



June 23, 2016

To: Interagency Partners: California State Transportation Agency, California Environmental Protection Agency, California Natural Resources Agency, California Air Resources Board, California Department of Transportation, California Energy Commission, Governor's Office of Business and Economic Development

Re: **California Sustainable Freight Action Plan – Draft Discussion Document**

The California Electric Transportation Coalition (CalETC) appreciates the opportunity to comment on the California Sustainable Freight Action Plan – Draft Discussion Document, released May 2016 (Plan).

CalETC is a non-profit association promoting economic growth, clean air, fuel diversity and energy independence, and combating climate change through the use of electric transportation. CalETC is committed to the successful introduction and large-scale deployment of all forms of electric transportation including plug-in electric vehicles of all weight classes, transit buses, port electrification, off-road electric vehicles and equipment, and rail. Our board of directors includes: Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, and the Southern California Public Power Authority. Our membership also includes major automakers, manufacturers of zero-emission trucks and buses, and other industry leaders supporting transportation electrification.

CalETC supports the interagency partners' efforts to establish clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system, as directed by the Governor's Executive Order B-32-15.

We urge the interagency partners to keep in mind the tremendous challenges inherent in transitioning the freight sector to zero-emission technologies, and the need for state commitment and investment to overcome these challenges. As an example, with light-duty vehicles, at the end of 2015 plug-in electric vehicles (PEVs) represented only 3.1% of the new vehicle market in California and only 0.66% in the U.S.¹ Sales for conventional hybrids only reached 5.8% in California last year,² even though this technology has been widely available and accessible for over a decade. We urge the interagency partners to recognize the need for unwavering state commitment and investment to overcome these challenges. Private investment will follow clear, consistent public commitment and investment.

¹ See, e.g., Cobb, Jeff, California Plug-in Sales Led The US Last Year with Nearly Five-Times Greater Market Share, February 17, 2016, <http://www.hybridcars.com/california-plug-in-sales-led-us-last-year-with-nearly-five-times-greater-market-share/>.

² *Ibid.*

We respectfully submit the following comments for your consideration:

Summarized Comments:

- CalETC supports the Plan’s vision for a sustainable freight transport system.
- We support the Plan’s emphasis on partnerships and collaboration and we recommend that more zero-emission pilots are needed in the near-term.
- We encourage the interagency partners to include the economic benefits of transitioning to a zero-emission freight system.
- CalETC recommends that the zero-emission vehicles and equipment target—to deploy over 100,000 freight vehicles and equipment capable of zero-emission operation by 2030—be increased to 400,000.
- We encourage the interagency partners to recognize the necessity of consistent, sustained, and adequate state funding for the transition to a sustainable freight transport system.
- CalETC recommends that the Plan specifically recommend a long-term, large-scale, and comprehensive role for utilities in achieving the specified freight goals and targets.

Full Comments:

General Considerations

CalETC supports the Plan’s vision for a sustainable freight transport system. In addition to the other components of the vision statement, we strongly support the intention to transition the freight system to zero-emission equipment everywhere feasible, and near-zero-emission equipment powered by clean, low-carbon renewable fuels everywhere else. We support the inclusion of supporting infrastructure to achieve this goal, in addition to the zero-emission vehicles and equipment. We also support the Plan’s use of “zero-emission operation,” rather than zero-emission miles, as this is appropriate for equipment such as forklifts and power takeoff units on trucks. Finally, we support the interagency partners’ intent to improve freight-system efficiency, transition to zero-emission technologies, and foster economic growth within the freight system.

CalETC supports the Plan’s emphasis on partnerships and collaboration and we recommend that more zero-emission pilots are needed in the near-term. Throughout the Plan, the importance of public, industry, and stakeholder collaboration and partnerships is emphasized as necessary to meet the Plan’s vision. We support this emphasis and look forward to continuing to work with the interagency team to refine and implement the Plan.

Specifically, we look forward to collaborating with the interagency team on the pilot projects to ensure that the projects successfully reflect the zero-emission technology target. While the potential pilot projects and discussion concepts listed in Appendixes D and E are important, we recommend that the state agencies form partnerships with interested stakeholders to develop additional pilots because zero-

and near-zero-emission freight technologies are at a “game-changing” moment³ and because there are many different types of zero- and near-zero-emission freight technologies.⁴ As the Plan is implemented, there should also be opportunities to adjust pilot projects based upon emerging and commercialized zero-emission solutions that will be introduced to the market.

CalETC encourages the interagency partners to include the economic benefits of transitioning to a zero-emission freight system. The Plan emphasizes the need to foster economic growth, but also contemplates the negative impacts to existing industries. Transitioning to a sustainable freight transport system, and to zero-emission technologies, has the potential to bring California substantial economic benefits. Many of the manufacturers of zero- and near-zero-emission technologies are located in California, and many more could be located in California in the future with a concerted effort by agencies, utilities, and other stakeholders. It is essential to highlight and analyze these growth opportunities and economic benefits in order to sustain support for the Plan and its related programs.

In addition, purchasing electricity as a fuel benefits California’s and the United States’ economies as California utilities supply electricity to the California freight system and utilities produce electricity within California and the United States. Using electricity as a fuel for vehicles and equipment displaces traditional fossil fuels, which are generally procured from outside the United States.⁵ And, all utility customers benefit from increasing efficiencies across the electric grid, which puts downward pressure on electric rates.⁶

Freight Targets

CalETC recommends that the zero-emission vehicles and equipment target—to deploy over 100,000 freight vehicles and equipment capable of zero-emission operation by 2030—be increased to 400,000. The current minimum target of 100,000 is not high enough to be consistent with the Plan’s vision, and does not accurately reflect other state priorities and programs to transition the freight sector to zero-emission vehicles and equipment.

³ For example, battery prices have fallen dramatically. (See, e.g. Harrington, Rebecca, Tech Insider, *One dramatic chart shows why electric cars are about to become mainstream*, March 29, 2016, <http://www.techinsider.io/electric-vehicle-battery-cost-decreases-2016-3>.) Investor-owned utilities have been directed by the Legislature in SB 350 to have an expanded long-term role to help enable electric transportation. Both large truck manufacturers with global distribution and Chinese truck makers have entered into the electric truck and bus markets. Finally, commercialization of zero-emission trucks and buses is accelerating because of the many substantial federal, state, and local funding programs.

⁴ For example, there are currently battery electric vehicles and equipment, plug-in hybrid electric vehicles and equipment using various types of fuel for the engine, dual-mode electric vehicles using a combination of batteries, overhead wire catenary systems paired with vehicles and equipment, conductive rail, and/or inductive rail, magnetic-levitation trains, battery-electric or over-head wire locomotives, and others.

⁵ See, e.g., Roland-Holst, David, University of California, Berkeley, *Plug-in Electric Vehicle Deployment in California: An Economic Assessment*, September 2012, http://are.berkeley.edu/~dwrh/CERES_Web/Docs/ETC_PEV_RH_Final120920.pdf; see also <https://www.eia.gov/state/analysis.cfm?sid=CA>.

⁶ ICF International and Energy+Environmental Economics, *Transportation Electrification Assessment, Phase 2: Grid Impacts*, October 23, 2014, pp 17-18, 51-54, http://www.caetc.com/wp-content/uploads/2014/10/CalETC_TEA_Phase_2_Final_10-23-14.pdf.

The California Air Resources Board’s Mobile Source Strategy identifies the following goods-movement equipment currently in use in California: approximately 1.1 million in-state class 2B and last-mile delivery trucks;⁷ approximately 250,000 in-state class 7 and 8 heavy-duty trucks;⁸ approximately 100,000 forklifts.⁹ The Air Resources Board’s technology assessments also identify: 4,600 cargo-handling equipment at California’s ports and intermodal rail yards, not including warehouse distribution centers,¹⁰ 7,000 truck transport refrigeration units (TRUs) based in California, 20,400 trailer TRUs based in California and another 12,500 that are based outside of California and operate in California, and 1,300 railcar TRUs operating in California.¹¹ Taking into account these specified vehicles and equipment, in addition to those not included within these figures, the 100,000 target is likely less than 5% of the total goods-movement vehicles and equipment used in California.

CalETC also notes that the Transportation Electrification Assessments (TEAs) by ICF International and Energy+Environmental Economics project and analyze three adoption scenarios for certain commercial and non-road plug-in electric technologies.¹² The “in-line with current adoption” scenario projects 293,016 plug-in electric units in operation by 2030.¹³ The “aggressive adoption” scenario projects 6,028,557 plug-in electric units in operation by 2030.¹⁴ And, the “in-between adoption” scenario projects 479,274 units in operation by 2030; we have over 118,500 plug-in electric units today (mostly forklifts).¹⁵ (Note that these projections include a subset of applicable technologies: transport refrigeration units,

⁷ California Air Resources Board, Mobile Source Strategy, May 2016, p. 81, <http://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>.

⁸ *Ibid.*

⁹ California Air Resources Board, Mobile Source Strategy, May 2016, p. 131, <http://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>.

¹⁰ California Air Resources Board, Draft Technology Assessment: Mobile Cargo Handling Equipment, November 2015, p. ES-2, http://www.arb.ca.gov/msprog/tech/techreport/che_tech_report.pdf.

¹¹ California Air Resources Board, Technology Assessment: Transport Refrigerators, August 2015, pp. ES-1 – ES-2, http://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

¹² ICF International and Energy+Environmental Economics, *Transportation Electrification Assessment, Phase 1*, September 2014, http://www.caletc.com/wp-content/uploads/2014/09/CalETC_TEA_Phase_1-FINAL_Updated_092014.pdf; ICF International and Energy+Environmental Economics, *Transportation Electrification Assessment, Phase 3-Part A: Commercial and Non-Road Grid Impacts*, January 2016, <http://www.caletc.com/wp-content/uploads/2016/01/California-Transportation-Electrification-Assessment-Phase-3-Part-A.pdf>.

¹³ ICF International and Energy+Environmental Economics, *Transportation Electrification Assessment, Phase 1*, September 2014, p. 10, http://www.caletc.com/wp-content/uploads/2014/09/CalETC_TEA_Phase_1-FINAL_Updated_092014.pdf. [The “In Line with Current Adoption” case for many technologies maintains the current population of electrified technologies, includes minimal anticipated natural growth, or achieves minimum compliance with current state and/or federal regulations. Electrification was not assumed to be the only avenue for compliance for regulations where multiple compliance options are available (e.g. anti-idling, ocean going vessels at-berth, TRUs).]

¹⁴ *Id.* at p. 19. [The “Aggressive Adoption” case for many technologies includes aggressive new incentive programs and/or regulations, especially regulations similar to the mandate at the ports. “Aggressive adoption” cases are not simply the hypothetical maximums, but are tangibly aggressive and anticipate achieving compliance with regulations where electrification is not the only avenue for compliance (e.g. anti-idling, ocean going vessels at-berth, TRUs) solely through electrification.]

¹⁵ *Id.* at pp. 10, 15. [The “In Between” case for many technologies is halfway in between the “In Line with Current Adoption” and “Aggressive Adoption” cases except for a few more advanced technologies. For these technologies, specific “In Between” cases were developed.]

truck-stop electrification (spaces), forklifts (classes 1-3), airport ground-support equipment, port cargo-handling equipment, medium- and heavy-duty vehicles.)

We encourage the interagency partners to increase the target—to deploy over 100,000 freight vehicles and equipment capable of zero-emission operation by 2030—to reflect a more ambitious minimum for 2030, reflective of California’s leadership on and commitment to transitioning to zero-emission technologies. The increased target should take into account concurrent federal and state actions to transition goods-movement vehicles and equipment to zero-emission technologies. And, an increased target should be ambitious enough to encourage public and private investment in these technologies and supporting infrastructure.

We believe a minimum of 400,000 freight vehicles and equipment capable of zero-emission operation by 2030 is a reasonable target. This target is a rational minimum as it is higher than what is expected given current adoption rates, but is also a practical and feasible target to encourage enhanced funding and regulatory mechanisms. The target must be higher than currently proposed in order to reach the objective, in the Governor’s Executive Order B-32-15, to transition to zero-emission technologies.

We also recommend that the interagency partners further break down this figure into categories, such as on- and off-road, long- and short-haul, infrastructure and stationary equipment, and more, as appropriate. Including categories will ensure that the benefits realized from transitioning these technologies are maximized. For example, the target should not be met solely through transitioning to zero-emission forklifts—which appears possible given the current target.

Funding

There is an urgent and growing need for investment in the freight sector; transitioning to zero-emission technologies is a tremendous, comprehensive, large-scale, and long-term challenge. It requires substantial public funding and leveraging the commitment of the industries, including utilities, technology manufacturers, and others, that are supportive of transitioning to zero-emission technologies.

The Plan recognizes the need to obtain consistent, multi-year funding for these programs, from public and private sources. We encourage the interagency partners to recognize the necessity of consistent, sustained, and adequate state funding for the transition to a sustainable freight transport system. CalETC recommends that the Plan’s funding programs require cost-sharing from sources outside of state agencies in order to make limited state funds go further and help accelerate zero-emission and near-zero-emission technology adoption. In addition, we encourage the interagency partners to include the role for utilities to aid in the transition to electrification of the freight sector.

Utility Role

CalETC recommends that the Plan specifically recommend a long-term, large-scale, and comprehensive role for utilities to implement the transportation-electrification provisions of Senate Bill 350 (2015). Both investor-owned utilities and publicly-owned utilities have a role in increasing transportation electrification within California. Publicly-owned utilities are currently investing in transportation electrification, and seeking new ways to be involved across all transportation segments. SB 350 directs investor-owned utilities to propose and implement programs and investments to accelerate widespread transportation electrification in order to help meet several long-term state goals and federal air-quality standards. Further, SB 350 defines transportation electrification in a very broad manner. Many of the interagency partners are and should continue to work with the Public Utilities Commission to implement SB 350 in the most effective fashion, and to extend limited state funds.

To the extent utilities are providing and will provide transportation-electrification infrastructure and investments, state agencies should seek to avoid duplicating or boxing-out utility investment. The Plan should specifically call for a utility public-private partnership regarding, for example: investments in charging and propulsion infrastructure, market-education and outreach programs, incentive programs, pilot projects, and electric rates designed with transportation electrification in mind. Achieving the infrastructure needed to deploy zero-emission technologies is a significant challenge; utility participation is needed to aid both the private and public sector in deploying these technologies.

Thank you for your consideration. Please do not hesitate to contact us should you have any questions.

Sincerely,



Eileen Wenger Tutt, Executive Director
California Electric Transportation Coalition