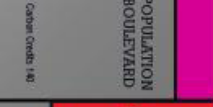




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Sustainable Organics Recycling



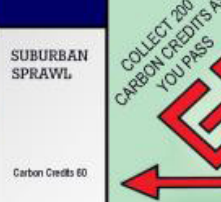
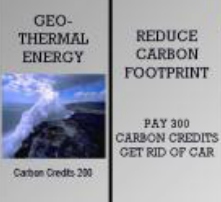
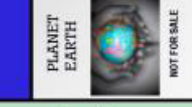
Carbonopoly - More than a Board Game

California quit playing checkers when AB 32, the Global Warming Solutions Act of 2006, was signed into law, and started playing carbon chess. AB 32 has survived a proposition to repeal it during the recession and numerous lawsuits over the last decade. CARB was able to adopt cap-and-trade regulations and the low carbon fuel standard without explicit new legislation, but relied on the broad authority of AB 32. CARB believes that have authority to set 2030 targets as the AB 32 Scoping Plan 2016 Update is underway to do just that. The Governor has taken 'Carbonopoly' to 2030 and beyond and to the international community where climate change is more than just a CARB Board game.

Cap-and-trade has raised billions of dollars where the fate of \$3.1 billion in the proposed budget is heating up once again this year. Such as last year, the Senate is again challenging the budget allocation amounts as a negotiation tactic which includes a reduction in CalRecycle funding from \$100 million to \$50 million. CARB is getting their full allocation of \$500 million for low carbon transportation programs and will pass 'Go' and plans to adopt the proposed the Short-Lived Climate Pollutant (SLCP) Strategy that sets a 2030 target to reduce methane by 40% by 2030. SB 1383 (Lara) is the bill to watch this year that could codify portions of the SLCP, and could go further on funding allocation and other 2030 goals.

Big Oil flexed in 2015 and had the Legislature remove the 50% petroleum reduction goal by 2030 from SB 350. The defiant Governor is pressing ahead in 2016, with Big Oil banking on the elections to stack the Legislature in 2017 to moderate future carbon reduction goals. As the Board delivers the AB 32 Scoping Plan to show how to get to 2030 goals, Carbonopoly is being stymied with low greenhouse gas allowance sales in the May 2016 auction due to the legal uncertainty of the cap-and-trade program past 2020. Be ready for a carbon power play this year with a possible return of SB 32 (Pavley) that could bind revenue allocation and 2030 goals to gain market certainty and to avoid a more difficult task next year with a packed Big Oil Legislature.

The climate change politic game is heating up as our industry is developing the infrastructure and transitioning our fleets from diesel to CNG with RNG fuel on the Organic Highway to reduce greenhouse gases, which in one of the most cost-effective GHG reduction programs at just \$9 per ton. As Californians adapt to uncertain weather patterns, there needs to be certainty past 2020 to 2030 to continue to develop the infrastructure that has shown to be carbon negative and community scale with global impacts and huge financial implications.



METHANE TO CARBON NEGATIVE FUEL IN 30 DAYS WITH AB 1383

Methane generation is a landfill could stew for over 30 years with fugitive emissions, but could instead become a carbon negative fuel in less than 30 days with anaerobic digestion. As the war on methane continues with the Short-Lived Climate Pollutant (SLCP) strategy to reduce methane from 2013 levels by 40% by 2030, the desire to reduce petroleum use by 50% is also looming. Harnessing the methane from the landfill and diverting organics to an anaerobic digestion facility to produce a renewable natural gas (RNG) for the CNG fleet solves two problems at the same time.

AB 1383 (Lara) requires the CARB to approve and implement the comprehensive short-lived climate pollutant strategy to achieve, from 2013 levels, a 40% reduction in methane, a 40% reduction in hydrofluorocarbon gases, and a 50% reduction in anthropogenic black carbon, by 2030. CARB held a public workshop on May 19, 2016, on the plan, and will consider adopting the SLCP strategy in the Fall. AB 1383 plans to place the strategy in statute, with the link to the SLCP noted below.

<http://www.arb.ca.gov/cc/shortlived/meetings/04112016/proposedstrategy.pdf>

California has already established its intent to phase out the disposal of organics from landfills. Existing law sets a goal of diverting 75 percent of solid waste from landfills by 2020 and 50 percent of commercial organic waste diversion by 2020 with AB 1826. The SLCP will build on that intent and progress, with market and institutional

support, and divert 90 percent of organics from landfills by 2025, effectively eliminating the disposal of organics in landfills.

As stated in the SLCP strategy, California's organic waste streams are responsible for half of the State's methane emissions and represent a valuable energy and soil-enhancing resource. Effectively implementing the measures described in this Proposed Strategy will not only reduce methane emissions but provide many other benefits as well, including cutting emissions of CO₂ and boosting economic growth in agricultural and rural communities. Building infrastructure to better manage organic waste streams could lead to billions of dollars of investment and thousands of jobs in the State. This infrastructure could provide valuable new sources of renewable electricity or biogas, clean transportation fuels, compost other beneficial soil amendments, and other products. Collectively, products from organic waste streams in California, and potential environmental credits from them, could represent a market worth billions of dollars in California.

For example, the Low Carbon Fuel Standard (LCFS) and federal Renewable Fuel Standard provide strong economic incentives to utilize organic waste resources for production of transportation fuels. At current LCFS and RIN credit prices and with the new CARB Low Carbon Transportation Fund, anaerobic digestion projects that generate transportation fuels can be laced with incentives amounting to over \$5.00 per diesel gallon equivalent.

CARB and the California Energy Commission has recognized the business model and the value of the community-scale distributed fuel production facilities where food waste is diverted from making methane at landfill and instead goes into the tank of the heavy-duty vehicle that collects the food waste. CARB has allocated \$40 million in low carbon fuel production incentives and another \$30 million in heavy-duty vehicles fleets to further develop the Organic Highway and CEC will be allocated a new \$25 million on production facilities.

[SB 1383 \(Lara\)](#)

TOPIC: Would require CARB to approve and implement Short-lived Climate Pollutants strategy to achieve 40% reduction in methane, 40% reduction of hydrofluorocarbon gases, and a 50% reduction in anthropogenic black carbon below 2013 levels, by 2030.

STATUS: To be on the Senate Floor after June 5, 2016. **SUPPORT**

[SB 32 \(Pavley\)](#)

TOPIC: Requires the Air Resources Board (ARB) to approve statewide greenhouse gas (GHG) emissions limits equivalent to 40% below the 1990 level by 2030 and 80% below the 1990 level by 2050. Prohibits ARB from implementing the next update of the California Global Warming Solutions Act of 2006 (AB 32) Scoping Plan until ARB has taken specified actions, including submitting the Scoping Plan to the Legislature for review.

STATUS: Held in Assembly Natural Resources Committee on September 10, 2015. **SUPPORT**

[AB 2415 \(Garcia\)](#)

TOPIC: This bill revises the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program (Clean Truck Program) to require no less than 50% of program funds to support the commercial deployment of certain heavy-duty trucks that meet specified emissions standards.

STATUS: Held in Assembly Appropriations on May 27, 2016. **SUPPORT**

[AB 2313 \(Williams\)](#)

TOPIC: The bill increases monetary incentives for biomethane projects until December 31, 2021: Requires the PUC to increase incentive program for biomethane projects is increased from \$1.5 million to \$3 million, other than a dairy cluster biomethane projects which would be limited to \$5 million; defines pipeline installation as an interconnection cost.

STATUS: In Senate, to Rules Committee for assignment. **SUPPORT**

[AB 1683 \(Eggman\)](#)

TOPIC: The bill would increase the limit on the sales and use tax exclusion from \$100 million per year to \$200 million for each calendar year, and can be used on equipment that processes recycled feedstocks and organics.

STATUS: Held in Committee. **SUPPORT**

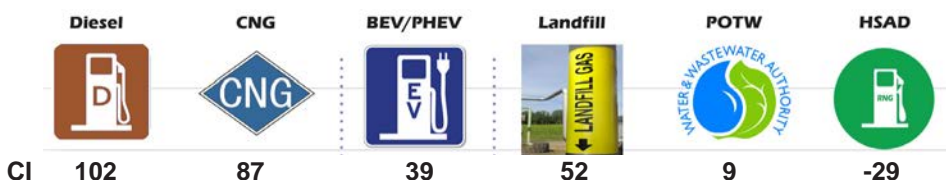
LOW CARBON BIOMETHANE TRANSPORTATION AND FUELS INVESTMENTS

CCC supports the Governor's proposed Fiscal Year 2016-17 State Budget which includes \$500 million for Low Carbon Transportation and Fuels investments administered by CARB from Cap-and-Trade auction proceeds deposited into the Greenhouse Gas Reduction Fund. This proposal includes \$40 million to support the production of very low carbon fuels, a new addition to CARB's incentive programs which could mean up an incentive of up to \$1.13 per diesel gallon equivalent (dge) for three years starting on July 2017. Plus there could be up to \$30 million in vouchers and incentives of up to \$50,000 per vehicle for heavy duty vehicles using renewable natural gas (RNG) and the new ultra-low NOx engines.

CCC with CleanFleets.Net, Bioenergy Association of California, and Clean Energy have been lobbying CARB staff for over two years on the funding allocation to recognize the value of RNG for heavy-duty truck use where the food waste collected can power the vehicle that collects it. As CARB wages the war on methane with the

Short-Lived Climate Pollutant Reduction Strategy, it makes sense to put that bio-methane back in the tank as RNG which has been deemed a carbon negative fuel. CARB staff had been pushing for funding electrification, bypassing the RNG play. CARB staff was reminded that zero emission vehicles are not zero emissions after all (carbon intensity of 39), but zero waste at landfills can lead to carbon negative fuel. The low carbon fuel standard (LCFS) requires that the carbon intensity (CI) of transportation fuel be 10% less by 2020. The CI from high-solids anaerobic digestion (HSAD) is minus 23 and landfill gas in 52.

With CARB's incentive program of \$1.13/dge, and with the RINs at \$2.81/dge and the LCFS at \$1.79/dge, the low carbon fuel incentive program could total as much as \$5.73/dge. These incentives have been volatile in the past which has limited certainty over time. Last year, SB 32 (Pavley) and SB 350 (DeLeon) attempted to set goals and extend cap-and-trade to 2030 to provide certainty past 2020. Look for Governor Brown to push for 2030 goals before he leaves office.



CUMMINS WESTPORT - NEAR ZERO EMISSIONS FUELED BY ZERO WASTE CARBON NEGATIVE CNG

Cummins Westport's new ISL G Near Zero NOx natural gas engine is the first MidRange engine in North America to receive emission certifications from both U.S. Environmental Protection Agency (EPA) and California Air Resources Board that meet the 0.02 g/bhp-hr optional Near Zero NOx Emissions standards for refuse and recycling applications. Cummins Westport ISL G NZ exhaust emissions will be 90% lower than the current EPA NOx limit of 0.2 g/bhp-hr and also meet the 2017 EPA greenhouse gas emission requirements. CWI natural gas engines have met the 2010 EPA standard for particulate matter (0.01 g/bhp-hr) since 2001.

CARB Regulations in 2018 for Organics Ban by 2025

The California Air Resources Board conducted a public workshop on May 19, 2016 to discuss the Proposed Short-Lived Climate Pollutant (SLCP) Reduction Strategy which was released for public review on April 11, 2016. This is the third iteration over the last year that also included black carbon and refrigerants in the analysis. CARB will consider approving this SLCP Strategy in the fall along with the CEQA document. The SLCP is calling for an effective landfill ban of organic waste in ten years. CARB will be working with CalRecycle to develop a regulation by 2018, noting the progress towards existing targets for landfill diversion by 2020 with the phase in of AB 1826 which is suppose to divert 50% of the commercial organic waste by 2020. With a balanced anaerobic digestion portfolio, over 33 million diesel gallons of RNG can be produced.

There has been a big push back from dairies, landfills and local government to slow down this ban. The solid waste industry group wants to give AB 1826, AB 341, and AB 1594 a chance and increase the incentives.

The AB 32 Scoping Plan 2016 Update is also underway where the Global Warming Potential for methane could increase to 84 times carbon dioxide, from 28 times, as the impacts over a 20 year period (as a short-live climate pollutant) is fully assessed. AB 876 (McCarty) passed in 2015 requires all jurisdictions demonstrate 15 years of organic waste processing capacity. Now is the time to prepare "The Plan before the Ban" as California will need to divert 8 million tons of organic wastes by 2020 and 14.5 million tons by 2025. There will need to be 100 new or expanded facilities by 2020 and another 100 new or expanded facilities by 2025, costing billions. The increased incentive funding is definitely needed to compete against the much cheaper landfill system.

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, renewable natural gas, and biochar.

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Burrtec Waste Industries
Caglia Environmental
California Wood Recycling
CleanFleets.net
Clover Flat Compost
Cold Canyon Compost
CT Bioenergy Consulting LLC
Harvest Tulare
Harvest Lathrop
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Sonoma Compost
Tracy Delta Compost
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Justin Malan, EcoConsult
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CCC Members News

Atlas Refuel Partners Up

A lot has happened in the world of organics based Renewable Natural Gas (RNG) for Fleets since 2014 when Atlas ReFuel was featured in CCC News. ReFuel Energy Partners, (formerly Atlas ReFuel), has established itself as the Sacramento Region's premier provider of carbon negative renewable natural gas and the only facility to offer RNG that is derived from anaerobically digested food waste. A truly closed loop solution for those customers who collect food waste, tip at the Sacramento Biodigester and then fill up on RNG made from the very food waste they collect. It's only 21 days from dump to pump! ReFuel Energy Partners is here to connect renewable energy to the end consumer by identifying opportunities, teaming with partners and bringing these solutions to market.



Atlas Disposal currently operates 30 trucks that run on renewable natural gas. That's over 60 % of the fleet. The latest vehicles planned for purchase feature the Cummins ISLG engines that have been California Air Resources Board (CARB) certified near ZERO emissions. The ISL G Near Zero (NZ) NOx natural gas engine is the first MidRange engine in North America to receive emission certifications from both the U.S. Environmental Protection Agency (EPA) and Air Resources Board (ARB) in California for meeting the 0.02 g/

bhp-hr optional Near Zero NOx Emissions standards for medium-duty truck, urban bus, school bus, and refuse applications. So, today, in the Greater Sacramento area, everybody breathes a little easier.

The Sacramento Biodigester operated by Clean World expanded the facility from 25 tons per day in 2014 to 100 tons per day in 2015. The facility is capable of processing enough material to deliver a carbon negative solution that offsets landfill Green House Gas (GHG) emissions by almost 40,000 tons or to put it more simply, it would power a compressed natural gas powered civic enough to drive all the way around the earth.

Atlas Disposal is hard at work helping customers comply with GHG reduction goals like those set forth in AB 32 and AB 1826. What started as a boutique collection for restaurants in the downtown area of Sacramento has grown to full service collection and closed loop zero waste solution for the businesses who have 8 cubic yards or more of organic waste. Soon, customers who generate 4 cubic yards or more will need help complying with the landfill ban on organics and Atlas stands at the ready to move more organics into clean burning renewable fuel.

The 4th Annual Composting Conference – Waste Expo

What happens in California does not stay in California

We look forward to floor show to see the latest and greatest in composting and anaerobic digestion and fleet technology. "The California Ban with a Plan – GHG Model Goes Global" by Evan Edgar will be in the Keynote session, and Neil Edgar will moderate the next AD session featuring Eric Herbert of ZeroWaste Energy and will be on the Policy Panel later that day.

