

September 21, 2018

Clerk of the Board  
California Air Resources Board  
1001 I Street, P.O. Box 2815  
Sacramento, CA 95812-2815

Re: proposed Innovative Clean Transit (ICT) Regulation and a Draft Environmental Analysis (Draft EA)

Submitted online via CARB's Web Comment Submittal Form

Olivine supports CARB's efforts to propel California's public transit agencies towards zero emissions fleets. We also appreciate CARB's efforts to engage diverse stakeholders in the process of formulating the Innovative Clean Transit Regulation. In reviewing the INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW (GOV. CODE, § 11346.5, subd. (a)(3)), it appears that the proposed actions do not contemplate Vehicle to Grid Interaction, electricity rates, and grid infrastructure. Olivine believes that a strong ZEB proposal needs to consider and provide prudent guidance around VGI deployment to ensure that ZEB charging impacts to the electrical grid are mitigated and/or positive. Without VGI, ZEB charging may induce additional stress to the electrical grid, which could negatively impact air quality in California.

Olivine also reinforces its earlier feedback provided both at the June 13, 2018 workshop and via public comment.

- Vehicle to Grid Integration (VGI) is crucial to manage electricity (fuel) costs. Several transit districts expressed concern over or shared their experience with high electricity costs. Olivine's analysis has shown that electricity costs can be managed via intelligent charge control algorithms and/or bi-directional power flow. These strategies enable a variety of grid engagement opportunities, including direct wholesale electricity market participation and joining virtual power plant aggregations like the Olivine Green Community. VGI functionality needs to be a default component of all Battery Electric Bus (BEB) deployments.
- VGI functionality should be required in BEB and/or charging infrastructure procurements. The costs associated with enabling VGI functionality are small compared with the large capital required for both buses and infrastructure. The marginal increase associated with VGI functionality will have a quick pay back period from electricity (fuel) cost savings.
- Transit-specific utility rates are needed to address the concerns of demand charges associated with fleet electrification. CARB should coordinate efforts with the CPUC and the Energy Commission in order to incent transit districts to electrify their fleets with targeted rate design, as opposed to chilling their investment due to problematic rate design which imposes burdensome electricity (fuel) costs.
- Department of General Services procurement efforts should require VGI and V2G functionality in the selection of battery electric buses and charging infrastructure by the State.
- Olivine recommends a technical workshop be held on these issues; the opportunity to explore and debate them would be valuable to all stakeholders. Olivine believes that such a workshop will help shed light on many of the uncertainties around deploying infrastructure and concerns around fuel costs.

Sincerely,  
Hitesh Soneji  
Sr. Solutions Design Engineer, Olivine Inc.