From the ports of California to the Great Central Valley, a network of renewable natural gas (RNG) production facilities and RNG fueling stations for near-zero NOx heavy-duty recycling vehicles that haul organics should be funded to de-carbonize the fuels and the fleets now. Getting the fossil out of the fuel with near-zero NOx emission engines, using carbon negative fuel produced from zero waste at net-zero facilities, should receive priority incentives from cap-and-trade proceeds. The technology is commercially available, proven, and can provide significant GHG and NOx reductions now while mitigating methane at landfills and creating organic compost to help zero out the use of pesticides and petroleum-based fertilizers. With incentive investment of $100 million per year in these facilities and investment of $100 million year in these clean fleets, California communities can experience significant benefits by 2020. These community-scale anaerobic digestion and compost systems have been determined to be among the most cost-effective GHG reduction strategies, with 100% of the CalRecycle grants from cap-and-trade proceeds having benefited disadvantaged communities (DACs). The California Legislative Analyst’s Office determined the cost of organic recycling grants to be at just $9/ton of GHG re¬duction while the overall average is $57/ton. Incentives for electrification and modernization of public fleets in DACs is costing $414/ton to $725/ton. CalEnviroScreen Methodology: CalEnviroScreen is used to help identify California communities that are disproportionately burdened by multiple sources of pollution. Disadvantaged communities in California are specifically targeted for investment of proceeds from the State’s cap-and-trade program. Cal EPA designated the top 25 percent of census tracts in CalEnviroScreen 3.0 as disadvantaged communities for the purpose of investing cap-and-trade proceeds while the overall average is $57/ton. Incentives for electrification and modernization of public fleets in DACs is costing $414/ton to $725/ton. The Short-Lived Climate Pollutant Plan (SLCP) was adopted on March 23, 2017 and the SB 32 Scoping Plan Update with 2030 goals may be considered by CARB on June 29, 2017. The community-scale anaerobic digestion facilities model (see graphic on page 4) is at the intersection of the SLCP, SB 32, and the Governor’s Five Pillars where the RNG produced at these anaerobic digestion facilities has been deemed to be carbon negative and – when utilized in CNG trucks with the near-zero emissions – will be a game changer today by reducing heavy duty diesel emissions now while striving for zero waste. Another huge game changer is the Federal EPA Food Recovery Hierarchy striving to feed hungry people first where CalRecycle and the industry have embraced programs coupled with AB 1826 outreach. SB 1383 will require that 20% of edible food be recovered by 2025 resulting in 45,500 tons that year being rescued, or 270,000 pounds resulting in 225,000 meals per day. CalRecycle will be awarding grants of over $1 million in August as part of the organics infrastructure grants and another $5 million has just been noticed, which will benefit DACs 100%. Back to the Future is now as the heavy-duty refuse fleet can be transformed in the short-term to address SLCPs (such as methane) and produce RNG, as heavy-duty electricification is still a generation away. The refuse industry is doing the heavy lifting now on heavy-duty vehicle deployment that will need to be further recognized and funded by CARB as the transformation of the industry to reduce reliance on diesel, landfills, NOx, and pesticides is expensive. Being a Zero Hero is not cheap and incentive funding is needed to benefit the community that fully utilizes their own waste for their own good.

Readvantaging Community-Scale Systems
Through Sustainable Facility, Fuel, Fleet, Feedstocks and Farming

The Net-Zero Facilities in the recycling sector including material recovery facilities processing recyclable materials, compost facilities, anaerobic digestion facilities, and biomass conversion facilities. The new composting facilities are covered aerated static pile systems using the best available control technologies and the anaerobic digestion facilities are enclosed closed-loop system without high temperature incineration. The avoided GHG emissions from these facilities compared to landfilling fully offset the project emissions including collection, hauling, processing activities and the landfilling of residuals. Landfills and garbage transfer stations are in the waste sector and are not Net-Zero Facilities.

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