The true Power of Organics lies in the conversion of food waste and green waste via anaerobic digestion (AD) to a biomethane that can be transformed into a carbon negative renewable natural gas (RNG). The value proposition is for biomethane to go to a heavy-duty tank outfitted with the near-zero NOx engine, and not necessarily compete against solar and wind going to the grid. SB 1383 requires a 75 percent reduction of all organics from landfills by 2025 to mitigate methane, a short-lived climate pollutant. The California Air Resources Board, together with the California Energy Commission and CalRecycle, should be planning to further develop these AD facilities to harness this potential biomethane and develop a low carbon infrastructure with facility grants, fuel production incentives, and fleet vouchers. This is a near-term heavy-duty answer to short-lived methane pollution and achieves near-zero NOx emissions that can benefit disadvantage communities (DACs) now.

The California Communities Environmental Health Screening Tool (CalEnviroScreen) uses environmental, health, and socioeconomic information to produce scores for every census tract in the State. CalEnviroScreen helps identify California communities that are most affected by many sources of pollution and helps identify where people are often especially vulnerable to pollution’s effects. The scores are mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores, as shown in the centerfold graphics, ranging from the high impact red at a 91% to 100% to the lower impact green at 0% to 10%, where the results above 75% are considered a DACs.

The recently released 2018 Annual Report on the Cap-and-Trade Proceeds tracked benefits to DACs where SB 535 required that at least 25% of the proceeds fund projects that benefit DACs, and that at least 10% of the proceeds fund projects that are located within and that benefit DACs. As of November 2017, with over $2 billion implemented, the SB 535 goals have been far surpassed with 51% of the funds benefitting DAC, 31% are located within the DACs, and 98% of the DACs have projects located within them. CalRecycle’s Organic Grants are acknowledged as one of the most cost-effective programs and show a 100% benefit to DACs.

Biomethane is a component of California’s Low Carbon Fuel Standard Program, which is intended to lower the greenhouse gas emissions. Within the Low Carbon Fuel Standard Program, the carbon intensity of “High Solids Anaerobic Digestion” is considered negative, meaning that it “displaces” more greenhouse gas emissions than it generates and has a default value of minus 22.9 g CO2e/MJ, carbon intensity (CI) and can be further reduced by site specific metrics. Fuels such as this are referred to as “carbon negative” and can be purchased by producers to reduce the overall carbon intensity of their products to levels required by the Low Carbon Fuel Standard, which requires a 10% reduction in CI by 2020 and 18% reduction in CI by 2030.

The solid waste and recycling industry of 15,000 heavy-duty vehicles uses about 150 million gallons of fuel per year. The Edgar Institute has projected that 80 percent of the industry’s heavy-duty fleets have the potential to upgrade to CNG near-zero engines by 2025. We have worked tirelessly for years to educate CARB and fund this low carbon infrastructure, using millions in Cap-and-Trade revenue to provide grants for the difference in the cost of the CNG Class 7 and Class 8 trucks – now with the near-zero NOx engines – over diesel trucks, which varies up to $10,000 to $60,000 per truck. We can vouch for it!
Near-Zero Counts with Heavy-Duty Trucks and NOx

The Administration and the Legislature have many accomplishments that chart the course to a low-carbon future for California. Last July, Governor Brown signed landmark legislation extending and improving the State’s Cap-and-Trade program with AB 398 and establishing a groundbreaking program to measure and combat air pollution at the neighborhood level with AB 617. In recent years, the Governor has signed legislation establishing ambitious and enforceable greenhouse gas (GHG) emission reduction targets; setting the nation’s toughest restrictions on short-lived climate pollutants with SB 1383, directing Cap-and-Trade funds to GHG-reducing programs that benefit disadvantaged communities with AB 1550, supporting clean transportation and protecting natural ecosystems, and requiring the State to generate half of its electricity from renewable sources by 2030 and double the rate of energy efficiency savings in buildings.

Governor Brown released his proposed spending plan in January for Cap-and-Trade revenues for the 2018-19 fiscal year. The plan would allocate $1.25 billion in Cap-and-Trade revenues. The bioenergy related funding categories in the Governor’s proposal are:

- $435 million to the Air Resources Board for clean vehicles funding
- $20 million to CalRecycle for waste diversion
- $25 million to the CEC for low carbon fuels production
- $99 million for dairy methane reduction
- $140 million for climate smart agriculture

The Governor’s proposed Cap-and-Trade spending plan for CalRecycle’s funding is just $20 million, after receiving $24 million last year for A list compost and anaerobic digestion projects, and another $40 million for B List projects. AB 1933 (Maienschein) would increase that amount to $200 million to fund CalRecycle for organic waste recycling infrastructure projects that reduce greenhouse gas emissions. According to the recently released 2018 Annual Report on the Cap-and-Trade Proceeds, compost and anaerobic digestion continues to be the most cost-effective GHG program, while the grants awarded by CalRecycle continue to show that disadvantaged communities (DAC) are receiving benefits or co-benefits 100% of the time.

The Governor also issued an Executive Order calling for 5 million Zero Emission Vehicles to be on the road by 2030. CARB Chair, Mary Nichols stated that the State will continue to support low carbon fuels, but they are ‘redoubling’ their efforts to get zero emission vehicles (ZEVs) on the road. When it comes to heavy-duty vehicles, you would think that CARB and the environmental community would readily embrace near-zero NOx engines, running on carbon negative renewable natural gas and include these near-zero emission vehicles (NZEV) in the ZEV funding. Instead, there is a constant play over the years to not prioritize heavy-duty NZEV funding, not fully recognizing the near-term benefits of reducing short-lived climate pollutants by utilizing biomethane as a transportation fuel. The CARB Workshop last week on the Fiscal Year 2018-19 Funding Plan alludes to a balanced portfolio, with some promise to deliver.

Legislation is being proposed with AB 2506 (Burke) to define near-zero emissions vehicles (NZEV) and include them in current state procurement laws to purchase ZEVs and with AB 2016 (Frazier) to allow NZEV weight limit exemptions. Zero emission vehicles running on batteries are not zero emissions on a life cycle basis, but NZEV can be carbon negative and be near-zero on NOx. We are constantly working with the Legislature and reminding CARB that the Cap-and-Trade funds should fund lower carbon transportation vehicles with these air quality benefits, which can clearly benefit disadvantaged communities (DAC). Close only counts in horseshoes and hand grenades, but near-zero needs to count in getting Cap-and-Trade funding for heavy-duty vehicles and near-zero NOx engines.

Bill Watch

**AB 2061 (Frazier)**

**TOPIC:** This bill would authorize a near-zero-emission vehicle (CNG trucks with the new near-zero NOx engines) or a zero-emission vehicle to exceed axle, tandem, gross, or bridge formula weight limits, up to a 2,000 pound maximum, by an amount equal to the difference between the weight of the vehicle attributable to the fueling and propulsion system carried by that vehicle and the weight of a comparable diesel fueling and propulsion system.

**STATUS:** Do pass on 12-0 with 2 abstaining from Assembly Transportation Committee on March 19 and be re-referred to the Committee on Appropriations

**AB 2506 (Burke)**

**TOPIC:** State vehicle fleet: near-zero-emission vehicles. Existing law requires beginning December 31, 2025, at least 15% of newly purchased vehicles with a gross vehicle weight rating of 19,000 pounds or more be purchased by the Department of General Services and other state entities for the state fleet to be zero emission, and beginning December 31, 2030, at least 30% of those vehicles to be zero emission. This bill would additionally require, beginning January 1, 2020, at least 30% of newly purchased vehicles with a gross vehicle weight rating of 19,000 pounds or more purchased by the department and other state entities for the state fleet to be near-zero emission (CNG trucks with the new near-zero NOx engines).

**STATUS:** Referred to ASM Accountability and Administrative Review

**AB 2411 (McCarty)**

**TOPIC:** State Agency Buy Recycled Campaign: compost. This bill would require each state agency to ensure that, on and after January 1, 2020, at least 50% of reportable purchases of soil or similar products are compost.

**STATUS:** Referred to ASM Accountability and Administrative Review

**AB 1970 (Eduardo Garcia)**

**TOPIC:** Low-carbon fuels. This bill would require CARB, CEC, CalRecycle, and the CDFA to allocate an unspecified percentage of moneys for fuels and methane mitigation appropriated by the Legislature to those agencies for the development of innovative low-carbon fuels.

**STATUS:** Re-referred to Assembly Natural Resources Committee
Deploying a Near-Zero NOx Fleet Running on Carbon Negative Fuel Produced at Net-Zero GHG Facilities

A 30,000 ton per year anaerobic digestion to renewable material gas (AD-to-RNG) project can be designed without a PUC pipeline as a community-scale model, and can serve a population of approximately 100,000 people. This model can produce 400,000 diesel gallon equivalents per year of RNG with a default carbon intensity of at least negative 22.9 g CO2e/MJ, and could file for a site specific intensity as low as negative 105 g CO2e/MJ, for a fleet of 50 heavy-duty trucks. The solid waste and recycling industry of 15,000 heavy-duty vehicles uses about 150 million gallons per year of fuel and can produce its own fuel.

The CEC found this business model attractive where the franchised organic feedstocks are taken to an AD facility co-located where the captive fleet is parked and fueled, in a community-scale system that could be replicated throughout California. CCC and CleanFleets.net co-authored a white paper for the CEC, "Biomethane Transportation Fuel: Powering the Solid Waste Industry: Community-Scale Distributed Fuel Production Facilities".

CARB is beginning to understand that this community-scale model is at the intersection of AB 32, SB 32, and the Governor’s Five Pillars that California will: (Pillar 1) reduce today’s petroleum use in cars and trucks by up to 50%; (Pillar 2) increase from one-third to 50% of our electricity derived from renewable sources; (Pillar 3) double the efficiency savings from existing buildings and make heating fuels cleaner; (Pillar 4) reduce the release of methane which includes diverting organics from the landfill by 2025; and (Pillar 5) manage farms, rangelands, forests, and wetlands so that they can use compost and store carbon. Organic power has been deemed the most cost-effective GHG reduction strategy that bonds all Five Pillars together and 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 approximately 49,500 tons that year being rescued, or 270,000 pounds resulting in 225,000 meals per day. CalRecycle awarded $575,000 as part of the organics infrastructure grants and another $4.4 million was just awarded for the food waste prevention and reuse grants, which will benefit DACs.

Cummins Westport Receives 2018 Emissions Certifications for ISX12N Natural Gas Engines

Cummins Westport Inc. (“CWI”) announced in early January 2018 that it has received certifications from both the U.S. EPA and CARB for its 2018 ISX12N natural gas engine. Like the Cummins Westport L9 engine, the ISX12N meets California ARB optional Low NOx standard of 0.02 g/bhp-hr, a 90% reduction from engines operating at the current EPA NOx limit of 0.2 g/bhp-hr. The ISX12N also meets 2017 EPA GHG requirements.

CWI is proud to continue its legacy of emissions-leading products with all 2018 engines now certified to CARB optional Low NOx standards. The ISX12N is the first Class 8 truck engine for larger heavy-duty vehicles to certify to the 0.02 g/bhp-hr optional standard, providing the trucking industry with a near-zero emissions solution today.


All CWI engines offer customers the choice of using compressed natural gas (“CNG”), liquefied natural gas (“LNG”), or renewable natural gas (“RNG”) as a fuel. RNG is pipeline-quality natural gas produced from the decomposition of organic waste, which can come from a variety of sources such as dairy farms, landfills, and urban waste treatment plants. Combining Cummins Westport’s ultra-low emission engines with RNG fuel provides additional and significant GHG reductions.
**Zero Net Emissions through Sustainable Facility, Fuel, Fleet, Feedstocks & Farming**

**Offteil**

**Knock off NOx**

**Off Landfills**

**Off Pesticides**

**Greening Your Community**

The Short-Lived Climate Pollutant Plan (SLCP) was adopted on March 23, 2017, and the SB 32 Scoping Plan Update with 2030 goals is being considered by CARB on June 23, 2017. The community-scale anaerobic digestion facilities model is at the intersection of the SLCP, SB 32, and the Governor’s Five Pillars that California will: (Pillar 1) reduce today’s petroleum use in cars and trucks by up to 50%; (Pillar 2) increase from one-third to 50% our electricity derived from renewable sources; (Pillar 3) double the efficiency savings from existing buildings; (Pillar 4) reduce the release of methane which includes diverting organic waste from the landfill by 2025; and (Pillar 5) manage farms, rangelands, forests and wetlands so that they can use compost and store carbon. RNG produced at these anaerobic digestion (AD) 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. The digestate can be composted to produce organic materials to reduce pesticide and fertilizer use to improve healthy soils. A 25,000 ton per year, or 100 tons per day, AD-to-RNG project is designed as a community-scale model, and can serve a population of approximately 100,000 people. This model can produce 333,000 diesel gallon equivalents per year of RNG with a carbon intensity of negative 22.9 g CO2e/MJ for a fleet of 45 heavy-duty trucks with near-zero NOx emissions.

**Community-Scale Carbon Neutral Near Zero Emissions at Net-Zero Facilities**

The California Communities Environmental Health Screening Tool (CalEnviroScreen) helps us to address environmental threats challenges. The objective in developing this tool is to use it to assist California communities by directing state and potentially local government resources toward a common purpose: the revitalization of disadvantaged communities and the pursuit of environmental justice. Cap-and-trade proceeds have funded projects where over $3.3 billion has been appropriated with 50% of the funds directed to communities near agricultural fields, primarily farm worker communities, that are at risk for exposure to pesticides. The goal of CalEnviroScreen is to prioritize projects that will improve environmental outcomes for communities in disadvantaged areas.
Grant Funding Update

CARB Grant Funding Ramping Up

Several existing and new truck grant programs will bring tens of millions of dollars to fleet owners looking at natural gas vehicles. This article summarizes these programs and we welcome a consultation to help refine the readers’ options.

First, the Hybrid Voucher Incentive Program (HVIP) is administered by CALSTART for CARB. It is a truck dealer-based grant for near-zero (NZ) engines. For the remainder of 2018 and most of 2019, a voucher of $10,000 is available for each Cummins L9N (9-liter) engine and $40,000 for ISGX2 (12-liter) that was recently CARB certified and will be available for order in the next few months. This program does require the purchase of renewable natural gas (RNG), but does not require scrapping an older truck.

The CARB AQIP program is funded by Greenhouse Gas Reduction Funding. It has put additional 2018-2019 funds into the HVIP, and it may also be an opportunity for vehicle funding later in 2018 and 2019. See article on the next page.

Second, fleet owners within the South Coast AQMD jurisdiction may be eligible for the June 5, 2018 filing deadline for the truck replacement funds using Moyer money. A $30,000 maximum grant is available to scrap and replace older diesel trucks and deploy NZ engines.

Third, about $60 million of the Volkswagen Settlement with CARB is proposed to be spent on truck replacement. New trucks would be battery, electric, or natural gas. CARB will finalize its Beneficiary Mitigation Plan over the summer and we will be at the table.

The Volkswagen (VW) Environmental Mitigation Trust provides over $2.935 billion nationwide with about $423 million going to California to mitigate the excess nitrogen oxide (NOx) emissions caused by VW’s use of illegal defeat devices in certain diesel vehicles. California gets the most, as shown in bar chart. The Trust is a component of partial settlements with VW and is enumerated in the first of two Partial Consent Decrees. The Trust provides funding opportunities for specified eligible actions that are focused mostly on “scrap and replace” projects for the heavy-duty sector, including on-road freight trucks, transit and shuttle buses, school buses, forklifts and port cargo handling equipment, commercial marine vessels, and freight switcher locomotives.

California must develop and submit to the Trustee, a Beneficiary Mitigation Plan before the State can expend any funds from its allocation of the Trust. The Plan will describe the eligible mitigation actions from the list specified in the Consent Decree that will be funded from the Trust. Senate Bill (SB) 92, passed in June 2017, further directs how California’s Mitigation Trust funds are to be spent. The legislation directs the designated Lead Agency for the Mitigation Trust to strive to ensure that at least 35 percent of California’s allocation benefit low-income or disadvantaged communities that are disproportionately impacted by air pollution. It also requires CARB to strive to ensure that the expenditures align with the state’s priorities and provide for public transparency before approval. The Beneficiary Mitigation Plan is being developed through a public process.

Email SE@CFAdvocates.net or call 916-520-6040 Ext. 104 for more information.
Cap-and-Trade Auction Proceeds
Low Carbon Transportation Funding

CARB held a Workshop on the development of the Fiscal-Year 2018-2019 Funding Plan for clean transportation incentives with $435 million revenue generated by the Cap-and-Trade program named the Greenhouse Gas Reduction Fund and the Air Quality Improvement Program (AQIP) valued at $28.6 million funded by DMV fees and about $60 million funded by the Volkswagen settlement. CARB also needs to address AB 1550 investing in disadvantaged communities (DACs) and AB 617 on community air quality systems for criteria pollutants with a focus on DACs. With a majority of funding coming from the Greenhouse Gas Reductions Fund, each year the industry promotes the lowest carbon intensity fuel with the cleanest emissions, such as the use of RNG coupled with the near-zero NOx engines. CARB staff has been giving preferences to ZEV and reductions of criteria pollutants, and have begun to recognize the significant reductions in GHG and NOx that can be achieved by heavy-duty vehicles in the short-term. About $160 million in Heavy-Duty Low Carbon Transportation funding is being recommended this year with $68 million on vouchers for low NOx Renewable Fuel fleet, ZEVs, and hybrids. A series of Work Groups will be convening in April to further define funding with heavy-duty lifting by Clean Fleet Advocates on April 12, 2018.

Since FY 2013-14, Cap-and-Trade auction proceeds have supported CARB’s advanced technology, clean transportation incentive programs to reduce greenhouse gas emissions, expanding the types of projects CARB has funded through AQIP. These investments accelerate the transition to low carbon freight and passenger transportation with a priority on providing health and economic benefits to California’s most disadvantaged communities. To date, over 50 percent of CARB’s Low Carbon Transportation funding has been allocated to benefit disadvantaged communities, including low-income residents of these communities. These investments uphold the pillars of the Governor’s climate change strategy of a 50 percent reduction in petroleum use in vehicles by 2030 and reducing short-lived climate pollutants and the Administration’s goal to deploy 1.5 million zero-emission vehicles in California by 2025 and five million by 2030.

The Governor’s proposed State Budget for FY 2018-19 includes $435 million for Low Carbon Transportation investments, using Cap-and-Trade auction proceeds. The proposed Budget states that these investments include “programs to improve and expand transit systems, support transit-oriented development, improve vehicle efficiency, reduce diesel emissions from trucks and buses and reduce the carbon intensity of transportation fuels.” CARB staff intends to develop a joint funding plan for the Low Carbon Transportation and AQIP for FY 2018-19, as it has done in past budget cycles. As part of last year’s session, the Legislature appropriated CARB funding for two new incentive programs in the budget bills passed on September 15, 2017. The first program provides $135 million to reduce emissions from agricultural equipment. The second program provides $250 million for air districts to implement the community emission reduction programs developed pursuant to AB 617. These new programs were not covered previously in the public process for the FY 2017-18 Funding Plan; therefore, they are being developed through a separate public process that is now getting underway. An additional $60 million in funding is also available as a result of several partial consent decrees with Volkswagen to resolve claims against the company for equipping its diesel vehicles with illegal defeat devices.

CARB staff is working to ensure that all of these investments are closely coordinated with the funding plan process for this year. AB 1550 governs the requirements related to disadvantaged and low-income community investments using Cap-and-Trade auction proceeds. Continuing to incorporate these requirements into CARB’s Low Carbon Transportation program will be a priority in developing the FY 2018-19 Funding Plan.

SB 1383 - REGULATIONS

After two delays in the schedule, CalRecycle will hold its seventh and final of workshops on May 8, 2018, in Sacramento, CA and on May 7, 2018 to discuss the SB 1383 implementation process. We hope to finally see some compost and wood material market development regulatory text within SB 1383 and will be meeting with CalRecycle staff after BioCycle to discuss. Topics will include an overview of the 2nd draft of the rulemaking text that is 90% there before entering the OAL process in June and July. CalRecycle plans to adopt the regulations in late 2018 or early 2019. Although the regulations will not take effect until 2022, adopting them in 2019 allows regulated entities approximately three years to plan and implement necessary budgetary, contractual, and other programmatic changes. Jurisdictions, haulers, and generators should consider taking actions to implement programs to be in compliance with the regulations on January 1, 2022. During 2019, CalRecycle will be networking, providing technical assistance, and developing tools, model ordinances, contracts, and case studies to support efforts at the local level to meet the organic waste reduction targets and comply with the regulatory requirements. With the draft regulations still in play, others in the industry are already calling for SB 1383 Reform this year. SB 1383 can provide MRF First! and deliver clean organics to the compost industry, where we are trying the best to make SB 1383 work.

AB 901 - REGULATIONS

Notice of the proposed regulations was published in the California Regulatory Notice Register by the Office of Administrative Law (OAL) on January 26, 2018, beginning the formal 45-day comment period of the rulemaking process. A public hearing to receive public comments on the proposed regulations for recycling and disposal facility reporting was held on for March 14, 2018.
Nationwide Grant Writing For Fleet Owners Seeking Funds

Clean Fleets Advocates (CFA) is an emissions management company with proven results in obtaining over $10 million in grant funds for diesel equipment owners facing future costly fleet upgrades. Our staff has over 100 years of combined experience serving Fortune 500 and smaller fleets with solutions to identify, apply for and manage equipment replacement. For the same reasons that fleet owners hire a CPA to do their taxes, our impressive list of publicly traded and privately-held clients have selected us as their liaison to state agencies having oversight of grant funding and fleet regulatory compliance.

Under consent decrees filed in federal court, Volkswagen will pay $2.9 billion toward diesel equipment replacement or retrofit during 2018-2028. We believe the majority of the funds will be distributed between 2018-2020. We are engaged with state officials to select our clients’ proposals to obtain VW grants for up to 100% of a retrofit device or up to 35% of a new truck purchase that replaces an older truck from model years 1992-2009. California’s Environmental Mitigation Trust provides funding opportunities for projects focused mostly on “scrap and replace” for the heavy-duty sector. We can successfully manage the “A to Z” of the data collection, application and post-award reporting to maximize the grant award while minimizing the headache and risk that can result from a poorly managed project by inexperienced personnel.

Clean Fleets Advocates provides the following Turnkey services:

1) Fleet Data Collection and Assessment: You cannot plan for what you don’t know, and the program has specific requirements based on vehicle use, weight, engine model year and geographic area of operation. Our proprietary and secured data system supports our grant writing projects. All the data about the client’s fleet, compliance actions taken, emissions testing performed, and grant documents are housed in a user-friendly and secured environment.

2) Emissions Analysis: The most successful projects are ones that produce the best emission benefit for each grant fund dollar. We have specialists to complete analysis and calculations to find this number, where most clients lack the person in-house to do so successfully.

3) Government Relations: Each state’s Beneficiary Mitigation Plan (BMP) will be in development over the next few months. A proposed Plan is expected to be presented to our Board for approval in Spring 2018. We are uniquely positioned to know who to ask and what to ask for.

4) Selling the Project: Based on the preceding steps our goal is to obtain the maximum share of grant fund possible for our clients.

5) Post-Grant Reporting: Our firm prepares and certifies regulatory reports for over 300 fleet owners each year and there will be regulatory filings required during the contract life. Incorrect filings could mean the agency requiring repayment of funds received. Let Clean Fleets Advocates assist you with your reporting needs after funding is received.

CFA looks forward to developing a turnkey approach for fleet owners interest to leverage these funds as outlined in the steps above. We may be reached at 833-VWFUNDS or via our website www.cfavocates.net.