

November 3, 2022

The Honorable Liane Randolph
Chair, California Air Resources Board
1001 I Street
Sacramento, CA 95811

RE: Proposed In-Use Locomotive Regulation

Chair Randolph:

On behalf of the California Transit Association, I write to you today in response to the Proposed In-Use Locomotive Regulation. As you know, the Association represents over 220 member organizations from across California's transit industry, which includes 85 transit and rail agency members. Through our work on the implementation of the Innovative Clean Transit regulation and our steadfast support for federal and state investments in zero-emission transit vehicles across modes, the Association and our members have been consistent partners with the California Air Resources Board in advancing the deployment of zero-emission vehicle (ZEV) technologies in public transportation applications. In recent years, we have taken concrete actions to support the deployment of zero-emission locomotives, including:

- Supporting the deployment of zero-emission and Tier 4 locomotives by intercity and commuter rail agencies;
- Championing and helping to secure from the State Legislature new funding for zero-emission rail and "emerging opportunities" in the Fiscal Year 2021-22 and Fiscal Year 2022-23 budgets, respectively;
- Supporting and helping to secure increased funding for passenger rail in the federal Bipartisan Infrastructure Investment & Jobs Act;
- Sponsoring legislation to expand California Environmental Quality Act exemptions to include charging and refueling infrastructure for zero-emission rail projects; and,
- Expanding our Zero-Emission Vehicle Task Force (formerly, Zero-Emission Bus Task Force) to include representatives from intercity passenger and commuter rail agencies with the explicit goal of informing our zero-emission rail-related advocacy and industry education.

Regrettably, and despite our ongoing commitment to continuing to advance zero-emission rail investments, the Association must voice significant concerns about the timing, structure, and compliance requirements of the proposed regulation. These concerns align with the feedback

previously provided to the Transportation and Toxics Division by our intercity passenger and commuter rail agency members throughout the development of the proposed regulation.

At the highest level, the Association notes concerns that the proposed regulation is being promulgated at a time when the financial position of rail agencies (which is highly dependent on ridership) has been significantly – and possibly, irreparably – damaged by the COVID-19 pandemic. Additionally, we note that, despite advances in zero-emission locomotive and multiple unit technologies internationally, the proposed regulation would proceed on a timeline that is faster than technology and market readiness and resource availability would permit, creating negative operational and financial impacts to rail service that would undermine the state’s ability to reduce vehicle miles traveled and that would create travel “leakage” to other modes, like personal automobiles and airplanes. What’s more, we note that zero-emission locomotives and multiple unit technologies are a still emerging technology and currently lack the required range to be a direct one-for-one replacement for diesel powered units. Due to these range limitations and lack of readily available infrastructure for recharging and refueling, intercity passenger and commuter rail agencies would be required to significantly expand their fleet size to maintain current levels of service.

To be more specific, we amplify the following precise concerns with the proposed regulation, which were previously raised by our intercity passenger and commuter rail agency members.

Spending Account Requirements (Section 2478.4(a)-(e)): Beginning, July 1, 2024, the proposed regulation would require all locomotive operators, including intercity passenger and commuter rail agencies, to annually deposit funding in a trust account (or “Spending Account”) at a level based on the emissions generated by their locomotive fleet. These funds and any interest generated must be used for: the purchase, lease, or rental of Tier 4 or cleaner locomotives, or for the remanufacture or repower to Tier 4 or cleaner locomotives (through 2030); the purchase, lease, or rental of ZE locomotives, ZE capable locomotives, ZE rail equipment, or to repower to ZE locomotives or ZE capable locomotives; or supporting infrastructure.

We estimate that, depending on the intercity passenger and commuter rail agency, the level of funding required to be deposited in the Spending Account could reach tens of millions of dollars annually, which would then be unavailable for rail operations, state of good repair improvements, or leveraging state and federal investment in rolling stock (including ZE technologies). In several cases, agencies would be depositing funding in the Spending Account (and paying, *in effect*, a penalty) for operating the cleanest available Tier 4 locomotives that were only recently put into operations with significant state investment.

This costly requirement would harm rail service in usual times by reducing funding available for operations and critical capital improvements, but it presents an existential threat to rail service when applied against the backdrop of the pandemic’s impact on rail agencies’ financial position and the reality that several rail agencies will soon face a fiscal cliff as one-time federal relief funding is depleted. Finally, this requirement in creating a new financial liability for locomotive operators is likely to impact the credit rating of intercity passenger and commuter rail agencies, thus limiting their ability to leverage financing instruments to deliver major capital projects and increasing their borrowing costs.

The importance of these financial considerations notwithstanding, we are also gravely concerned that the proposed regulation and its Spending Account requirements are premised on a false assumption – that is, that zero-emission locomotives and multiple unit technologies will be commercially available and a satisfactory alternative to diesel locomotives when Spending Accounts reach financial maturity to cover the costs of a zero-emission locomotive or multiple unit. To be clear, there are currently no Federal Railroad Administration-approved zero-emission locomotive or multiple units commercially available for passenger rail use in the United States except those that run on wayside electrified lines. In fact, approval is required to operate such locomotives on intercity passenger and commuter rail systems and would take 1-5 years from order date to approval, longer for multiple units.

ZE Credit System (Section 2478.4(f)): The proposed regulation would implement a ZE credit system for the Spending Account, whereby the operations of zero-emission locomotives, zero-emission rail equipment, or use of wayside power by locomotive operators, including intercity passenger and commuter rail agencies, in California would result in the generation of credits that would reduce a locomotive operator's annual deposits into their Spending Account. This system would be in effect through December 31, 2029, with all ZE credits expiring on January 1, 2030. This system is intended to incentivize early deployment of zero-emission locomotives and multiple units but fails to acknowledge that the procurement of locomotives by intercity passenger and commuter rail agencies is heavily dependent on their receipt of competitive grant funding. Intercity rail and commuter rail agencies that receive these grants would clearly benefit from the system; however, agencies that failed to secure these grants – despite their best efforts – would be unfairly penalized.

Engine Life (Section 2478.5(a)): The proposed regulation would prohibit use of locomotives more than 23 years old, beginning in 2030. We object to this limitation, as public agencies receiving federal funding are required by federal law and grant terms to use their equipment for at least 25 years or face re-paying grant funds.

Technology Assessment (Section 2478.5 (b)(1)): The proposed regulation would require any switch, industrial, or passenger locomotive with an original engine build date of 2030 or newer to operate in a ZE configuration at all times in California, beginning January 1, 2030.

By December 1, 2027, CARB staff would be required to publish an assessment of this progress made to determine if locomotives are on target to meet the 2030 ZE configuration deadline. However, we are concerned about conducting a technology assessment in 2027, as it is too late to be helpful to intercity passenger and commuter rail agencies that would be required, beginning on July 1, 2024, to deposit funding into a Spending Account.

If, in 2027, the technology assessment ultimately finds that zero-emission locomotive and multiple unit technology has not progressed sufficiently to maintain the regulation's compliance deadlines, CARB will have undermined rail service by requiring the redirection of limited resources and funding that could have been used for operations and other capital investments to the Spending Account over 3.5 years for little to no movement on the deployment of zero-emission locomotive and multiple unit technology (relative to what could have been achieved through other means).

Temporary Waiver (Section 2478.6(a)): The proposed regulation would allow locomotive operators, including intercity passenger and commuter rail agencies, to exercise a temporary operating waiver option. If a locomotive operator plans to operate a locomotive that would be

considered prohibited pursuant to section 2478.5, the locomotive operator has the option to submit a request to the Executive Officer to temporarily operate the locomotive in California. The temporary operating waiver request may be approved, provided certain specified requirements are satisfied. While this is useful flexibility, we are concerned that the temporary operating waiver does not include relief for lack of funds, or lack of commercial availability, both of which are significant barriers for public agencies.

Alternative Compliance Plan (Section 2487.7 (a) and Section 2487.10): The proposed regulation permits locomotive operators, including intercity passenger and commuter rail agencies, to submit an alternative compliance plan (ACP) instead of complying with the Spending Account requirements in Section 2478.4 and/or the In-Use Operational requirements in 2478.5. While California's intercity passenger and commuter rail agencies urged CARB staff to create an alternative to the proposed regulation's Spending Account requirements (due to the challenges noted above), the proposed structure and requirements of the ACP fails to deliver the broad-based relief we seek.

Below we note the specific issues and complications we find with the proposed ACP structure and requirements:

- An approved ACP would be valid for a five year "verification" period. In that period, a locomotive operators would be required demonstrate emissions reductions equivalent to compliance with Section 2478.4 and/or Section 2478.5. through use of cleaner equipment. In practice, this requirement would charge locomotive operators with absorbing financial costs and operational impacts similar to compliance with Section 2478.4 and/or Section 2478.5.
- The proposed ACP would require locomotive operators to document lower emissions for PM, NOx and GHG. These measurements are expensive and administratively burdensome, and GHG is not defined to the extent the regulation defines PM and NOx. Additionally, the measurements for GHG fail to provide an offset for GHG reductions associated with decreases in highway vehicle miles traveled resulting from rail service.
- The proposed ACP would require usage data for each locomotive in a locomotive operator's fleet, which may not be readily available.
- The proposed ACP would require applications to be submitted six months before their effective date. As the proposed regulation is not expected to be in force until 2024 and there is currently no approved framework under which to submit an ACP for consideration, intercity passenger and commuter rail agencies are likely to see a near-term encumbrance of funds into a Spending Account in the interval time between the proposed regulation's approval and ACP approval. Additionally, this submittal process would create uncertainty for intercity passenger and commuter rail agencies that would stymie operations and capital planning – that is, an agency is unlikely to finalize operational and capital plans if acceptance of an ACP is outstanding, as rejection of the ACP would create new financial burden.

- The proposed regulation requires locomotive operators exercising an approved ACP to annually report several data points including:
 - The locomotive operator/company name; a detailed explanation of the progress of the ACP for the prior calendar year;
 - A detailed accounting of the reductions achieved pursuant to the ACP for the prior calendar year;
 - A detailed explanation as to how the reductions achieved by the ACP in the prior year were real, quantifiable, verifiable, and enforceable;
 - The location(s) of the emissions reductions that were achieved by the ACP in the prior calendar year;
 - A detailed accounting of the emissions reductions that would have been achieved pursuant to section 2478.4 and/or 2478.5; and,
 - Any other information identified in the Executive Order as necessary for evaluating whether the locomotive operator has complied with section 2478.7 requirements and ACP requirements.

For publicly funded passenger railroads, reporting this data annually is certain to be onerous and costly, and will have a negative impact on overall agency budgets.

Idling Requirements (Section 2478.8): The proposed regulation prohibits idling for more than 30 minutes with exceptions for various scenarios that do not include typical reasons passenger services may idle to ensure the safety of the public.

Finally, we note that the proposed regulation would require locomotive operators to report usage data for each locomotive including, in some cases, usage by air district. This data may not be available, particularly by air district.

Association Proposal: Given the significance of the concerns detailed, the Association urges CARB to initiate and complete an independent and peer-reviewed market and technology assessment before implementing the proposed regulation or any alternative regulation. This market assessment should be conducted with input from industry stakeholders and all relevant state and federal departments and agencies, and should address the following issues:

1. The commercial availability of zero-emission locomotive and multiple unit technologies and fuels in the United States, with consideration to all applicable federal laws and regulations;
2. The deployment status of zero-emission locomotive and multiple unit technologies in the United States;
3. The capital and operational costs, performance, and reliability of zero-emission locomotive and multiple unit technologies and requisite infrastructure on the United States market, including the compared costs of locomotives and related technologies now versus estimated future costs;

4. The availability of state and federal funding opportunities to address the costs of deploying and operating zero-emission passenger locomotive and multiple unit technologies and requisite infrastructure;
5. The barriers to adoption of zero-emission locomotive technologies, including the availability of battery storage and regularity of required maintenance on locomotive batteries; and,
6. The status of intercity passenger and commuter rail service in California.

This market and technology assessment is intended to inform: the timelines for compliance by intercity passenger and commuter rail agencies with the proposed regulation or any alternative regulation; amendments to the proposed regulation or any alternative regulation to address assessment findings; and funding strategies to support the deployment of zero-emission locomotive technologies and requisite infrastructure.

Importantly, this market and technology assessment is more expansive than the 2022 assessment included in Appendix F of the Initial Statement of Reasons. That earlier assessment reflects only supplier marketing statements and public transit agencies' plans, and fails to consider the market and technology availability of zero-emission locomotive and multiple unit technologies, infrastructure and fuel in the United States in the context of the proposed regulation's precise compliance requirements and deadlines. Moreover, that earlier assessment neglects to highlight that much of the technology reviewed is currently unavailable in the United States as it has not been approved by the Federal Railroad Administration for use by American intercity passenger and commuter rail agencies and does not meet federal Buy America requirements; and minimizes the reality that, for such technologies to be approved for deployment in the United States, manufacturers and suppliers would need to establish a wholly new manufacturing presence in the country to meet federal domestic content requirements. Additionally, our market and technology assessment is distinct from the assessment scheduled for 2027 in the proposed regulation in that it aims to proactively identify and address the barriers associated with transitioning to zero-emission locomotives before agencies are required to take preparatory steps – i.e. investments in the savings accounts – for technology deployments that may later prove to be infeasible. In a time of limited resources, we believe strongly that this phased approach is necessary and responsible.

If CARB were to pursue this market and technology assessment, we urge CARB to continue to take actions to prove the viability of zero-emission locomotives; such actions can include continued investment in demonstration and pilot projects that deliver near-term benefits to communities burdened by poor air quality and that set the stage for a broader industry transition. As we have done recently for bus agencies relative to the Innovative Clean Transit regulation, we aim to ensure passenger and commuter rail agencies are presented with a feasible target which is wholly considerate and accommodating of rail agency concerns and limitations. In supporting sufficient funding, ample time to commence the transition to zero-emission locomotive technologies, consideration to previously stated barriers, and adequate alternatives to them, CARB's partnership will ensure that we can continue to drive the transition to ZEV technologies together.

In submitting this letter, we thank you for the opportunity to comment on the Proposed In-Use Locomotive Regulation. The Association looks forward to discussing this with you further as we prepare for the CARB November 17 hearing, and beyond as we work together to address our

concerns about implementation of the proposed regulation. If you have any questions regarding this letter, please contact me at michael@caltransit.org or (916)-446-4656 x1034.

Sincerely,



Michael Pimentel
Executive Director

cc: Members, California Air Resources Board
Dr. Steven Cliff, Executive Officer, California Air Resources Board
Edie Chang, Deputy Executive Officer – Planning, Freight & Toxics, California Air Resources Board
Heather Arias, Chief, Transportation and Toxics Division, California Air Resources Board
Jamie Callahan, Chief of Staff, Office of Chairwoman Liane Randolph, California Air Resources Board
Mark Tollefson, Deputy Cabinet Secretary, Office of Governor Gavin Newsom
Karen Douglas, Senior Advisor, Office of Governor Gavin Newsom
Toks Omishakin, Secretary, California State Transportation Agency
Chad Edison, Chief Deputy Secretary for Rail and Transit, California State Transportation Agency
Tony Tavares, Director, California Department of Transportation
Jeanie Ward-Waller, Deputy Director of Planning and Modal Programs, California Department of Transportation
Kyle Gradinger, Chief, Division of Rail and Mass Transportation, California Department of Transportation
Momoko Tamaoki, Assistant Division Chief, Division of Rail and Mass Transportation, California Department of Transportation
Members, Executive Committee, California Transit Association
Members, Zero-Emission Vehicle Task Force, California Transit Association