

SOUTHERN DISTRICT

January 20, 2020

Clerk’s Office

California Air Resources Board

1001 I Street

Sacramento, California 95814

*Via Electronic Submittal:* [https://www.arb.ca.gov/lispub/comm/bclist.php](about:blank)

**Subject: Public Meeting Comments to Consider Policy Recommendations to Increase the Use of Zero-Emission Vehicles Per** [**Senate Bill 498**](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB498) **(Chapter 628, Statutes of 2017)**

Dear Clerk’s Office:

The California Refuse Recycling Council, Southern District (CRRC SD) is an association of solid waste service providers.  Our members range from small, privately owned enterprises to several of the world’s largest integrated waste management firms. Collectively, CRRC Southern District members serve an estimated two-thirds of the state’s population and operate virtually every form of facility and service now in existence for integrated solid waste management, recycling, composting, and anaerobic digestion.  Our members share in the state’s pollutant reduction and climate change goals, and although we may have different views on how best to accomplish those goals, we remain committed to providing these essential services to help ensure that California will realize all of its environmental objectives.

The CRRC Southern District is comprised of the California counties of Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, Tulare, and Riverside. It is home to approximately 26 million residents. CRRC SD members have expended billions of dollars in delivering recycling and composting services to these communities. We are one of several primary stakeholders over the past twenty years that have invested and committed to the mandated use of alternative fuel natural gas clean fleet vehicles and low NOx engines with renewable natural gas fueling infrastructure. Our experiences along with other transportation sector stakeholders have given us realistic understandings of the difficulties in converting fleets and building infrastructure to take on the difficult challenges of advancing ZEV technologies, but yet preserving the investments in natural gas fleets to meet existing mandates to achieve compliance with 8-hour Ozone SIP requirements in the South Coast and San Joaquin Valley Air Basins.

We are pleased to provide comments on the California Air Resources Board consideration of policy recommendations to increase the use of zero-emission vehicles per [Senate Bill 498](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB498) (Skinner, Chapter 628, Statutes of 2017).

We recognize the need to transition the transportation sector to zero-emission technology and its importance in achieving California’s public health protection goals, minimizing air pollution exposure, and mitigating climate change impacts. We concur that significant improvements have been made in both the South Coast Air Basin and the San Joaquin Valley; however, greater challenges lay ahead to meet air quality goals.

We would like to share a few observations based on our members’ experiences implementing advanced Natural Gas fleet technology regulations. First, there is never enough incentive money to accelerate fleet vehicle replacement, conversions or infrastructure development and installations. Second, if policies priorities do not account for highly deleterious air quality impacts in high density-populated coastal zones and their transportation corridors within low-income disadvantage communities, equity cannot be achieved. Advanced technologies and funding have the potential to be used in less impacted zones that will sub-optimize the achievement of overall air quality benefits. Problems may be exacerbated in lower density inland valley air basins or sub basins due to downwind unhealthy air quality transport. Third, it seems prudent to support and maintain the continued use of Low NOx engines and renewable fuels to delay the transition of vocational captive Refuse Fleets for now to meet the 8-Hour Ozone and PM 2.5 SIP requirements and to allow the equitable implementation of game changing Short-Lived Climate Reduction Strategies mandated by [SB 1383](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383) (Lara, Chapter 395, Statutes of 2016).

**PROPOSED POLICY RECOMMENDATIONS**

We submit the following comments on Policy Recommendations to Increase the Use of Zero-Emission Vehicles Per Senate Bill 498:

*ZEV Sale Requirements*

As noted, the waste industry has been transitioning from diesel to natural gas (NG)-powered vehicles. The transition began some 20 years ago, and there is universal agreement that the emissions benefits of the transition have been profound. Billions of dollars have been invested in NG fleets and equipment as well as in fueling stations to keep these vehicles on the road. The timing of a further transition to electric power has many in the waste industry in a quandary about capital investments and the air quality trade-offs that might occur as a result of abrupt deployment to a technology that is not readily available or has not gone through the rigorous analysis needed for our sector.

*Electric Refuse Vehicle (ERV) Considerations*

Waste industry challenges for deploying zero-emission technologies include

1. high upfront capital costs for both vehicle purchase and fueling/charging infrastructure construction,
2. fueling/charging infrastructure expansion,
3. maintenance facility retrofit and scalability,
4. electricity rates,
5. vehicle payload capacity and operation flexibility,
6. workforce training,
7. need for carbon intensity analysis,
8. grid resiliency,
9. need for economic evaluation for electric refuse vehicle (ERV) closed loop energy systems, such as anaerobic digestion and landfill gas to energy, to maintain and build out those energy systems,
10. factoring in geographical distinctions, i.e., mountainous terrain impact on battery performance,
11. warranty impacts on the customized components of ERV’s, and
12. need for a comparison of the cost of ZEV’s with other renewable fuels and comparable determination of environmental benefits,
13. as essential public service providers, need for reliable backup and emergency charging infrastructure in the event of power shutoffs, and
14. full life cycle costs and disposal for components of this infrastructure.

*Captive Fleets*

In addition, a guaranteed uninterrupted electrical energy supply and/or on-site battery backup charging infrastructure must be available to meet the mandated public health and environmental protection services for nuisances, homeless encampments, fires and disaster readiness, and uninterrupted daily integrated solid waste management services.

It is also important to recognize that most waste industry service providers are rate-regulated: they are not free to unilaterally pass on to their customers the costs associated with a change in policy, law or regulation. Typically, rate increases must be approved by the local agency with a jurisdiction to set the rates, and it can take a substantial amount of time to implement changes. These jurisdictions have, in many cases, recently authorized relatively substantial rate increases to address a host of other environmental compliance objectives resulting from new legislative requirements, regulations and China’s new import policies that have deprived much of the world of its most reliable market for recyclable materials.

The current state of the technology regarding electric-powered refuse equipment is yet another area of potential concern. Prototype zero-emission refuse trucks may be available today, and they may be capable of exceeding a 100 mile daily range. However, they are not ready to meet certain duty cycle requirements, let alone the need to refuel or charge at the end of the shift in order to be able to operate within that same range the following day or be on standby to meet public health and environmental emergencies. Therefore, refuse truck applications where the vehicle can return to base or utilize multiple hub operations are not suitable candidates for electrification, at least for the foreseeable future.

*Customized Vehicles*

Class 8 refuse vehicles (except for tractors) are specialized equipment, usually manufactured by companies that are not vertically integrated (i.e., the manufacturer that produces the drivetrain and chassis likely does not produce the body). This is typical of a lot of specialized truck manufacturing. Manufacturers work with third parties, including upfitters and dealers, who actually install vocational bodies to meet our members’ needs. The body elements are manufactured by a variety of companies and assembled based on the specifications of our members’ end uses. This process can make it exceedingly difficult, and expensive, to identify the proper engine/chassis/body configuration that will perform as required. Specialized equipment requires a great deal of coordination among the parties, and this contributes to issues associated with maintenance and troubleshooting problems with the equipment.

We hasten to add that Class 8 vocational refuse vehicles have general operational characteristics that are less favorable for electrification, typically with multiple types of unpredictable routes, greater concerns about payload, varied daily range needs, stop-and-go operations, and they return to multiple locations daily where they can be charged or fueled.

We submit that more detail is needed about individual fleets and how they dispatch services to better determine whether this concern about variable payloads could be managed when the percentage of ZEVs in the fleet may be relatively small. Without further study, it is unwise to assume it will all work as expected.

In addition, the uncertainty over the continuous availability of electricity and hydrogen for integrated solid waste management fleet deployments will possibly deter fleet owners from transitioning to ZEVs. Front line equipment must be available, and consistently reliable, at all times, otherwise the fleet operator risks being in default of their franchise agreement with the local agency. Guarantees of price stability and continuous availability from electric utilities and hydrogen suppliers are needed for greater confidence.

*Conflicting Environmental Policies*

Finally, we have communicated to several agencies our continuing concern that many of the state’s environmental policies do not reconcile well. Too often, air and water quality regulations may have the effect of actually constraining our ability to provide comprehensive waste recycling and composting services and the environmental benefits which they offer, including GHG emissions reductions. To be sure, the waste sector has a role to play in improving the air we breathe. Too often, however, the environmental benefit that accrues from waste recycling and composting activities is either overlooked or completely disregarded in our haste to pursue other environmental goals. This need not be the case. We can, and should, better align and harmonize ALL of our environmental policies at the federal, state and local levels.

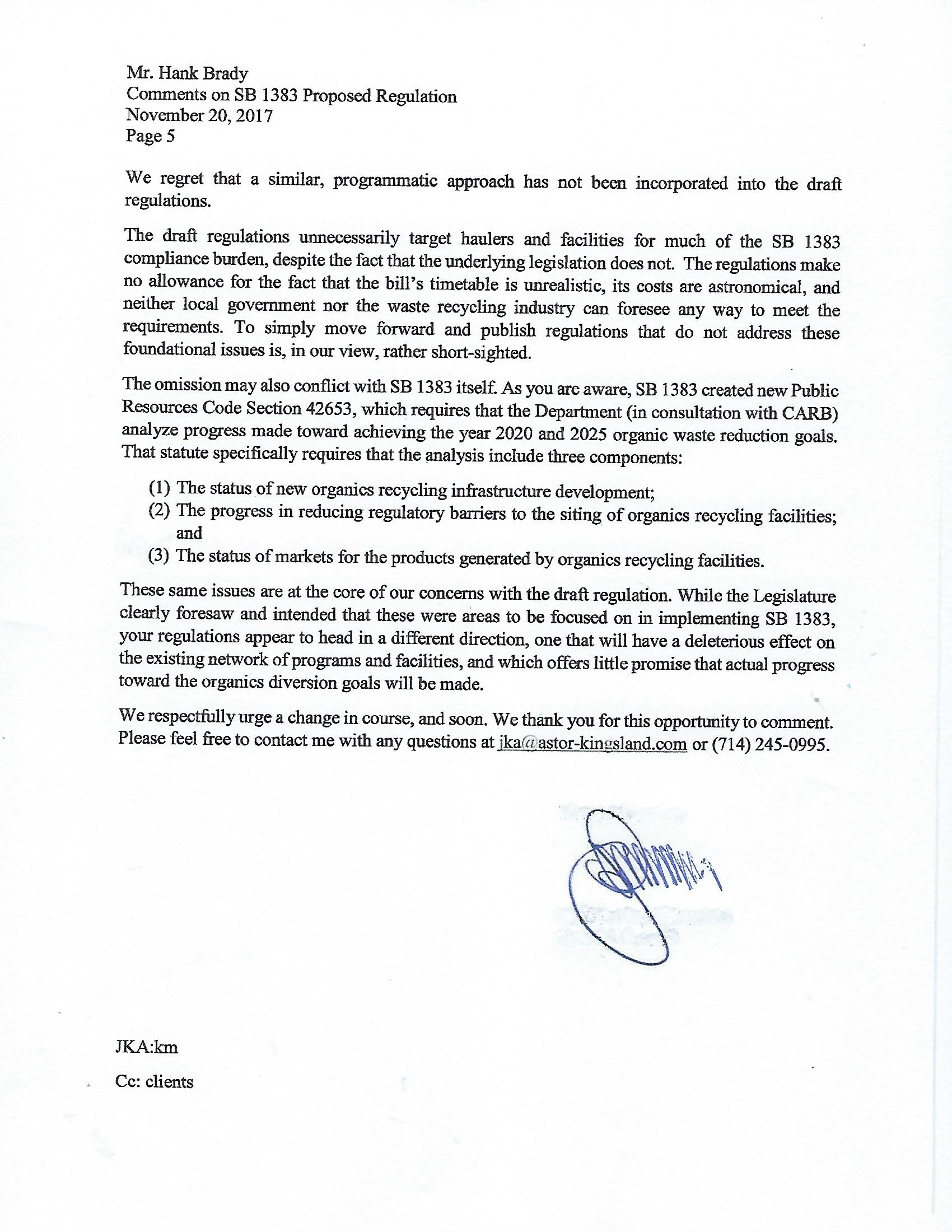
*Funding Needs*

We applaud the efforts being discussed at CARB to better align the funding programs with the needs of our sector, specifically in the Carl Moyer program. We encourage CARB to send a market signal supporting the current heavy-duty engines, or default to a dirtier technology could be the unfortunate outcome. During future discussions of the HVIP program, we will express our request for continued inclusion of low NOx vehicles. We also urge CARB to prioritize sending GHG funds to the waste sector since we are captive fleets that can lower GHG emissions and NOx now in our jurisdictions, especially in our most vulnerable communities.

We operate in and are partners with our disadvantaged communities throughout the Central Valley and Southern California. We have urged using the current tools available to address communities’ concerns and to “do no harm” to them from an environmental and health perspective. We request a tiered approach to future differentiated fleet regulation development and an alternative pathway for those entities we serve. We will remain on the local adopted 8-Hour Ozone SIP measures alternative pathways, for the inclusion of advanced clean diesel and alternative fuel low NOx engines and renewable fuels to complete our mandated tasks. It is important to stay the course with low NOx engines and renewable natural gas fuels until such time as our fleets can transition in the future to ZEV technologies that are street ready for the comprehensive daily delivery of services.

Thank you for the opportunity to comment on the proposed regulations. Please contact any of the undersigned if you have questions or to request further information. We stand ready to assist you and our local air districts in achieving the goals of the use of zero-emission vehicles.

Sincerely,



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Senator Nancy Skinner, California State Legislature

CRRC Southern District Board