CALIFORNIA ASSOCIATION of SANITATION AGENCIES

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Submitted electronically via: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-meetings-and-workshops

Re: Comments on the July 7th Public Workshop where Staff Presented Potential Changes to the Low Carbon Fuel Standard (LCFS)

To Whom it May Concern:

The California Association of Sanitation Agencies (CASA) appreciates the opportunity to provide comments on the potential changes to the LCFS program. CASA is an association of local agencies performing essential public services – cleaning wastewater to protect public health and the environment while advancing community resilience through the recovery of renewable resources (water, energy, fuel, biosolids, nutrients, etc.). Through these efforts we help create a clean and sustainable environment for Californians.

Our members are focused on helping the state achieve carbon neutrality (and its current 2030 mandates and goals for greenhouse gas [GHG] emissions reductions) which include:

- Reducing short-lived climate pollutants (SLCP) by recycling diverted food waste from landfills
- Reducing carbon intensity of transportation fuel
- Providing 60 percent (later 100 percent) of the state's energy needs from renewable sources
- Increasing soil carbon and carbon sequestration by land applying biosolids in support of the Healthy Soils Initiative, Natural and Working Lands Climate Smart Strategy, and Wildfire and Forest Resilience Action Plan

Over 90 percent of California's wastewater solids are treated via anaerobic digestion (AD). AD is an integral component of the solids treatment process at publicly owned (wastewater) treatment works (POTWs) that produces renewable non-fossil fuel biogas (digester gas containing about 60 percent methane on average) and biosolids (an organic soil amendment meeting EPA and SWRCB requirements for land application). By utilizing these recoverable resources, we avoid wasting resources and help close the loop on the circular economy. We have a readily available and usable renewable, non-fossil low carbon biogas to produce renewable energy and heat to sustain critical POTW operations and for transportation fuel including for heavy-duty essential fleet vehicles; however, no single use is sufficient for all non-fossil fuel biogas produced today and in the future with SB 1383 implementation since there are regulatory limitations (discussed below). As quantified in the SWRCB's Co-Digestion Capacity Analysis (released by the Governor's office in August 2020), POTWs can utilize their available anaerobic digestion capacity to co-digest all divertible food waste across the state thereby removing a major source of fugitive methane from landfills (which account for about 20 percent of the state's methane). Utilizing co-digestion, California's POTWs will significantly increase biogas production.

Keeping in mind the existing production and potential significant future increases in renewable non-fossil fuel biogas production as a result of complying with Senate Bill 1383 regulations, our comments focus on the critical importance of its continued use – not only for ensuring that the essential public service of wastewater treatment continue to operate in all conditions, but to significantly increase community resilience through the recovery of natural resources instead of wasting them!

We ask that the following comments be given strong consideration by CARB staff (and associated state agencies) to prioritize resilient essential public service operations while achieving carbon neutrality and environmental justice. Our comments are focused on the July 7th Staff Presentation and address key issues raised within the questions posed to stakeholders:

- Prioritizing fuels that reduce SLCPs to meet SB 1383 requirements
- Aligning with transportation and equity objectives
- Establishing 5-year interim targets between 2030 and 2045

Prioritize Fuels that Reduce SLCPs to meet SB 1383 Mandates and Support Essential Public Services

Senate Bill 1383 (SB 1383) requires reductions in SLCP emissions, 40 percent reduction in methane and a 50 percent reduction in anthropogenic black carbon by 2030. As CARB's SLCP Reduction Strategy states, "The science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants (SLCPs)."

CASA strongly supports the continued incentive for production of low carbon fuel, prioritizing those that provide direct benefits to public health and that reduce SLCP emissions to help meet the requirements of SB 1383. A pillar of the 2017 Scoping Plan Update (SPU) is the SLCP Reduction Strategy, targeting landfill methane emission reductions. SB 1383 requires organic waste be diverted to anaerobic digesters or compost[1] facilities. The SWRCB estimates existing POTW anaerobic digester capacity can accept all divertible food waste, which can produce up to 29 billion standard cubic feet of renewable wastewater-derived non-fossil fuel biogas. Adding this to what is produced from municipal sludge digestion results in about 87 million diesel gallon equivalents (or about 575 million truck-miles each year). Converting this biogas to a low carbon transportation fuel helps clean the air by eliminating diesel particulate emissions, lowering nitrogen oxide (NOx) emissions[2], and creating a potentially carbon negative fuel. Since managing diverted organic waste and producing energy or fuel is not the core mission of wastewater treatment, it is imperative that markets exist for the products of diversion and that they be at least cost neutral. The ability to use our renewable biogas as a low carbon vehicle fuel creates a market which is critical to the successful diversion of landfilled food waste to POTWs and, in turn, methane emission reductions at landfills. It should be noted that further processing this fuel to hydrogen (as suggested during the workshop) is an evolving technologic process and will likely increase the CI score (as indicated in staff's chart of CI Values of Certified Pathways. Additionally, converting biogas into hydrogen can be challenging and is not currently commercially viable. CASA recommends staff work closely with the wastewater sector to perform the life cycle assessment to determine the net carbon (and cost) impact of further processing the already low carbon fuel to a hydrogen fuel.

Alignment with Transportation and Equity Objectives

[1] Due to Clean Air Act limitations, expanding existing or siting new compost facilities will be extremely limited. Accordingly, utilizing existing AD facilities will be critical for California to achieve the methane reduction goals specified in SB 1383.

[2] CASA recommends the use of N-ZEV RNG engines (0.02 g/bhp-hr) to reduce NOx emissions.

The Governor's Executive Order N-79-20 states regulations must be "… ***consistent with state and federal law***…" and implemented "…***where feasible***…" Our members are already required to invest in compressed natural gas (CNG) fueled vehicles and infrastructure by various regulatory requirements, including SCAQMD Rule 1196. Furthermore, the Clean Air Act (CAA) requires the South Coast air basin, which is in extreme non-attainment for ozone, to come into compliance by 2023 via NOx reductions. Table 8 of CARB's October 28, 2021, Mobile Source Strategy shows that only 7.9 tons per day of NOx reductions will be achieved in the South Coast Air Basin by 2023, which is about 100 tons per day less than required. For those in violation, the CAA Sections 179 and 185 allow the USEPA to withhold federal highway funding, increase offsetting requirements, and impose an annual penalty on major stationary sources (some public WWTPs estimated the penalty to exceed $1,000,000 per year).

Additionally, the draft Advanced Clean Fleet (ACF) public fleet regulations only consider zero emission vehicles (ZEVs) for POTWs, since the definition of near-zero emission vehicles (N-ZEVs) in the regulation does not consider renewable CNG vehicles to be N-ZEV.[3] Our members have attempted to purchase ZEVs, but manufacturers are unable to deliver electric medium- and heavy-duty trucks specific to WWTP needs and have stated in bids they will be unavailable for years to come. The question of feasibility is critical – heavy-duty ZEVs used for essential public services are not commercially available and will not be for years, nor will they provide the level of service and reliability of existing heavy-duty N-ZEVs fueled with wastewater derived non-fossil fuel biogas.[4] These issues, if not addressed, will incentivize the continued use of diesel trucks which will exacerbate air quality issues and result in significant stranded assets for POTWs who have invested in N-ZEVs which operate on their non-fossil fuel biogas.

Finally, California POTWs have very limited experience with producing hydrogen from biogas for use as a transportation fuel. Considering this option necessitates funding to support researching geographically diverse demonstration projects to vet the viability supporting essential public services. The fact is N-ZEVs are available today to provide continued essential public services while achieving NO_x reductions to protect public health.

CASA urges CARB staff to coordinate across Scoping Plan programs, including the developing ACF regulatory language, to be in compliance with existing regulations (per the Governor's Executive Order N-79-20) to reduce NO_x while achieving carbon neutrality. Such an approach would not only improve the overall resilience of our state's essential public services and communities but would also accelerate these clean air efforts for all.

Establish 5-year Interim Targets beginning 2030 through 2045 to Ensure Implementation

The LCFS has helped diversify vehicle fuels in California to meet emission reductions while maintaining a reliable fleet of vehicles supporting the world's fifth largest economy. The LCFS is not currently on track to meet the state's 2030 and 2045 climate mandates. While CASA supports setting interim targets to provide benchmarks for market development and certainty, we recommend they continue to be statewide since individual project timelines may require more than five years to implement and

[3] The draft ACF language states that "Near-zero-emissions vehicle" or "NZEV" means a vehicle as defined in title 13, CCR section 1963(c)(16), i.e.: An on-road plug-in hybrid electric vehicle which has the same definition as that in 40 CFR section 86.1803-01, amended on July 1, 2011, OR an on-road hybrid electric vehicle that has the capability to charge the battery from an off-vehicle conductive or inductive electric source and achieves all-electric range as defined in section 1963(c)(1).

[4] The 200-Vehicle Project, which has not concluded, is a collaboration between the CEC and CARB in response to a request by SCAQMD to "identify technology benefits and shortfalls, feed information into future research and development opportunities, aid future regulation development and improve emissions inventory estimates" for heavy-duty vehicles. However, SCAQMD has noted that a Fact Sheet produced by CARB /CEC presenting preliminary results without proper context is being used as the basis for guidance in developing language within the SPU and draft ACF regulation. CASA strongly recommends waiting for final (vetted) results before drawing conclusions or drafting any policies or regulations on the effectiveness NZEVs fueled by renewable biogas.

become operational. This will continue to allow for projects sited at a POTW to fully participate and contribute to the targets.

Please contact me with any questions at sdeslauriers@carollo.com or at 925-705-6404. We are ready to work closely and collaboratively with you on this critical effort while reliably maintaining essential public and emergency services for all communities under all conditions.

Sincerely,

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Climate Change Program Manager

cc: Liane Randolph – Chair, CARB
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