City Council
311 Vernon Street
Roseville, California 95678

May 28, 2020

The Honorable Mary Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments on the 30-day Notice for the Amendments to the Proposed Advanced Clean Trucks Regulation

Dear Chair Nichols:

Thank you for the opportunity to comment on the proposed Advanced Clean Trucks (ACT) Regulation. The City of Roseville Environmental Utilities Department (Roseville) provides water, wastewater, recycled water, waste services, and stormwater services for residential, commercial and industrial customers. Having all services under one integrated utility service allows us to be innovative and cost efficient because we can manage all utilities in coordination and partner to create synergies amongst all utility services.

Roseville operates a solid waste heavy-duty fleet of 50 vehicles of which 8 are currently powered by natural gas. Roseville is investing heavily in renewable natural gas (RNG) production and fueling infrastructure for use as a cleaner transportation fuel in order to transition the remainder of our solid waste fleet to RNG by 2025. We believe that the combination of near-zero NOx engines and renewable natural gas deserves recognition and credit within the proposed ACT regulation. Attached is a copy of the $28 million Roseville Waste-to-RNG story.

Background
Roseville collects our own refuse, recyclables and organic wastes and operates our wastewater treatment plant as one integrated utility. We understand the importance of state mandates to recycle more, clean the air, and reduce greenhouse gases and have responded responsibly. We are transitioning our fleet from diesel to natural gas vehicles and will spend over $4 Million on vehicles and maintenance facility upgrades alone. We have also planned for SB 1383 compliance by reducing short-lived climate pollutants (SLCP) by using our own waste stream to co-digest at our wastewater treatment plant to produce 267,000 diesel gallon equivalents per year of renewable natural gas to fuel our CNG solid waste fleet.

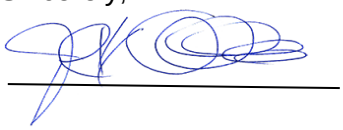
In 2018, Roseville received a $3 million grant from the California Energy Commission towards our $28 million dollar investment to expand our anaerobic digester capacity that is planned to last over the next 30 years. Attached is the Executive Summary of our project where Roseville plans to stay the course of fueling our CNG solid waste fleet with our own waste stream for the next 30 years. Now is not the time to radically upset this carbon reduction strategy with over $50 million invested in our local circular economy.

Proposed Amendments
Several municipalities have made significant early investments and built the infrastructure to close the loop on their waste stream through use in their heavy-duty fleets. We propose allowing this compliance

pathway for entities in direct control of solid waste or wastewater treatment with obligations under the SLCP strategy to mitigate through conversion to biomethane for use in their fleet. The City of Roseville and other municipalities are in a unique position to use these low and even negative carbon fuels to substantially clean up the emissions of their fleets and overall carbon footprint of their communities.

In closing, we thank you for consideration of these comments and the City of Roseville stands ready as a local example for CARB members and staff to coordinate follow up visits so we may demonstrate both our accomplishments to date and assist you in reaching policy conclusions that validate and protect our investments in cleaner air for our residents and the region. If you or your staff have any questions, please contact Noelle Mattock at 916-297-2177 or ncmattock@roseville.ca.us.

Sincerely,



John B. Allard II,
Mayor

cc: Senator Jim Nielsen
Assembly Member Kevin Kiley
Jason Gonsalves, Joe A. Gonsalves and Son
Kendra Daijogo, The Gualco Group, Inc.

City of Roseville
Waste-to-RNG Facility

The City of Roseville, California, owns and operates two wastewater treatment plants (WWTP) on behalf of the South Placer Wastewater Authority (SPWA) and its partner agencies. The SPWA serves more than 250,000 residents in Placer County. The proposed Energy Recovery Project (ERP) will be installed at Roseville's Pleasant Grove WWTP (PGWWTP), which currently treats up to 10 million gallons of wastewater per day, protects local streams and rivers, and provides recycled water back to the community.

The PGWWTP needs to be expanded to accommodate future population growth in Roseville and surrounding areas. In addition to increasing the treatment capacity, the plant expansion will add anaerobic digesters to stabilize wastewater solids and generate a biosolids product that is suitable for beneficial use rather than landfilling as currently practiced.

The City faces a unique opportunity: adding new anaerobic digesters to its PGWWTP at a time when regulations and grant funding opportunities are focused on driving organic waste toward such facilities while also incentivizing the use of digester gas for renewable energy and fuels. In the face of this opportunity, the City, on behalf of the SPWA, initiated a project to evaluate the best uses of its new source of digester gas and to capitalize on the new digestion process by co-digesting high- strength organic wastes. For this evaluation, the City chose to partner with Brown and Caldwell, an experienced environmental engineering firm with a specialty in municipal digester gas utilization projects. The result of this evaluation is the ERP – an ambitious and innovative renewable biofuels production facility.

The City's ERP will condition and upgrade digester gas generated in anaerobic digesters to produce vehicle fuel for a City-owned solid waste truck fleet. The system is comprised of several components:

High Strength Waste Receiving Facility

By accepting organic high strength waste streams directly into the plant's anaerobic digesters, this facility will serve the community by diverting up to 5,000,000 gallons of organic waste per year in support of SB1383. This waste feedstock, in addition to municipal wastewater solids, will serve to increase digester gas production. Organics diverted from landfills will decrease fugitive emission of methane, a short-term climate pollutant, as well as provide a more local destination for trucked waste, which will in turn reduce fossil fuel usage and criteria pollutant generation through shorter trips. As

detailed in the Letter of Support from SRC Companies, the supply of high strength wastes in the local area is substantial.

Biofuel Production

The ERP 's biogas conditioning and upgrading facility will have a production capacity of 267,000 diesel gallon equivalents (DGE) per year. By partnering with equipment supplier Unison Solutions, the project will use the BioCNG membrane separation technology to upgrade digester gas to vehicle fuel quality renewable natural gas (RNG). Unison will also provide digester gas conditioning equipment to remove contaminants typically found in gas from a municipal anaerobic digester, such as hydrogen sulfide, siloxanes, and volatile organic compounds.

Cogeneration from Tail Gas

The process that separates carbon dioxide from methane in digester gas produces a rejected stream of gas – also called tail gas – that must be treated. Instead of flaring this gas as is typically done, the ERP system incorporates microturbine cogeneration units that will utilize the tailgas as a fuel supply. These microturbines will produce electricity to help power the gas upgrading equipment as well as heat for the anaerobic digester process. As part of the City's commitment to maximizing its beneficial use of biogas, this system will push the boundaries of fully utilizing portions of biogas production that may otherwise be wasted.

Onsite Fueling of Solid Waste Truck Fleet

The City of Roseville's Refuse and Stormwater Division owns and operates a solid waste collections fleet for the Roseville community. The City's Wastewater Division, which owns and operates the PGWWTP, has negotiated a long-term fuel offtake agreement for all the RNG that will be produced as part of the ERP. RNG will be delivered to the vehicles at a new onsite compressed natural gas (CNG) fueling facility that includes compressors, storage vessels, and fuel dispensers. In anticipation of facility's completion, the truck fleet is being converted from diesel fuel to CNG fuel. Switching from diesel fuel to renewable CNG will reduce greenhouse gas emissions by approximately 3,655 metric tons of CO2 equivalents per year and will reduce NOx emission by 5 metric tons per year at project build-out.

With support from the California Energy Commission (CEC), the ERP will produce some astounding financial and environmental benefits:

- Renewable fuel with a Carbon Intensity of 0 g CO2e/MJ, based on consultation with the California Air Resources Board
- Grant Funding Cost Effectiveness per GHG Reduction of $35/MTCO2e reduced over a 30- year project lifetime
- Grant Funding Cost Effectiveness per DGE of $0.48/DGE over a 30-year project lifetime
- Creation of 27 temporary construction jobs and 4 permanent full-time City staff
- 30-year production of over 6 million DGE of renewable biofuel

Municipal wastewater facilities represent a largely untapped resource to support California's Low Carbon Fuel Standard and the Governor's Executive Order goal for Carbon Neutrality by 2045. The City of Roseville will help lead the way forward by choosing to embrace this new application of gas upgrading technologies, unfamiliar credit and incentive marketplaces, and the uncertainty of being on the innovative edge in the municipal wastewater industry. By helping to support the City's ERP, the CEC will not only support a worthy and well-conceived project, but also the development of renewable vehicle fuel as a proven opportunity for the entire municipal wastewater sector. We thank you for your consideration, and please do not hesitate to reach out to our team with any questions.