthma (over 1.3 million children), compared to 7.3 percent for white children."[10] California needs to prioritize cleaner alternatives.

Transportation electrification is the fastest and most effective strategy for combating climate change and improving local air quality in low-income communities and communities of color. For example, the Union of Concerned Scientists examined the life cycle emissions (considered not only tailpipe emissions but also emissions from producing the fuel) of transit buses across engine and fuel types and found that battery electric buses have lower emissions than CNG buses. They found that global warming emissions from fuel cell electric buses are more than 50 percent lower than both compressed natural gas (CNG) or diesel buses.[11] They also found that life cycle global warming emissions from battery electric buses are nearly 75 percent lower than both CNG and diesel buses.[12] Moreover, "battery and fuel cell electric buses have lower life cycle NOx emissions than do diesel and CNG buses" even when you include CNG buses with engines certified to meet California's voluntary low-NOx standards.[13] Battery electric buses can have tremendous public health benefits in low-income and disadvantaged communities and can ensure California meets its air quality and climate goals.

Recommendation: Because of the environmental injustice reasons above, Greenlining recommends that the Commission, ARFVTP advisory committee, and interested stakeholders discuss and identify Commission actions that reduce ARFVTP funding for natural gas

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[8] California Environmental Protection Agency (CalEPA). 2016. Environmental Justice Program Update 2013– 2015. Sacramento, CA. Online at www.calepa.ca.gov/EnvJustice/Documents/2016/EJReport.pdf

[9] "Fumes Across the Fence-Line: The Health Impacts of Air Pollution form Oil & Gas Facilities in African America Communities" at http://catf.us/resources/publications/files/FumesAcrossTheFenceLine.pdf.

[10] "Fumes Across the Fence-Line: The Health Impacts of Air Pollution form Oil & Gas Facilities in African America Communities" at http://catf.us/resources/publications/files/FumesAcrossTheFenceLine.pdf.

[11] "Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California", pg. 2 at: http://www.ucsusa.org/sites/default/files/attach/2016/10/UCS-Electric-Buses-Report.pdf

[12] "Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California", pg. 2 at: http://www.ucsusa.org/sites/default/files/attach/2016/10/UCS-Electric-Buses-Report.pdf

[13] "Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California", pg. 14 at: http://www.ucsusa.org/sites/default/files/attach/2016/10/UCS-Electric-Buses-Report.pdf

technology in the 2018-19 investment plan and future plans, especially in the transit bus sector, as the economic and technological viability of electric buses and trucks increases and reaches parity with natural gas technologies. We need contraction of this industry, not expansion.

III. Workforce Development and Training and Diverse-Owned Business Contracting

Greenlining supports the $3.5 million to support alternative transportation workforce training and development. Greenlining supports and is excited to see efforts to increase interest in alternative transportation careers for high school students and those seeking career in technical jobs outside of traditional college pathways. Greenlining supports the emphasis on pre-apprenticeship programs as they are critical in helping prepare participants for the demands of apprenticeships

Recommendation: Greenlining takes this opportunity to re-introduce some of our recommendations expressed in our comments last year from our Delivering Opportunity report:

- Support the development of and place a high priority on projects that have robust recruiting and hiring policies targeting underserved communities, provide high-quality jobs, have robust minority-owned business procurement goals (i.e., supplier diversity), and partner with or provide support to workforce development programs aimed at underserved communities.
- Invest in skills-development programs aimed at training members of underserved communities (particularly those with barriers to employment) to fill emerging employment needs in the heavy-duty EV industry and related transportation-electrification fields.
- Track and report individual level data on the progress of efforts to train and employ members of underserved communities.
- Reference and use the US Employment Plan to evaluate and score proposals with the aim of encouraging commitments to creating good jobs and improving access for people historically excluded from manufacturing jobs.[14]

Recommendation: Greenlining recommends also incorporating, more explicitly, "High Road" workforce development values in this funding category (and the "Manufacturing" category) that focuses on a commitment to quality, quantity, and access. We encourage using these questions in guiding this effort:

- How can you ensure clean transportation jobs in your area pay good wages, provide benefits, and provide well-articulated career ladders (quality)?
- Where are the opportunities that will go to a large enough scale to be meaningful (quantity)?
- And how can you ensure that those jobs are attainable for people with barriers to employment (access)?

[14] The US Employment Plan was developed by a team of experts from LAANE, the Brookings Institution, the University of Southern California's Program for Environmental and Regional Equity, and the University of Massachusetts at Amherst's Political Economy Research Institute (JMA n.d.). For more information, visit http://jobstomoveamerica.org/resources/u-s-employmentplan-resources-2.

To ensure the success of ARFVTP workforce investments and policies, Greenlining recommends increasing transparency and workforce data collection. Within the workforce funding category, there should be reporting on individual level data. Where possible, there should be reporting on subcontractors and whether subcontractors used to carry out a solicitation qualify as a diverse-owned business.

In all ARFVTP investments, Greenlining encourages the Energy Commission to prioritize projects that encourage broader economic and health benefits for low-income communities of color, particularly disadvantaged communities impacted most significantly by poor air quality and poverty.

Thank you for all the work in developing the Staff Report and thank you for the opportunity to comment. We look forward to continued engagement with the Commission, the ARFVTP advisory committee, and other relevant stakeholders on creating an equitable ARFVTP program that works to uplift our most vulnerable Californians.

Sincerely,

Joel Espino
Legal Counsel, Environmental Equity
The Greenlining Institute

ENCLOSURE

Accelerating Investment in Electric Transit Buses:
Harnessing a Utility Tariff to Drive out Diesel

Transit agencies around the world are looking for ways to buy zero-emission electric buses to replace diesel buses - and eliminate their air and noise pollution. Electric bus manufacturers have recently reached cost parity with diesel buses in key markets when evaluated on a lifecycle basis, yet the upfront cost premium can be above 50%, creating a barrier for procurement. Because many transit agencies are operating in financially constrained conditions, a financing solution is required to accelerate retirement of the dirtiest diesel buses in favor of zero-emission transit.

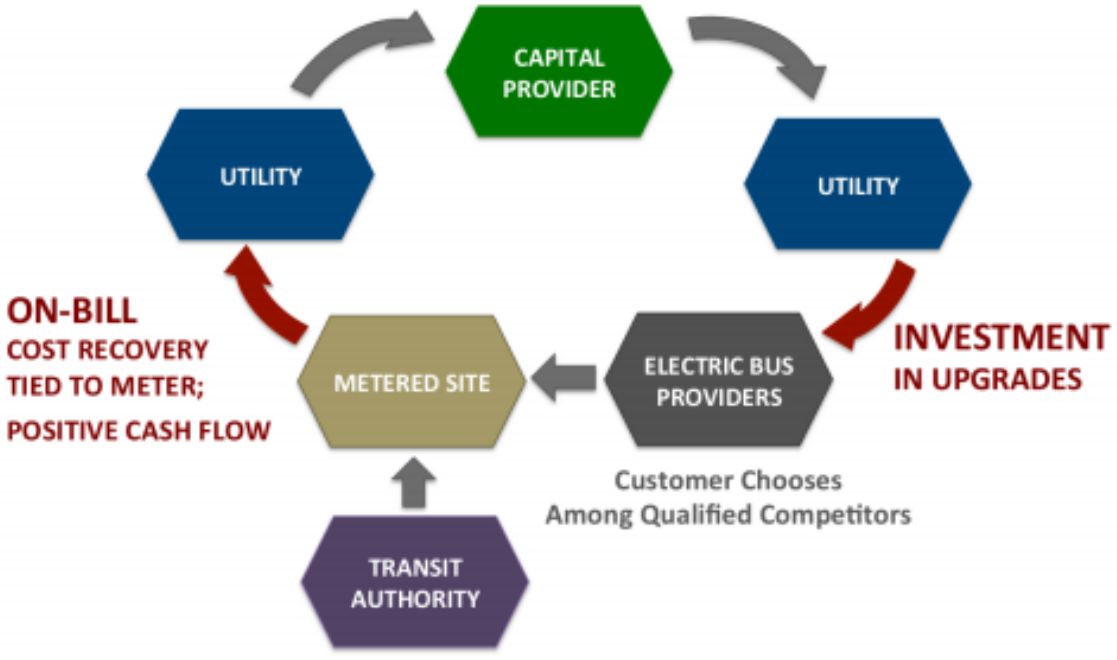
Harnessing a utility's business model can accelerate investment

Utilities have sold electricity for nearly a century under a terms of service agreement called a tariff, and in the last decade, innovations in the field of energy efficiency for buildings have yielded an opt-in tariff for upgrades like better lighting or heat pumps. These utility *tariffed on-bill programs* accelerate investment in cost effective upgrades by resolving the upfront cost for customers and providing net benefits from the start.

When applied to the transportation sector, these tariffed on-bill programs can break through the upfront cost barrier for batteries and charging stations by allowing a utility to finance the equipment that drives the premium cost of electric buses.

PAY AS YOU SAVE® (PAYS®)

PAYS offers all utility customers the option to access cost effective energy upgrades using a proven investment and cost recovery model that benefits both the customer and utility.



Here's how it works:

First, the utility establishes a terms of service agreement (a tariff) for investing in the battery and charging station for each new electric bus sought by a transit agency in its service area. Second, the transit authority opts into a terms-of-service agreement (a tariff) that allows the utility to put a charge on the agency's monthly bill that is capped at a level below the estimated savings (lower than the cost of fuel for a diesel bus) and to recover its costs within the warranty period of the equipment it has financed. If the equipment has been maintained as per warranty conditions, the utility can call on the warranty to address upgrades that need repair or remedy.

As a result, the transit authority's upfront cost to buy an electric bus to replace a diesel bus would be comparable to new diesel bus - and the community would gain all the benefits of a zero emissions electric bus instead. For the transit agencies that opt in, the utility pays for energy saving upgrades to the bus fleet, and the transit authority pays nothing upfront for the premium cost of the zero-emission electric bus. The utility gains approximately $100,000 in new sales over the life of each electric bus that displaces a diesel bus.

Bus riders and communities served by both the utility and the transit agency are then spared the hazards of air pollution and the nuisance of noise pollution produced by diesel buses.
The transit authority has no loan, no lien, and no debt associated with this transaction; just lower costs of operation and a better bus fleet. When the utility recovers its costs, the monthly charges end, and when the transit agency has exhausted a battery used for on-board storage, the utility may opt to buy battery packs for second life applications for stationary storage.

Where is tariffed on-bill financing already available?

Utility regulators in Kansas, Kentucky, Arkansas and more have already approved opt-in tariffs for building efficiency upgrades. Although only a few leading utilities in each of those states are taking advantage of the opportunity thus far, all of them are using the same system for their program design, called Pay As You Save® (PAYS®). PAYS offers all customers the option to access cost effective energy upgrades using a proven investment and cost recovery model that benefits both the transit authority and utility. Although the PAYS system has not yet been applied to transit buses, recent cost reductions achieved by manufacturers have now put that breakthrough within reach in multiple states.

For more information:

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