

CALIFORNIA COMPOST COALITION

AB 32 to SB 32

FIVE PILLARS

50%
LESS OIL

50%
RPS

DOUBLE
EFFICIENCY

MITIGATE
METHANE

HEALTHY
SOILS

August 2018 | Vol. 5, Issue 8

Sustainable Organics Recycling



Moonbeaming Carbonopoly Around the Globe

The Governor will be leaving California with a strong foundation supporting his [Five Pillars](#), which provides the world with a pathway for climate change mitigation. Ending his fourth term and taking a victory lap around the globe, Governor Brown has been the adult in the room playing carbon chess when we are just recycling checkers. The Global Climate Action Summit scheduled for September 13-14 in San Francisco will bring leaders and people together from around the world to, "Take Ambition to the Next Level." It will be his walk-off song to celebrate the extraordinary achievements of states, regions, cities, companies, investors, and citizens with respect to climate action. Counties and subregional governments will be linking to California's billion dollar Cap-and-Trade program with technology transfer. It will also be a launching pad for deeper worldwide commitments and accelerated action from countries that can put the globe on track to prevent dangerous climate change and realize the historic Paris Agreement without playing the trump card.

The Governor's Five Pillars will: 1) reduce today's petroleum use in cars and trucks by up to 50% and promote RNG use; 2) increase from one-third to 50% our electricity derived from renewable sources and hopefully move biomass with BioMAT; 3) double the efficiency savings from existing buildings and make heating fuels cleaner; 4) reduce the release of methane, which includes diverting 75% of all organics by 2025; and 5) manage farms, rangelands, forests, and wetlands so that they can use

compost and store carbon. The 2017 AB 32 Scoping Plan places organic waste and compost in all sectors noting that organic waste can be transformed into transportation fuels and renewable energy, and where compost can provide water savings and healthy soils to sequester carbon.

The Governor is showing us some money, but not all the money that is needed. We will be providing comments on the Draft Cap-and-Trade Third Investment Plan, with CalRecycle for \$100 million per year, CARB for \$100 million per year in Clean Transportation to fund CNG trucks on RNG with the near-zero engines, and CDFA needing \$50 million for Healthy Soils to move compost. We need to PASS GO and collect \$200 million per year. 'Show Me the Money' and we will show you the tons once SB 1383 regulations pass in early 2019. Without SB 1383 regulations being adopted soon, we cannot show the banks and the grant applications the contracted organic tons to build it, as local government will not come until AB 939-like enforcement happens with shared responsibility.

For the uninitiated, 'Governor Moonbeam' became Mr. Brown's persona, dating back to 1975 and 1983, meant for the young, idealistic and nontraditional, when California led the nation in pretty much everything then and is back doing the same. As the Governor walks off into a blazing sunset of hazy smoke, former SF Mayor Gavin Newsom has eclipsed the man in the moon, as he was in front of same-sex marriages, plastic bags, and even banned organics in 2009. Ban it for The Planet!!!



WALKABILITY
WAY

Carbon Credits: 200



ICELET
AVENUE

Carbon Credits: 100



COMMUNITY
EQUITY

Follow
instructions on
top card



GREEN
URBANISM
BOULEVARD

Carbon Credits: 100



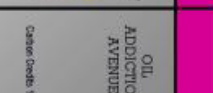
WIND FARM
ENERGY

Carbon Credits: 200



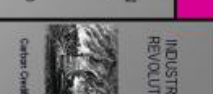
FUTURE
GENERATION
WAY

Carbon Credits: 100



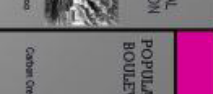
OIL
ADDICTION
AVENUE

Carbon Credits: 100



INDUSTRIAL
REVOLUTION
BOULEVARD

Carbon Credits: 100



POPULATION
BOULEVARD

Carbon Credits: 100



JUST IN
VISITING

Carbon Credits: 100



ICE CAPS
DRIVE

Carbon Credits: 120



FOOD SYSTEMS
AVENUE

Carbon Credits: 100



CHANCE

Carbon Credits: 100



CLIMATE
UNCERTAINTY

Carbon Credits: 100



GEO-THERMAL
ENERGY

Carbon Credits: 200



REDUCE
CARBON
FOOTPRINT

PAY 300
CARBON CREDITS
GET RID OF CAR

Carbon Credits: 60



ENDLESS
AVENUE

Carbon Credits: 60



COMMUNITY
EQUITY

Follow
instructions on
top card

Carbon Credits: 60



SUBURBAN
SPRAWL

Carbon Credits: 60



COLLECT 200
CARBON CREDITS AS
YOU PASS

GO

Carbon Credits: 200

Budget

CAP-AND-TRADE FOR \$1.4 BILLION

The Governor and Legislature have agreed to a [\\$1.4 billion investment plan for Cap & Trade revenues for 2018-19](#). The waste diversion and compost related funds are way below what is needed to fully implement SB 1383. CalRecycle has taken a cut from last year (\$25 million instead of \$40 million). The other bioenergy related programs received the same or increased funding compared to last year. In addition, there is \$12.5 million for biofuels production at the CEC which may take the place of the AB 118 DMV funding next year if we don't rally. Bioenergy Association of California (BAC) the other biofuels industries have managed to prevent the Legislature from passing the Governor's Budget Trailer Bill that would have converted the \$100 million dollar per year clean fuels/vehicles funding program (known as the AB 118) to an electric vehicle only program.

Cap & Trade funding allocations related to composting, bioenergy, and hauling is shown on the insert:

- \$25 million for waste diversion
- \$5 million for Healthy Soils
- \$12.5 million for low carbon fuel production
- \$175 million for clean vehicle rebate program
- \$180 million for clean trucks, buses and off-road vehicles

The Short-Lived Climate Reduction Strategy states there will need to be at least \$100 million in incentives over the next 5 years to start to develop the required compost and organics diversion infrastructure. CalRecycle awarded \$14.6 million in organics grants, from Cap-and-Trade dollars for 5 facilities in FY 2014-2015, where over \$118 million in grant requests were submitted. Having been passed over in FY 2015-2016, CalRecycle awarded \$24 million in organics grants to 10 facilities in FY 2016-2017. CalRecycle just awarded \$25.1 million for 10 facilities in FY 2017-18. However, the Governor's budget is just the same \$25 million for FY 2018-2019. AB 1933 (Maienschein) would have increased that amount to \$200 million, but the amount has been gutted.

Bill Watch

[AB 1933 \(Maienschein\)](#)

TOPIC: Greenhouse Gas Reduction Fund: recycling infrastructure projects. This bill would additionally specify as an eligible use for in-state infrastructure projects or other projects that reduce emissions of greenhouse gases activities that expand and improve waste diversion and recycling, including the recovery of food for human consumption and food waste prevention. The bill would additionally specify that eligible infrastructure projects that reduce emissions of greenhouse gases include the expansion of facilities for the processing recyclable materials and projects to improve the quality of recycled materials.

STATUS: **Senate amendments concurred in. To Engrossing and Enrolling.**

[AB 2411 \(McCarty\)](#)

TOPIC: Solid waste: use of compost: planning.

This bill would require the Department of Resources Recycling and Recovery, on or before December 31, 2019, to develop and implement a plan to maximize the use of compost for slope stabilization and for establishing vegetation in the course of providing debris removal services following a wildfire. The bill would require the Department of Resources Recycling and Recovery, in coordination with the Department of Transportation, to identify best practices for each of the Department of Transportation's 12 districts regarding the cost-effective use of compost along roadways and to develop a plan to implement the identified best practices in each of the districts. The bill would additionally require the Department of Resources Recycling and Recovery to review the best practices at least once every 5 years and update the best practices as necessary.

STATUS: **Enrolled to Governor**

[AB 1981\(Limón\)](#)

TOPIC: Organic waste: composting.

This bill would revise and recast this and related provisions, including, among other changes, imposing additional duties on those state agencies relating to promoting the application of compost and additionally including the Department of Forestry and Fire Protection in the state agencies in coordination with which the California Environmental Protection Agency is required to develop and implement the above-specified policies.

STATUS: **In Senate Appropriations – 3rd reading**

Reg Watch

[SB 1383 - Regulations](#)

The bank and the Cap-and-Trade grant applications want to see the new SB 1383 tons as much as CalRecycle and the Governor's Office does in their efforts to reduce short-lived climate pollutants, such as methane being generated at landfills. New facilities have been entitled and permitted as the bank waits for the new SB 1383 ton to be in contract. Grants have been awarded as the facilities wait for those new SB 1383 tons to get into contract. We have the egg, but Chicken Little is waiting for the regulations to go away, which they will not since SB 1383 is the law to reduce greenhouse gases and mitigate climate change.

CalRecycle plans to adopt the regulations in early 2019 to inspire local government and the industry to start to get these new SB 1383 tons under contract to flow into the new compost and anaerobic digestion facilities that are being permitted and receiving grants dollars. 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 now to implement programs to be in compliance with the regulations on January 1, 2022.

The final informal draft of the rulemaking text for SB 1383 (<https://www.calrecycle.ca.gov/Laws/Rulemaking/SLCP/>), has been posted since May 2018 and will go OAL this Fall. The draft regulations include new jurisdictional procurement requirements for compost and renewable natural gas, among the numerous revisions. 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.

[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. The seventh draft of the proposed regulatory text will be released mid-September, 2018 for a 15-day formal comment period. Please refer to the "Notice of Changes to Proposed AB 901 Regulations"

<http://www.calrecycle.ca.gov/Laws/Rulemaking/Reporting/6thNotice.pdf> for information on how to comment. The comment period will close in late September, 2018.

WHEELS OF FORTUNE

CalRecycle for \$32 Million

CalRecycle met on August 21, 2018 to allocate their \$32 million in Cap-and-Trade revenues. Organics infrastructure will receive \$17 million and will be noticed in Nov/Dec. 2018 with grants for composting and anaerobic digestion. Now is time to get CEQA and permit ready where your CEQA should be certified during 2019, if not already. Fiber, Plastic and Glass will receive \$9 million to build domestic remanufacturing and will be noticed in September/October 2018. Food rescue will get over \$6 million and will go out in August 2018. A Pilot Reuse



Program may get \$1 million with a workshop first in November 2018. CalRecycle has just awarded \$25 million in grants in June 2018 for Organic Infrastructure where 4 CCC members received grants (see page 4) with Mt. Diablo Resource Recovery winning \$4 million for anaerobic digestion, Burrtec receiving \$3 million for a composting facility, and Upper Valley Disposal Service getting \$1.25 million in a rural carve out for a blending barn. Recology was able to fulfill their funding amount at their Yuba-Sutter Compost Facility.

CEC for \$23 Million

The California Energy Commission's (CEC) announced on August 8th the availability of up to \$16.9 million in grant funds for low carbon biofuel production projects at new and existing biofuel production facilities; existing biofuel production facilities must expand or modify facilities to increase production capacity. Eligible biofuels are diesel substitutes, gasoline substitutes, and biomethane such as RNG. Typically, 2 to 3 RNG projects are awarded each year where this time under 1 million dge per year is eligible for \$3 million and over 1 million dge/year can receive \$5 million.



CEC also announced the availability of up to \$6,000,000 in grant funds for biofuels projects that scale-up, scale-out, and prove a technology or process at the first demonstration-scale biofuels production facilities at a site specific location. Workshops are being held on August 23rd in Sacramento with pre-application abstracts due on September 20, 2018. Deadline for full applications will be November 19, 2018. These programs are funded under AB 118 by DMV fees and may be swept away next year in favor of electrification.

CARB for \$467 Million

CARB was allocated over \$467 million dollars in 2018-2019 from Cap-and-Trade. Several truck grant programs will bring tens of millions of dollars for "Near-Zero" CNG/LNG engines in natural gas vehicles. First, the CARB Board recently approved up to \$90 million of the Volkswagen Settlement funds to be spent on diesel truck replacement with new Cummins Near-Zero natural gas engines. State law requires at least 35% to be spent in disadvantaged communities so the waste and recycling industries have a good shot at receiving funding.



Second, the Hybrid Voucher Incentive Program (HVIP) is administered by Calstart for CARB. It is a truck dealer-based grant for Near-Zero 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 is coming 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.



CAP-AND-TRADE THIRD INVESTMENT PLAN

The Draft [Cap-and-Trade Third Investment Plan for Fiscal Years 2019-20 through 2021-22](#) builds on the successful implementation of previous Investment Plans and identifies how existing programs can further the priorities identified by the Legislature and public. The Administration will hold public workshops September 4 and 5 and is accepting public comments on the draft document through September 14. The Draft Third Investment Plan will be available for public review prior to the workshops.

We have been asking for and will continue to comment that CalRecycle needs \$100 million per year for Compost and Anaerobic Digestion infrastructure, CARB needs \$100 million per year in Clean Transportation to fund CNG trucks on RNG with the Near-Zero engines, and California Department of Food and Agriculture needs \$50 million for Healthy Soils to move compost into the agricultural to pay for the haul.

Unfortunately, the value of RNG carbon-negative fuel is being shocked by the electrification lobby and may be losing critical funding as the AB 118 biofuels production incentive grants at the California Energy Commission may be phased out this year. Cap-and-Trade dollars will probably replace only a portion of the AB 118 fund as CARB has abandoned biofuel production funding program in the past where there was \$25 million available at one time, which is being reduced to just \$12.5 million.

According to CARB's 2018 Annual Report on the Cap-and-Trade Proceeds to the Legislature 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 (DACs) are receiving benefits or co-benefits 100% of the time. From the diesel-impacted ports of California to the DAC-laden Central Valley, a network of RNG facilities and RNG fueling stations for Near-Zero NOx heavy-duty vehicles, which collect and transport organic materials around California, should be funded to significantly reduce greenhouse gases and criteria pollutants. Using the CalEnviroScreen scale and comparing to a year 2000 baseline, the organic recycling industry can deliver vast co-benefits to DACs. Deploying Near-Zero NOx emission engines has a 99% reduction (dark green). Recycling trucks and transfer trailers using carbon negative fuel have a 100% reduction from diesel (dark green), produced from zero waste (statewide recycling rate is 44% - yellow) at net-zero GHG facilities (avoids 15 to 25 times - dark green). Organic compost use decreases pesticide use by over 99% (dark green). Being a Zero Hero with clean fleets and facilities is not cheap and should receive priority incentives from the Cap-and-Trade revenues, recognizing the numerous co-benefits to DACs.

The California Compost Coalition

is a registered Lobbying Coalition with the Fair Political Practices Commission (FPPC), created in 2002 by a group of compost operators in response to demands for increased recycling of organic materials & production of clean compost, bioenergy, anaerobic digestion, renewable natural gas, and biochar.

CCC Members

Agromin
Atlas Disposal
Burrtec Waste Industries
Caglia Environmental
California Waste Recovery Systems
California Wood Recycling
CleanFleets.net
Clean Fleets Advocates
Clover Flat Compost
Cold Canyon Compost
GreenWaste Recovery
Harvest Tulare
Harvest Lathrop
Marin Sanitary Service
Mt. Diablo Resource Recovery
Napa Recycling Compost
Northern Recycling Compost
Organic Waste Solutions
Phoenix Energy
Quackenbush Mt. Compost
Recology Blossom Valley Organics
Recology Feather River Organics
Recology Jepson Prairie Organics
ReFuel Energy Partners
Soiland Co, Inc.
Sonoma Compost
Tracy Delta Compost
Upper Valley Recycling
Vision Recycling
Zanker Road Resource Management
Z-Best Compost Facility
Zero Waste Energy Development
Zero Waste Energy, LLC

CCC Executive Committee

Bill Camarillo, *Agromin*
Vince Colvis, *Mt. Diablo Recycling*
Greg Kelley, *Northern Recycling*
Eric Potashner, *Recology*
Greg Pryor, *Recology*
Will Bakx, *Sonoma Compost*
Christy Pestoni Abreu, *UVR Compost*
Michael Gross, *Z-Best Compost*

CCC Team

Neil Edgar, Executive Director
Evan Edgar, Regulatory Affairs
Steve Peterson, Financial Advisor
Rick Moore, Peer Review Engineer
Monica White, Sustainability Advisor
Sean Edgar, Fleet Advisor

CCC Legislative Affairs

Justin Malan, EcoConsult
Neil Edgar, Edgar & Associates Inc.

CCC Members News

Four CCC Members Awarded Organics Infrastructure Grants



Applicant: Mt. Diablo Resource Recovery

Project Type:

Anaerobic Digestion with Grant Funds of \$4,000,000.

Estimated GHGs (MTCO₂e) Total Project: 7,755. Estimated Diversion Total Project: 39,192 Tons.

The proposed project utilizes anaerobic digesters at the existing Mount Diablo Resource Recovery Park as the site for organics separation, co-digestion and bioenergy production. The proposed project includes: 1) an organics separation system with high diversion mixed waste processing, 2) an organics receiving facility to feed the organic slurry into the existing digesters, and 3) additional bioenergy infrastructure. The proposed project will allow for the diversion of 24,400 TPY of organics from the landfill and increase biogas production by 280 percent at the Delta Diablo wastewater treatment plant.



Applicant: Burrtec Waste Industries, Inc.

Project Type: Compost with Grant Funds of \$3,000,000.

Estimated GHGs Total Project: 13,474 MTCO₂e.

Estimated Diversion Total Project: 47,780 Tons.

Burrtec Waste Industries will construct and operate a GORE composting system at the existing Robert A. Nelson Material Recovery Facility and Transfer Station near Riverside, CA. The project will generate compost for the region, and rescue edible food for the surrounding communities. The project will yield more than 18,000 TPY of compost that will help improve regional storm water management, erosion control, and regenerate soil for agriculture, gardening and other uses.



Applicant: Upper Valley Disposal Service

Project Type: Rural

Compost for \$1.25 million.

Estimated GHGs (MTCO₂e) Total Project: 7,471. Estimated Diversion Total Project: 16,840 Tons.

Upper Valley Disposal Service proposes to build "Organics Blending Barn" which consists of a fully-enclosed 100 ft. by 150 ft. concrete tilt-up building with roll-up doors and a biofilter to process air flow from the building. It will accept and mix approximately 4,500 TPY of newly collected food waste, which will be blended with nearly 4,000 tons per year of newly collected green materials and woody waste to produce compost. The project is partnering with Sacramento Food Bank and Family Services to recover edible food and distribute that food to residents of disadvantaged and low-income communities.



Applicant: Recology Yuba-Sutter (partially funded)

Project Type: Compost

with Grant Funds of \$216,865. Estimated GHGs (MTCO₂e) Total Project: 20,511. Estimated Diversion Total Project: 78,167 Tons.

Recology proposes to construct a new composting facility at its Ostrom Road Landfill. The grant money will pay for phase one of a three-phase project by constructing infrastructure for water-quality protection that will allow the facility to begin operations. This will be a regional composting facility with the capacity to handle compostable materials from surrounding cities. The project will prioritize hiring for both permanent and temporary jobs for residents of disadvantaged communities.

READVANTAGING COMMUNITY-SCALE SYSTEMS

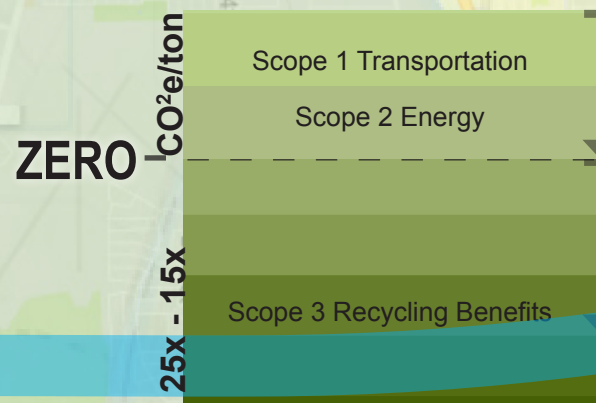
THROUGH SUSTAINABLE FACILITY, FUEL, FLEET, FEEDSTOCKS & FARMING



NET ZERO FACILITIES

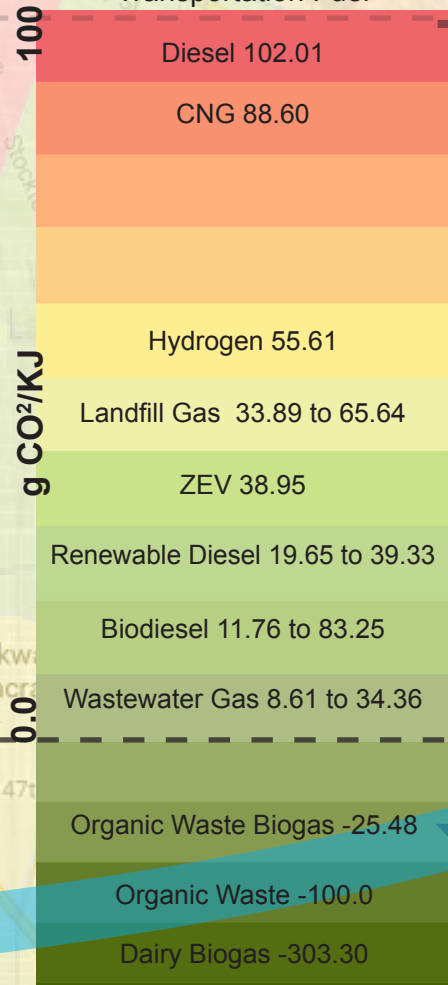
Greenhouse Gases

The Net Zero Facilities in 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 for 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.



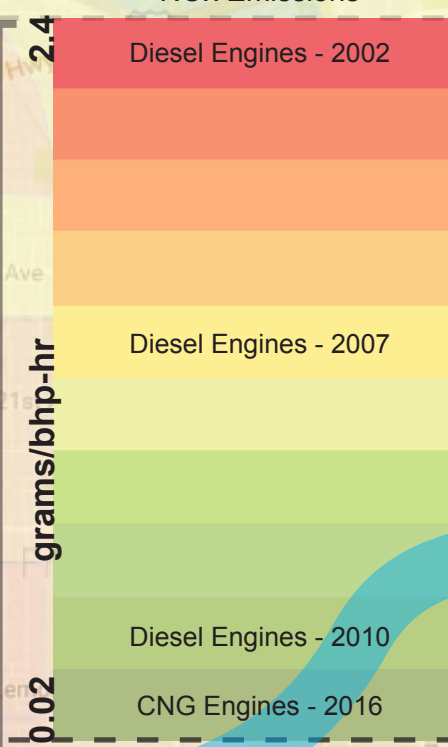
CARBON NEGATIVE FUEL

Carbon Intensity Transportation Fuel



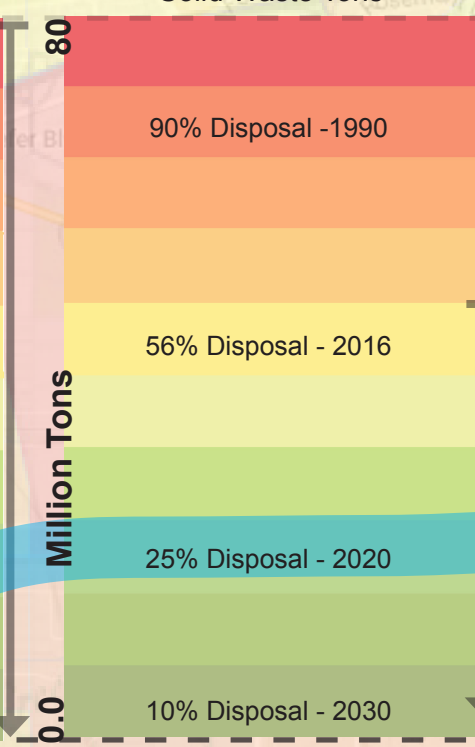
NEAR ZERO FLEET

Heavy-Duty Vehicle NOx Emissions



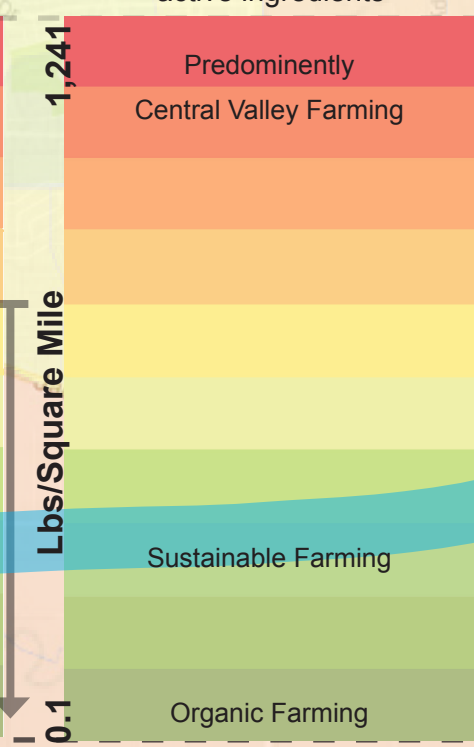
ZERO WASTE

Disposal Solid Waste Tons



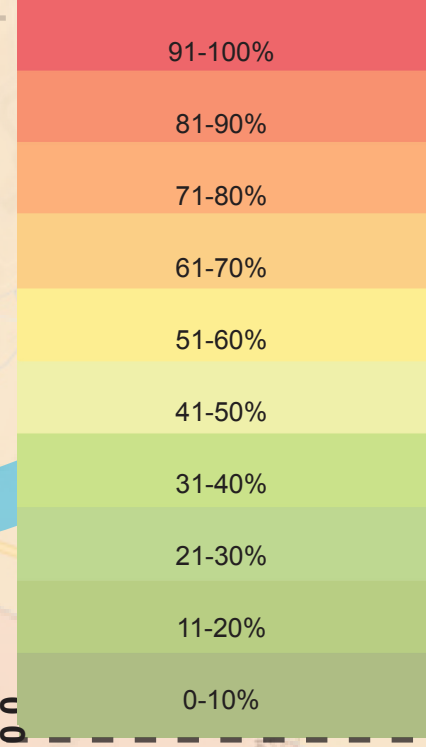
ZERO PESTICIDE USE

Pounds of selected active ingredients



DISADVANTAGED COMMUNITIES

CalEnviro Screen 3.0 results



Community-Scale Carbon Negative Near Zero Emissions at Net-Zero Facilities

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 consider 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 organics 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 produce 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.

AB 32 Scoping Plan 2014 Update Waste Sector

Net-Zero GHG Emissions from the Waste Sector by 2030. Reduce Scope 1 emissions with alternative fuels. Reduce Scope 2 emissions with roof-top solar and on-site bioenergy. Avoid Scope 3 GHG emissions with recycling and composting. To achieve Net-Zero, the direct GHG emissions from the Waste Sector would have to be fully offset by avoided GHG emissions. Avoided GHG emissions are reductions in life-cycle GHG emissions that would occur because waste is shifted from landfilling to alternative non-disposal pathways. Most material recovery facilities are 15 to 25 times offset over their GHG emissions.

LCFS Pathway CARB Certified Carbon Intensities

The wide range of carbon intensities is due to the lifecycle emissions methodology of the Low Carbon Fuel standard (LCFS); variation of feedstock types, origin, raw material production, processing efficiencies, and transportation all contribute to the producers' fuel pathway carbon intensity. The certification of carbon negative fuel for the production of renewable natural gas (RNG) from organic waste anaerobic digestion is based on the biogenic feedstocks of food waste and green waste, and the avoided methane emissions from the landfilling of the material. The CNG truck collect food waste to make RNG.

CARB and EPA certified ISL G NZ (8.9) L CNG engines

In 2015, Cummins Westport certified the world's first heavy-duty engine at near-zero-emission levels (90 percent below the existing federal standard) for Class 7 refuse trucks and will be available for Class 8 transfer trucks in 2018. To complement the NOx reductions provided by this landmark engine, conventional (fossil) natural gas provides significant GHG reduction benefits. However, renewable natural gas with carbon negative fuel completes the game changing proposition by providing the lowest carbon intensity of any heavy duty transportation fuel available in the market today.

90% or more Waste Reduction from Landfills and Incineration

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Communities that have a Zero Waste goal and are working towards or have reduced their waste to landfill, incineration and the environment by 90% or more. Dozens of large cities have adopted zero waste goal by 2025. California is at a 45% recycling rate as compost facilities are curtailed by NIMBYism.

Healthy Soils Initiative with Compost Use

Communities near agricultural fields, primarily farm worker communities, may be at risk for exposure to pesticides. Drift or volatilization of pesticides from agricultural fields can be a significant source of pesticide exposure. The use of most synthetic pesticides and fertilizers is prohibited from organic production. Organic farming with certified organic compost use and a zero pesticide goal makes healthy soils. The multiple co-benefits of enhanced soil organic matter on our agricultural lands, include improved water retention, soil stability and nutrient use efficiency to reduce fertilizer use.

CalEnviroScreen 3.0 Cap-and-Trade Investments

The California Communities Environmental Health Screening Tool (CalEnviroScreen) helps us to address environmental threat 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 funding benefiting DACs and 34% located in DACs.

NET ZERO NOW

OFF DIESEL

KNOCK OFF NOx

OFF LANDFILLS

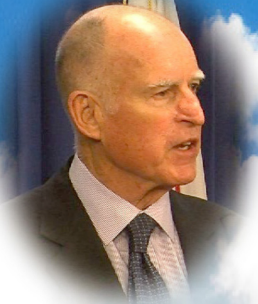
OFF PESTICIDES

GREENING YOUR COMMUNITY

2017 Scoping Plan Update

TABLE 16: CROSS-SECTOR RELATIONSHIPS

Sector	Example Interactions with Other Sectors
 Energy	- Hydroelectric power, cooling, cleaning, waste water treatment plant (WWTP) bioenergy - Vehicle-to-grid power; electricity supply to vehicle charging infrastructure - Biomass feedstock for bioenergy, land for utility-scale renewable energy (solar, wind) - Agricultural waste and manure feedstocks for bioenergy/biofuels - Organic waste for bioenergy
 Transportation	- Electric vehicles, natural gas vehicles, transit/rail; more compact development patterns that reduce vehicle miles traveled (VMT) also demand less energy per capita - More compact development patterns that reduce VMT also demand less water per capita and reduce conversion of natural and working lands - Reducing VMT also reduces energy demands necessary for producing and distributing fuels and vehicles and construction and maintenance of roads - Biomass feedstock for biofuels - Agricultural waste and manure feedstocks for biofuels - Organic waste for biofuels - Greenfield suburban development on natural and working lands leads to increased VMT
 Industry	- Potential to electrify fossil natural gas equipment, substitution of fossil-based energy with renewable energy - Greenfield urban development impacts
 Water	- Energy consumption for water pumping, treatment, heating; resource for cooling, cleaning; WWTP bioenergy - Use of compost to help with water retention/ conservation / drought mitigation - Land conservation results in healthier watersheds by reducing polluted runoff, allowing groundwater recharge, and maintaining properly functioning ecosystems
 Waste Management	- Composting, anaerobic digestion, and wastewater treatment plant capacity to help process organic waste diverted from landfills - Compost for carbon sequestration, erosion control in fire-ravaged lands, water conservation, and healthy soils - Replacing virgin materials with recycled materials associated with goods production; enhanced producer responsibility reduces energy impacts of consumption - Efficient packaging materials reduces energy consumption and transportation fuel use
 Agriculture	- Crop production, manure management; WWTP biosolids for soil amendments - Agricultural waste and manure feedstocks for bioenergy - Compost production in support of Healthy Soils Initiative
 Natural and Working Lands	- Healthy forestlands provide wood and other forest products - Restoring coastal and sub-tidal areas improves habitat for commercial and other fisheries - Sustainable management can provide biomass for electricity - Sustainable management can provide biomass for biofuels - Resilient natural and working lands provide habitat for species and functions to store water, recharge groundwater, naturally purify water, and moderate flooding. Forests are also a source of compost and other soil amendments. - Conservation and land protections help reduce VMT and increase stable carbon pools in soils and above-ground biomass



40 % GHG Reduction below 1990
by 2030

Governor Brown's

FIVE PILLARS

50% LESS
OIL
by 2030

Convert Organics to
Carbon Negative Fuel

Low
Carbon
Fuel Standard



LCFS

10% LESS CARBON
INTENSITY
by 2020

50% RPS
RENEWABLE ENERGY
by 2030

NET ZERO



Renewable
Portfolio
Standard



RPS

33% RPS
RENEWABLE ENERGY
by 2020

DOUBLE ENERGY
EFFICIENCY
by 2030

Decarbonize
Economy

LEED
Certification

*CAL*Green

**Cal-
Green**

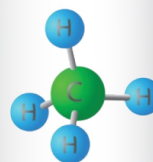
3 MILLION
METRIC TONS GHG
REDUCTIONS
by 2020

75% ORGANICS
RECYCLING
by 2025

METHANE
MITIGATION



Reduce
Short-Lived
Climate
Pollutants



SLCP

50% ORGANICS
RECYCLING
by 2020

15 MILLION TONS OF
COMPOST USE
by 2025

Sequester Carbon
into Soil

Healthy Soils
Initiative



HSI

7.5 MILLION TONS
OF COMPOST USE
by 2020



2015 | 2016 - Executive Order B-30-15, SB 350, SB 32, SB 1383

2006 - California Global Warming Solutions Act - AB 32