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October 18, 2021

Honorable Chair Liane M. Randolph
Honorable Board Members California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Submitted online to the "2020moblesourcestrat" comment submittal form

Re: Comments on the 2020 Mobile Source Strategy

Dear Chair Randolph and Honorable Board Members:

Southern California Edison (SCE) appreciates the opportunity to comment on the 2020 Mobile Source Strategy (MSS).

Addressing climate change and improving air quality requires large-scale transformation of the transportation sector to zero-emissions.

SCE's Pathway 2045 whitepaper provides a blueprint for reaching California's greenhouse gas reduction and carbon neutrality goals and finds accelerating zero-emission (ZE) transportation as critical to realizing California's emission reduction goals.[1] The CARB 2020 Mobile Source Strategy[2] charts a similar large-scale transition of the transportation sector across all segments to address emission reductions, modelling 85% zero-emission vehicles (ZEVs) and plug-in hybrid electric vehicles on-road for light-duty, 65% ZEVs for medium-duty vehicles, and 77% ZEVs for heavy-duty vehicles in 2045 to achieve multiple emission reduction goals.[3]

In addition to being the largest source of greenhouse gas emissions, the transportation sector is responsible for a majority of smog-forming nitrogen oxide (NOx) pollutants and is a significant

[1] "Pathway 2045, Update to the Clean Power and Electrification Pathway," Southern California Edison, November 2019. https://www.edison.com/home/our-perspective/pathway-2045.html
[2] "Proposed 2020 Mobile Source Strategy," CARB, September 2021. https://ww2.arb.ca.gov/sites/default/files/2021-09/Proposed_2020_Mobile_Source_Strategy.pdf
[3] Percentage figures for the light-duty 2020 MSS scenario are from CARB's Vision model (accessed September 30, 2021) and percentage figures for medium- and heavy-duty are from CARB's META tool (accessed September 30, 2021). https://arb.ca.gov/emfac/meta/

source of air toxics having a detrimental impact on public health.[4] Assessing viable pathways to accelerating ZEVs will provide important air quality and public health benefits, especially in reducing local and regional air pollution impacts in affected communities.

To realize the scale of ZEV adoption outlined in the MSS, complementary actions and policies are required for California to be on course to achieve aggressive greenhouse gas and air pollutant reduction targets.

SCE's Mind the Gap[5] policy paper identifies transportation electrification as making up a third of the emissions gap for reductions needed by 2030.[6] California has set recent bold goals and targets for a transition to zero-emission transportation,[7] but it is uncertain how the ZEV transition will be effectuated and realized without additional policies and action. To ensure a successful and orderly transition to zero-emission modes of transportation, more funding for vehicles and infrastructure is needed along with ensuring that the planning and investment for necessary supportive grid and charging infrastructure is in sync and on a similar accelerated path to increased ZEV adoption.

While the economics for EVs are growing increasingly favorable and funding included in the 2021 California state budget represents significant progress in helping spur EV adoption, there remains a significant funding need, given vehicle sales are overwhelmingly traditional internal combustion engine (ICE) vehicles. Assuming favorable cost trends, Mind the Gap estimates a funding gap of $3B to bridge the gap between ICE and EV costs. California's incentives have had a significant impact on increasing adoption. However, additional durable funding is required to transform the transportation market and achieve levels of adoption outlined by the MSS.

A large-scale transition to zero-emission modes of transportation will also require preparing the grid for significant shifts in usage and increasing demands. Currently, planning targets in the state that determine the investment and development in electric power system infrastructure are not aligned with a large-scale transition to ZEVs outlined in the MSS. The CEC's Integrated Energy Policy Report (IEPR) mid-case 2030 ZEV forecast, used for electric grid planning purposes, comes in 60% short by 2030, at 3.3 million light-duty ZEVs, compared to CARB's 2030 defined need of 7.9 million light-duty ZEVs.[8] Additionally, a gap of 100,000 ZEV trucks and buses exists between CARB's Mobile Source Strategy and the CEC IEPR mid forecast in 2030. This misalignment prevents electric utilities from properly preparing for and building out electric power system infrastructure at the larger scale because grid planning processes rely on the

[4] "Proposed 2020 Mobile Source Strategy," CARB, September 2021. https://ww2.arb.ca.gov/sites/default/files/2021-09/Proposed_2020_Mobile_Source_Strategy.pdf
[5] "Mind the Gap: Policies for California's Countdown to 2030," Southern California Edison, September 2021. https://www.edison.com/home/our-perspective/mind-the-gap.html
[6] Assumes existing policies and funding are met.
[7] Governor's Executive Order N-79-20, September 2020. https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf
[8] Final 2020 Integrated Energy Policy Report Update, Volume III: California Energy Demand Forecast Update, CEC, March 2021, pp. 24-26. https://efiling.energy.ca.gov/getdocument.aspx?tn=237269

lower IEPR forecasts. The CEC is developing a scenario to reflect the level of electrification necessary to meet the state's climate and environmental goals. This policy scenario and CEC's assessments of required EV charging infrastructure[9] should be central to the IEPR TE demand planning targets, so state goals and planning targets are not out of sync. Subsequently, utilities will be able to better plan for the necessary grid infrastructure to support large-scale decarbonization. In addition to ensuring planning targets are aligned, we encourage the CEC and CARB to jointly develop a funding plan assessing the needs over the next 10 years for both vehicles and infrastructure to be on pace with achieving California's goals.

There are challenges ahead as we set the foundation for a large-scale transition to ZEVs across California – from incentives to infrastructure. California has long been a leader in energy and environmental progress and SCE views the challenges and work ahead as a call to action to work with state agencies and stakeholders to realize a viable path of transition to the necessary ZE technology solutions to achieve our air quality and climate goals.

Thank you for considering our comments and suggestions.

Sincerely,

/s/ Vazken Kassakhian

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[9] Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment - Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030 (Commission Report), CEC, July 2021. https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127