

SOUTHERN DISTRICT

December 9, 2019

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: Comments on Proposed Advanced Clean Trucks Regulation and Draft Environmental Analysis Prepared for the Regulation**

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 a primary stakeholder that has invested and committed to the highest level of waste recycling, composting and anaerobic digestion, and we are proud of our significant contribution to our communities and the state’s environmental goals.

We are pleased to provide comments on the Proposed Advanced Clean Trucks (ACT) Regulation and Draft Environmental Analysis (Draft EA) prepared for this regulation. The ACT Regulation is of critical importance to the delivery of services in our communities and contributing to the advancement of the state’s laudable environmental objectives, both the immediate benefits and California’s long-term goals.

**DRAFT ENVIRONMENTAL ANALYSIS – COMPLIANCE RESPONSES**

First, we would like to address a few observations related to the Draft EA. The Draft EA makes clear that the [Proposed Advanced Clean Trucks Regulation](https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks) is intended to create environmental benefits related to greenhouse gas (GHG) reductions and air quality benefits. As integrated solid waste management services, including recycling, composting, anaerobic digestion, landfills, and export of recyclables, we approach this regulation through the myriad efforts underway. As we review the EA, we have determined that the Proposed ACT Regulation may actually trigger a number of compliance responses producing environmental impacts and unintended consequences.

For example, in complying with the current [State Implementation Plan](https://ww3.arb.ca.gov/planning/sip/sip.htm) (SIP), we will need to expand several efforts, including but not limited to the following

1. more facilities for natural gas and alternative diesel refueling,
2. increased demand for organics processing, recycling and composting services,
3. increased emissions testing of heavy-duty vehicles, and
4. increased complexities in the support of recyclables.

As a result, the near-term replacement of off-road and on-road vehicles will also increase, requiring that older models be sold outside of California or recycled. Consideration should be given to the environmental and fiscal impact that will increase costs for construction and operation of new integrated waste management facilities to support more organics processing, composting and recycling facilities. These new facilities will require readily available near zero-emission technologies and increased manufacturing of low NOx engines, along with future considerations for electrification. It is important to note that many of these facilities are needed in the very near future to accomplish the timelines established to divert more waste, including organics. These initiatives should be carefully considered, harmonized and incorporated in any environmental analysis.

Implementation of a Low Emission Diesel (LED) standard will also be necessary to increase consumption of LED fuels, including renewable diesel and/or compressed or liquefied renewable LED fuels from gas to liquid processing of biomethane. The infrastructure to support collection, processing and distribution of biomethane in the form of Renewable Natural Gas (RNG) will also be mandated and thus needs to be evaluated.

The contribution of the proposed ACT regulation compared to the significant cumulative impacts could be considerable, particularly given that the proposed regulations may themselves result in significant adverse effects on public service systems, including integrated waste management system mandates, recyclables export, increased vehicle trips (VT), more vehicle miles travelled (VMT), new source review (NSR), and permitting, to name a few.

The Proposed Draft EA has not fully factored all of the impacts, and we urge a more specific detailed look at the likely impacts on the state’s solid waste management system and current initiatives that need to be considered for this major regulatory directive. In considering the state’s solid waste management system, we seek careful consideration and expression of the many environmental benefits our programs currently provide and our continued commitment to advance the state’s ambitious environmental goals.

A few of those requirements include the mandates and policy objectives set forth in [AB 341](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120AB341) (2011) – 75% recycling goal and mandatory commercial recycling; [AB 1826](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB1826) (2014) – mandatory commercial recycling; [AB 1594](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB1594) (2014) – ADC no longer counts as recycling in measuring a jurisdiction’s annual 50% per capita disposal rate**;** [AB 901](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB901) (2015) – requires direct reporting of organics, recyclable materials and solid waste to CalRecycle; and [SB 1383](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383) (2016) – requires a 50% reduction of solid waste disposal by 2020 and 75% by 2025. Our solid waste management systems are essential public services, the support and sustained operation of which must be considered alongside achievement of the state’s varied air quality objectives, including GHG emissions reductions.

It should be noted that our members are part of the fabric of every jurisdiction in the state and are called upon for assistance in natural disasters and consistently are partners in our communities and their unique and varied environmental goals. It is imperative that we are able to respond in a timely and effective manner to assist in safeguarding public health and safety. We respectfully urge that these issues and our role be more thoroughly incorporated in both the Draft EA and the regulations, and we offer any assistance to such an effort.

**PROPOSED** [**ADVANCED CLEAN TRUCKS**](https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks) **RULEMAKING**

We submit the following comments on the draft regulation referenced above:

*ZEV Sale Requirements*

The waste industry has been transitioning from diesel to natural gas (NG)-powered vehicles. The transition began some 15 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.

*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 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.

*Truck Market Segment Analysis*

The expansion of the heavy-duty ZEV market is dependent on matching the suitability of zero-emission technologies with fleet operation needs. The [Truck and Engine Manufacturers Association](http://www.truckandenginemanufacturers.org/) (EMA) identified 87 truck market segments and 4 suitability factors to rank the compatibility of each market segment for electrification. CARB staff updated the suitability analysis this year (2019) to include the effects of legislation and other sources of truck operation data using quantitative methods to assign weighted suitability factors for each vehicle market segment.

Our association members reviewed the final [market segment and sustainability analysis](https://ww3.arb.ca.gov/regact/2019/act2019/appe.pdf) and found that the CARB staff analysis of suitability factors did not properly reflect the suitability weighting of Class 8 integrated solid waste management vehicles, including Class 8 heavy-duty tractors, identified in each of the appropriate 87 market segments, and this is a concerning misclassification. Some of the suitability factors that we find erroneous are the following:

1. Weight/Route/Range – Payloads, routes, weights, and ranges vary and are not routine in each segment and are under reported in this market assessment. Legislative changes such as [AB 341](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120AB341), [AB 876](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB876), [AB 1826](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1826), proposed [SB 1383](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383), pending command and control regulations, and unprecedented fluctuations in recycling and organics commodity markets have increased both VT and VMT.
2. In addition, the 2,000 lb. weight allowance provided by [AB 2061](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=199920000AB2061) is already being utilized by existing compliant NG fleets due to variability in payloads which advanced the legislative intent of the statute. It would be inaccurate to consider that weight allowance again to offset battery weight.
3. The market segment analysis does not account for ZEV model solid waste collection vehicles and transfer tractor availability, costs, site specific issues that could impact infrastructure installations, normal truck replacement rates, fleet size, duty cycles, nor other factors that impact the weighting of suitability for ZEVs that could be deployed in each integrated solid waste management sector.

In summary, we find the market segment and suitability analysis, and suitability scores of 1 or 2 for refuse or solid waste vehicles, to be dramatically overstated, and they should not be relied upon to support the transition of integrated solid waste management fleets to ZEV powertrains before 2027 or thereafter.

*Large Entity Reporting Requirements*

[Section 2012](https://ww3.arb.ca.gov/regact/2019/act2019/appa.pdf). Advanced Clean Trucks, Large Entity Reporting Requirement states the purpose of this section is to collect information to assess the suitability of zero emission vehicles in multiple use cases and to inform future strategies on how to accelerate the zero-emission market in California. In reviewing this section of the regulation, our members find that there are ambiguities in the section language that will lead to misleading or erroneous conclusions on how to accelerate the zero-emission vehicle market in multiple use cases. For example, refuse collection vehicles will be reported by entities with more than 100 refuse vehicles and, at the same time, local municipalities will report the same refuse collection vehicles as franchise contracted captive fleet vocational vehicles. Another situation might arise where a local municipality may have a franchise contract with a company that has less than 100 vehicles. In both cases the information will be skewed and/or double-counted.

Of general concern is the broad scope of data collection and the need to have further expression of the time frame for collection and the representative period of data collection. We always appreciate regulations providing more clarity in the definitions and descriptions, and we encourage further efforts in that regard in these regulations.

Other problems identified by our membership are that the facility categories, contracting practices, fleet mix, fueling infrastructure, and service delivery are internally inconsistent and do not match cross-agency policies and mandates. This lack of consistency and clarity will interfere with compliance obligations of our members with CalRecycle, the California Department of Food and Agriculture, the Governor’s Office of Planning and Research, the State Water Resources Control Board, the Department of Motor Vehicles, local air districts, etc.

*Near-Zero Limitation*

We are perplexed by why the regulation would narrowly interpret “near-zero” to apply only to plug-in hybrids with some “all-electric range,” eliminating low NOx vehicles as they greatly advance our environmental efforts and are contributing currently to air quality improvements in our air districts. To reiterate what we referenced above in the data collection discussion, it is imperative that definitions be clear and consistent. “Near-zero” has statutory meaning, as has been expressed in [SB 1403](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1403) (2018), and includes low NOx vehicles. Additionally, the near-zero definition is laced throughout regulations and state commissioned reports to include low NOx vehicles. We respectfully request the regulation emulate the current definition of near-zero.

*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.

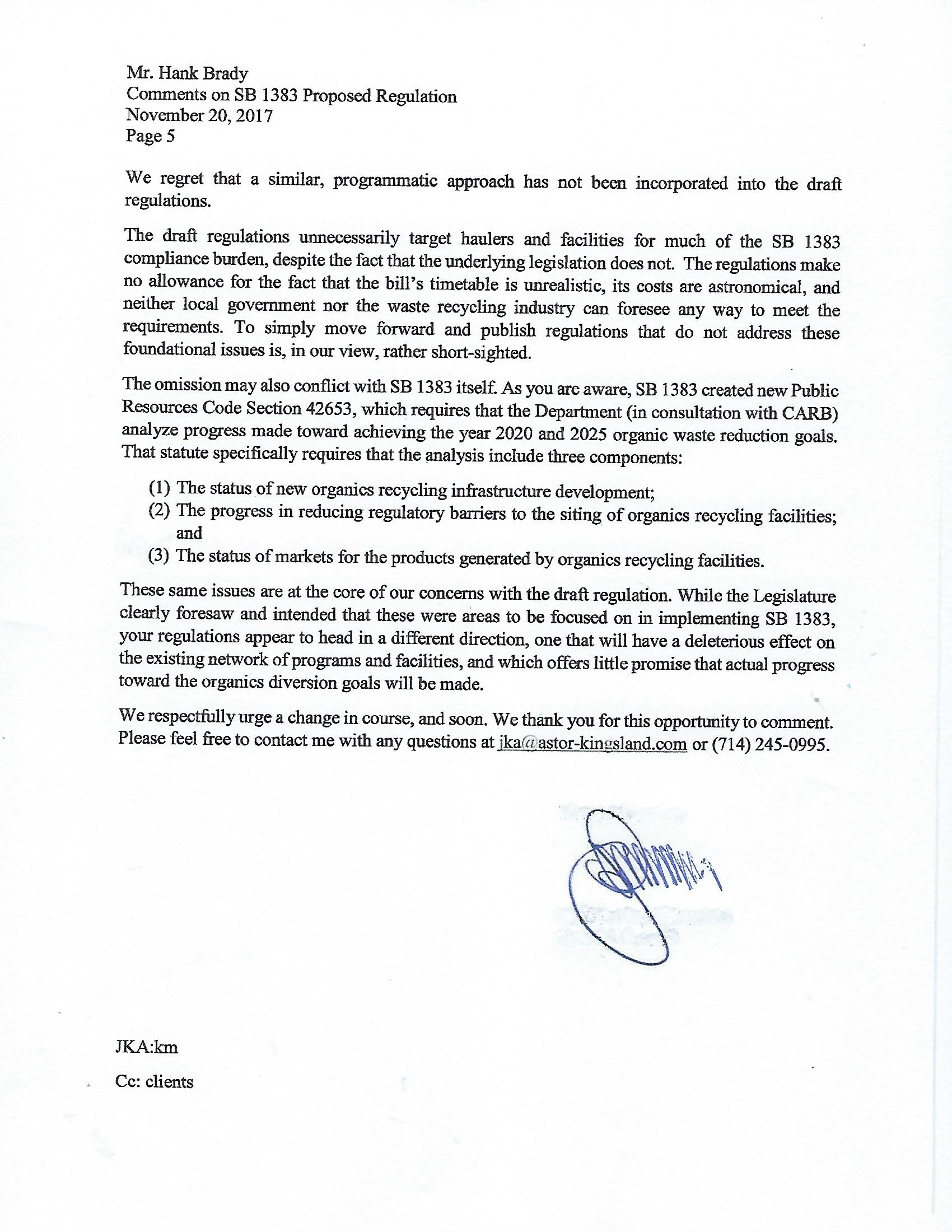
*Funding Needs*

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 the discussion of the HVIP program, we have expressed our request for continued inclusion of low NOx vehicles until a comparable transition can be made to a revised and improved Carl Moyer program. While those issues are complex, involving scrappage and working with U.S. Environmental Protection Agency to access SIP credit factors, it needs to be coupled with this regulation within the context of the goals. 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. Until that tiered approach is realized, we will continue 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 on this 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 Advanced Clean Truck Regulation.

Sincerely,



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CRRC Southern District Board