

July 2, 2018

Shirin Barfjani  
Air Pollution Specialist, Mobile Source Control Division  
California Air Resources Board  
1001 I Street, P.O. Box 2815  
Sacramento, CA 95812-2815

Re: Proposed Innovative Clean Transit Regulation

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.

Olivine would like to reinforce our statements made at the June 13, 2018 workshop as well as support comments by many of the stakeholders in attendance at the workshop.

- The proposal strikes a good balance between pushing for ZEB deployment and recognizing the concerns and constraints of the diverse set of transit districts in California.
- 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. Olivine believes that VGI functionality needs to be a default component of all Battery Electric Bus (BEB) deployments.
- Vehicle to Grid (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 protect transit districts from unreasonable 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.
- A technical workshop 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. The workshop would be an opportunity to share VGI opportunities, electricity rate developments, and technology solutions for grid services revenue and electricity bill management.

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

Beth Reid  
CEO, Olivine, Inc.