The true Power of Organics lies in the conversion of food waste and green waste via anaerobic digestion (AD) into a “carbon negative” compressed renewable natural gas (RNG). RNG needs to go to the heavy-duty tank, and not necessarily to the grid.

With a concept to divert 90 percent of all organics from landfills by 2025 to mitigation methane, the California Air Resources Board (CARB) with the California Energy Commission (CEC) should assist in developing these AD facilities to harness this potential biomethane and develop The Organic Highway. From the ports of California to the Great Central Valley, a network of RNG facilities and RNG fueling stations for heavy-duty vehicles that collect and transport organic materials around California should be funded to de-carbonize the fuels and the fleets. Get the fossil out of the fuel.

A 25,000 ton per year AD-to-RNG project can be designed without a PUC pipeline – and the associated leakage – as a community-scale model, and can serve a population of approximately 100,000 people. This model can collect commercial food waste from all accounts to comply with AB 1826 (see page 5 – Food Waste Not) and achieve a zero waste goal while deploying a carbon negative fleet.

The co-location of this AD-to-RNG facility where the fleet is parked is a natural fit by having RNG fuel demand on-site, producing over 333,000 diesel gallon equivalents per year of RNG with a carbon intensity of negative 31 g CO2e/MJ (see page 3 for the LCFS) for a fleet of 45 heavy-duty trucks. This is the Napa model that received a $3 million CEC grant on a $15 million project that will be operational in a few years, and which will be replicated throughout California.

CEC prepared a Technology Assessment in 2014 stating that today’s potential supply of biomass resources could produce 2.2 billion gallons per year of fuel where 24.7 billion gallons is estimated to have been used in 2014. Of the 2.2 billion gallons, UC Davis determined that 113 million gallons per year could be derived from food waste.

The solid waste and recycling industry of 15,000 heavy-duty fleets uses about 150 million gallons per year of fuel. The Edgar Institute has projected that 80 percent of the industry’s heavy-duty fleets will be CNG by 2020, when 12,000 vehicles will be able to substitute 120 million gallons of diesel fuel with an equivalent amount of RNG.

CleanFleets.net, the newest CCC member (see page 4), has teamed up with CCC to educate CARB to fund The Organic Highway by using the $350 million in cap-and-trade revenue to provide grants for the difference in the cost of the CNG Class 7 and Class 8 truck over a diesel truck, which varies from $40,000 to $50,000 per truck.

The Governor, with SB 350, is proposing that we use 50 percent less petroleum by 2030. CARB is promoting zero organic waste by 2025. CalRecycle, with the Department of Food and Agriculture, is recognizing the huge benefits of healthy soils using compost (see page 7 – Carbon Farming). Cap-and-trade revenues are growing by billions of dollars per year to fund the required infrastructure. We are at the nexus of organic waste diversion, clean energy, clean transportation, and natural resources, where the cap-and-trade investment in our industry is a cost-effective quadruple play. We look forward to you joining us on The Organic Highway.
Life At 2020

The Governor’s proclamations have set the tone for legislation in 2015 for clean transportation and clean energy while reducing greenhouse gases. With bold action and gusto that California will achieve its 2020 goals of reducing greenhouse gases to 1990 levels by 2020 and the 33 percent renewable energy goal, Governor Brown issued Executive Order B-30-15 to extend AB 32 and its leadership role, and joins the community of states and nations that are committed to slash carbon pollution through 2030 and beyond.

Building on our existing climate programs, the 40 percent reduction of greenhouse gases below 1990 levels by 2030 will drive and accelerate innovation, generate new jobs, improve air quality and hasten California’s transition to a clean energy economy. The 2030 target represents reductions needed to ensure California can achieve its larger 2050 target – a reduction of greenhouse gases to 80 percent below 1990 levels. The need for these reductions is supported by the latest science on climate change.

The Governor decided that it was time to establish our next set of objectives for 2030 and beyond. Toward that end, he proposed three ambitious goals to be accomplished within the next 15 years: (1) Increase from one-third to 50 percent our electricity derived from renewable sources; (2) Reduce today’s petroleum use in cars and trucks by up to 50 percent; and (3) Double the efficiency of existing buildings and make heating fuels cleaner. The carbon market responded during the last auction to raise the price of allowances to $12.29 per metric ton of CO2. Cap-and-trade allowances are expected to raise over $2.7 million dollars for budget year 2015-2016.

Senator DeLeon introduced SB 350 to place these three 50 percent goals into law with the desire to reduce greenhouse gases to 350 ppm, thus SB 350.

AB 577 (Bonilla)
TOPIC: Biomethane grant program. AB 577 would require CEC to develop and implement a grant program for pipeline projects that build or develop biogas collection and purification technology and infrastructure using cap-and-trade revenues.

WATCH

AB 857 (Perea)
TOPIC: This bill, between 2018 to 2023, would require that $100 million be deployed for technology development, demonstration for heavy-duty truck technology with near-zero-emission truck technology.

Since CARB staff is favoring EV fleets over the current GHG laws to fund Class 7 and Class B heavy-duty trucks, Southern California Gas Company has sponsored this bill to carve out $100 million of cap-and-trade revenue to fund the RNG Organic Highway.

CCC to consider SUPPORT on June 11.

SB 350 (De León)
TOPIC: Clean Energy and Pollution Reduction Act of 2015. This bill will reduce petroleum use by 50 percent by 2030 and increase renewable energy to 50 percent by 2030.


CCC to consider SUPPORT on June 11.

SB 687 (Allen)
TOPIC: To reduce GHGs by 40 percent of 1990 levels by 2030.

STATUS: Passed Senate. In Assembly pending referral.
CARB Regulatory Affairs

How Low Can LCFS Go?

The California Air Resources Board (CARB) approved the Low Carbon Fuel Standard (LCFS) in 2009. Under the authority of AB 32, and without subsequent legislation, the LCFS has upheld numerous legal challenges by Big Oil. The court has held that the LCFS would remain in effect and that CARB can continue to implement and enforce while CEQA and other administrative process issues are cured. On June 25, 2015, CARB plans to re-adopt the LCFS, certify the CEQA document, and adopt the carbon intensity (CI) for many types of fuels. Note that the LCFS requires that the carbon intensity of transportation fuels needs to be lowered by 10 percent by 2020. Transportation fuels also fell under the cap-and-trade regulations in January 2015 and are bringing in over a billion dollars in revenues to de-carbonize the economy.

With the latest modeling, CARB will adopt a CI for diesel at 102.8 g CO2/MJ. CNG will have an 88.3 CI, a decrease of 14 percent from diesel. Electrical vehicles are not "zero emissions" when it comes to GHGs, and will have a CI of 30.9, a decrease of 70 percent from diesel. Renewable natural gas from landfill gas will have a CI of 21.3, and a decrease of 79 percent from diesel. RNG from high solid anaerobic digestion (AD) will have a CI of negative 30.8, which will be the first certified carbon negative fuel in the world. Both Atlas ReFuel in Sacramento and Blue Line Biogenic AD Facility in South San Francisco are producing carbon negative RNG fuel. Attached is a chart prepared by Edgar & Associates that combines the CARB data for carbon intensities and the economy efficiency ratios (EERs) to present the proposed LCFS regulations to be adopted on June 25, 2015 for RNG fuels.

Show Me the Low Carbon Money!

CARB has been holding workshops this year on how to deploy $200 million in cap-and-trade revenue for clean transportation for 2015-2016. Even though RNG from AD is less carbon intensive than electrical vehicles (EV), CARB staff is proposing that the bulk of the money goes to EVs and bypass the RNG Organic Highway. CleanFleets.net with the Bioenergy Association of California and Clean Energy have been hammering on CARB staff to fund RNG fleets and the RNG infrastructure. Following current GHG laws for Class 7 and Class 8 vehicle criteria, CleanFleets.net has been proposing that cap-and-trade revenues provide grants when a CNG fleet is purchased that has an RNG agreement in place, resulting in a $40,000 to $50,000 grant per vehicle. With another $150 million being allocated to CARB for clean transportation in the May Revise budget, be ready for a multi-million dollar program in 2015-2016 that will fund that CNG fleet with a RNG off-take agreement.

Prop 1B Truck Replacement Grant Program

CleanFleets.net is staffing the implementation of next year’s Proposition 1B truck replacement grant program that is managed by CARB and the major air districts. This program is in its final year and has granted nearly $700 million since 2009.

Under this year’s proposal announced in April, CARB staff recommends a grant of $50,000 to $100,000 for replacement of an existing diesel truck with a GVWR greater than 23,500. Program requirements will finalized later this Fall. Note that this program best suits transfer truck replacement, as solid waste collection vehicles are the subject of the GGRF funding play described in this article.
Welcome Our Newest Member: CleanFleets

The California Compost Coalition (CCC) 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 and production of clean compost, bioenergy, renewable natural gas, and biochar.

The California Compost Coalition represents member organic material recyclers and compost operators with a unified statewide voice on many issues: product safety and standards, government regulations, environmental planning, and marketing.

Members
Agromin
Atlas ReFuel
Caglia Environmental
California Wood Recycling
CleanFleets.net
Cold Canyon Compost
CT Bioenergy Consulting LLC
Marin Sanitary Service
Mt. Diablo Recycling
Napa Recycling Compost
Northern Recycling Compost
Organic Waste Solutions
Phoenix Energy
Quackenbush Mt. Compost
Recology
Sonoma Compost
Tracy Delta Compost
Upper Valley Recycling
Zanker Road Resource Management
Z-Best Compost Facility
Zero Waste Energy, LLC

Executive Committee
Bill Camarillo, Agromin
Greg Kelley, Northern Recycling Compost
Mike Madrigal, Recology
Rachel Oster, Recology
Will Bakx, Sonoma Compost
Chris Pestoni Abreu, UVR Compost
Michael Gross, Z-Best Compost

Staff
Neil Edgar, Executive Director
Evan Edgar, Regulatory Affairs
Monica White, Sustainability Advisor
Sean Edgar, Fleet Advisor
Rita Athanacio, Communications

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

CleanFleets.net as a key advisor to the Coalition. Located as a tenant in the CCC Sacramento headquarters, CleanFleets provides fleet engineering and regulatory compliance services for hundreds of municipal and private fleet owners. Their services consist of regulatory advocacy, compliance auditing, fleet engineering, opacity testing, recordkeeping and procurement services.

CleanFleets has a team of analysts that evaluates a fleet on all relevant factors and presents clients with their least-costly compliance scenarios. Because each regulation has unique provisions that can allow additional time to comply, knowing the regulations and details gives CleanFleets the ability help their clients plan future capital expenditures and get every possible extension or credit to which they might be entitled.

Following through on the compliance plan may require outside support and monitoring - another service CleanFleets provides for many clients, monitoring over 300 fleets. Additionally, they have assisted Fortune 500 companies in multi-year procurement deals and assisted in all facets of bid preparation, diagnostic work, financial analysis, grant funding support, and project management.

Currently, CleanFleets plays a key role in challenging the California Air Resources Board (CARB) and the CEC with the environmental benefits of funding clean transportation projects. Due to its presence in front of the CARB board for more than ten years, CleanFleets has a unique perspective to share and access to senior staff at the Board in order develop and implement clean transportation programs.

Director Sean Edgar has twenty-five years of public policy development and field experience in transportation, construction and air quality projects in both the public and private sectors. He gained experience in the public policy arena while serving in the Office of Governor Pete Wilson, where he participated in the formation of the California Environmental Protection Agency in 1991-1993.

Since 2000, his consulting practice has consisted of regulatory advocacy and compliance services relating to transportation and air quality. He has an established presence at CARB since the September 2000 adoption of the Diesel Risk Reduction Plan and has participated in every major on-road and off-road rulemaking for more than twelve years.

Among other accomplishments, he represented the California Refuse & Recycling Council in the development and implementation of the CARB Solid Waste Collection Vehicle Rule, the first private carrier rule enacted by CARB, and currently serves as the endorsed consultant of the California Construction Trucking Association. Mr. Edgar’s other affiliations include the Associated General Contractors, California Beer and Beverage Distributors, and the California Moving and Storage Association. In 2009 he was appointed by CARB to their Truck Regulations Advisory Committee. In 2011 he was authorized by CARB through a competitive bid process to train business owners about CARB rules. In the past two years he has educated more than 5,000 fleet owners in six western states through over 150 personal appearances. He is a recognized expert regarding on-road fleet rule implementation and technology options, and is an instructor with the University of California Davis Extension.

For your fleet emissions and compliance needs, call CleanFleets at (916) 520-6040 or visit CleanFleets.net.
CARB is proposing to require diversion of 90% of organics by 2025 to mitigate methane amounting to over 14.7 million tons by 2025 requiring 100’s of facilities with cap-and-trade dollars growing. Edgar & Associates has prepared the attached White Paper.

CalRecycle has estimated 10.6% of the commercial waste stream as “compostable paper” waiting to be defined as “food-soiled paper”. There is more self-hauling of organics today than curbside organics collected by registered haulers. Let the food fight begin with a feeding frenzy for cap-and-trade grant dollars.

**LEGISLATION**

**AB 1103 (Dodd)**

TOPIC: This bill currently proposes to define the terms “food-soiled paper” and “food waste” for purposes of AB 1826 provisions for mandatory commercial organics collection. This bill also is proposing registration for transporting food waste and tracking food waste by jurisdiction in order to obtain the best GHG reduction data.

STATUS: Passed from the Assembly and referred to Senate Environmental Quality Committee.

Sponsored by CRRC. CCC Executive Committee to consider on June 11, 2015.

**SHORT-LIVED CLIMATE POLLUTANT PLAN – METHANE MITIGATION**

CARB adopted the AB 32 Scoping Plan First Update last May 2014 which included a comprehensive strategy for mitigation of short lived climate pollutants (SLCP) such as methane. SB 605 (Lara, 2014) placed this strategy into statute with a report due to the Legislature by January 1, 2016.

CARB released the **SLCP Concept Paper** and held a Workshop on May 27, 2015. The Global Warming Potential of methane may increase from 25 times CO2 over a 100 year period, to 72 times CO2 over a 20 year time horizon, increasing the potential contribution to the GHG Inventory.

The SLCP Concept Paper would effectively eliminate the disposal of organic materials at landfills by proposing a strategy to divert 90% of the organics by 2025, which amounts to 14.7 million tons by 2025 requiring 100’s of facilities with cap-and-trade dollars growing. Edgar & Associates has prepared the attached White Paper.

**CalRecycle** has estimated 10.6% of the commercial waste stream as “compostable paper” waiting to be defined as “food-soiled paper”. There is more self-hauling of organics today than curbside organics collected by registered haulers. Let the food fight begin with a feeding frenzy for cap-and-trade grant dollars.

**2014 WASTE STUDY**

CalRecycle has released the draft commercial waste study: food waste is 24.4% of disposal, yard waste is 5.3%, wood waste is 8.1%, and compostable paper is 10.6% to total 48.5% of the waste stream. AB 1826 requires 50% of commercial organics be diverted by 2020, and with AB 341 will amount to 8.16 million tons, with 4.3 million metric tons of GHG being avoided. (See attached White Paper.)

CalRecycle also tallied the curbside collected commercial materials and other diversion from self-haul and back-haul. Curbside recycling amounts to 2.0 million tons and curbside organics total 1.7 million with 1.4 million tons of yard waste and 265,000 tons of food waste. Other diversion totals 5.7 million tons, with almost 1 million tons of food waste currently being self-hauled without registration.

**CAP-AND-TRADE ALLOCATION**

The Governor allocated $60 million in his May Revise budget towards CalRecycle with $30 million for compost and AD. Assembly kicked it up $20 million and the Senate kicked it down. Look for a budget trailer bill to decide the amount of grant money as cap-and-trade revenue defies gravity and grows by billions.
The biomass market had been relatively stable since 2000, with 33 plants averaging 600 MW of operating capacity utilizing 5 million tons of wood chips from the urban, agricultural, and forest sectors.

In 2014, 5 plants shut their doors totaling 85 MW. With expiring power purchase agreements, another 10 plants representing 276 MW and approximately 3 million tons in wood chips, or about 1 million tons of urban sector wood chips, could close by 2020.

AB 590 is proposing to use cap-and-trade revenue to keep these plants open. With AB 1826 and AB 341, another 1.7 million tons of new wood chips will need to be diverted by 2020. With SB 605 and 90% of the organics out of the landfills, a total of 3.1 million tons of new wood chips will be on the market in 2025.

The existing biomass plants must be kept open and new biomass gasification plants must be built to reduce black carbon from forests fires and agricultural burning and to reach SB 350 goals of 50% renewable power use by 2030.

**2014 WASTE STUDY**

CalRecycle has released the draft commercial waste study. Wood waste was 8.1% of disposal. This is a drastic reduction from the 2008 Study where wood waste was 15.7% of the commercial stream, amounting to over 3.1 million tons, which was even greater than food waste. The bust of the construction industry coupled with C&D recycling and LEED certification has kept wood waste out of the landfill.

**AB 590 (Dahle)**

**TOPIC:** This bill will provide money from cap-and-trade revenues Greenhouse Gas Reduction Fund for purposes of maintaining the current level of biomass power generation in the state and revitalizing currently idle facilities in strategically located regions.

**STATUS:** Passed the Assembly on to the Senate

CCC staff to recommend SUPPORT on June 11, 2015.

**BIOCHAR GHG PROTOCOL**

Placer County Air Pollution Control District is sponsoring the development of a Biochar GHG Quantification protocol. The protocol is being moved ahead in parallel with the American Climate Registry Methodology for Biochar Projects. The County Air Pollution Control officers GHGRx Program is posted at [http://www.ghgrx.org/](http://www.ghgrx.org/). Air Districts that are participating in the GHGRx Program will be responsible for certifying verifiers. With CARB taking on black carbon from forest fires in 2015, the value of the off-sets can only increase with the use of biochar.

**AB 1826 INCLUDES WOOD**

Cal Recycle held a series of AB 1826 Workshops in April and issued Frequently Asked Questions, identifying commercial nonhazardous wood waste as covered under AB 1826. With 1.34 million tons being disposed of in 2014, over half will need to be diverted by 2020, amounting to 0.7 million new tons coming onto the market from the commercial stream, and 1.7 million tons from all MSW to comply with AB 341.

**SB 350 (DeLeon)**

**TOPIC:** This bill will increase renewable energy to 50% by 2030.

**SHORT-LIVED CLIMATE POLLUTANT PLAN – BLACK CARBON MITIGATION**

CARB adopted the AB 32 Scoping Plan First Update last May 2014 which included a comprehensive strategy for mitigation of short lived climate pollutants (SLCP) such as black carbon. SB 605 (Lara, 2014) placed this strategy into statute with a report due to the Legislature by January 1, 2016.

CARB released the [SLCP Concept Paper](http://www.slcpcouncil.org/) and held a Workshop on May 27, 2015. The Global Warming Potential of black carbon may increase from 900 times CO2 over a 100 year period, to 3,200 times CO2 over a 20 year time horizon, increasing the contribution to the GHG Inventory.

The SLCP Concept Paper proposes to have CARB continue to lead on reducing diesel black carbon emissions by providing incentives to deploy near-zero emission vehicles and fleets powered by CNG and RNG. SB 350 (DeLeon) proposes to reduce petroleum use by 50% by 2030.

The SLCP Concept Paper proposes to continue to reduce black carbon from open biomass burning in the fields and forest by proposing incentives to collected woody biomass to controlled bioenergy. Biomass gasification generates energy and biochar, which is recognized as sequestering carbon in the soils. Comments are due June 12, 2015.
Last Fall, the California Compost Coalition recognized that this drought underway was a perfect storm for a Compost Initiative. Justin Malan – as our CCC Lobbyist – networked with key collaborators and called for an Organic Revival (November 2014 issue). The seeds were planted and the concept has turned into the Healthy Soils Initiative. As we embarked upon the International Year of Soils 2015, with California facing one of the most severe droughts on record, Governor Brown released his budget which recognized healthy soils and their climate change benefits with the following message:

“As the leading agricultural state in the nation, it is important for California’s soils to be sustainable and resilient to climate change. Increased carbon in soils is responsible for numerous benefits including increased water holding capacity, increased crop yields and decreased sediment erosion. In the upcoming year, the Administration will work on several new initiatives to increase carbon in soil and establish long term goals for carbon levels in all California’s agricultural soils. CDFA will coordinate this initiative under its existing authority provided by the Environmental Farming Act.”

CDFA has released the framework and lead a stakeholder process on May 14, 2015 and is forging ahead. SB 367 (Wolk) and AB 761 (Levine) plan to allocate cap-and-trade revenue to healthy soils. The Governor has requested $20 million and the Senate Budget Committee says none for now. Regardless on the recent hue-down, the Healthy Soils Initiative has caught the attention of Sacramento where funding will not be sequestered this year.

CDFA HEALTHY SOILS MEETING

CDFA initiated their leadership on the Healthy Soils Initiative (HSI) with a May 14, 2015 meeting of the Environmental Farming Act Science Advisory Panel (EFA SAP) in Sacramento. The HSI establishes both short- and long-term actions for enhancing soil health, and compost is front and center of many elements outlined. The meeting focused on developing a framework for reducing GHG impacts from agriculture, partially by building soil organic matter in California’s agricultural and degraded. While a significant portion of the meeting was spent on conservation tillage practices, additional measures will be evaluated during stakeholder meetings under authority of EFA SAP.

CAP-AND-TRADE DEBATE

The Governor stressed that we must manage farm and rangelands, forests and wetlands so they can store carbon and backed it up with a $20 million CDFA budget request in his May Revise of the 2015-2016 budget. The Governor also allocated $60 million to waste diversion including $30 million for composting and anaerobic digestion and up to $6 million in research grants for compost use, where CCC testified should also include composted digestate and biochar. With $2.2 billion in the Governor’s budget and $2.7 billion from the Senate and $2.4 billion from the Assembly, the Healthy Soils Initiative and CalRecycle funding amounts are in play. The Legislature may postpone deciding on cap-and-trade revenue funding plan as a whole until the budget is passed, where a budget trailer bill could be used later this month. Meanwhile, the grant’s Notice of Funding Available will be on hold.

SB 367 (Wolk)

TOPIC: Agriculture Climate Benefits Act will expand the scope of the existing CDFA Environmental Farming Program to include an explicit focus on reducing on-farm greenhouse gas emissions and/or increasing carbon storage in soils and woody biomass with $25 million in funding from the cap-and-trade revenue. SB 367 helps CDFA more effectively deliver programs and improve growers’ access to resources for addressing climate change and other pressing environmental concerns. It will also amend the list of services and support to be provided to growers by CDFA, to encompass: low interest loans, technical assistance, educational materials and outreach, permit assistance, and funding of on-farm demonstration projects.

STATUS: Passed the Senate, on to the Assembly.

SUPPORT

AB 761 (Levine)

TOPIC: In accordance with the Governor’s Healthy Soils Initiative, AB 761 (Levine) provides incentives for using California’s working lands to capture and sequester harmful greenhouse gasses (GHGs) to help meet the state’s AB 32 GHG emission reduction goals and fight climate change with funds to be named later.

STATUS: Passed the Assembly, on to the Senate.

SUPPORT

AB 1045 (Irwin)

TOPIC: Cal-EPA shall streamline permitting among agencies and promote the use of compost on working lands.

STATUS: Passed the Assembly, on to the Senate.

SUPPORT