

### November 2015 | Vol. 2, Issue 11

### Sustainable Organics Recycling

## Pillars in the Community

With AB 32 as a strong foundation, Governor Brown unveiled his *Five Pillars* vision in his 2015 inaugural address, that by 2030, California will: (Pillar 1) reduce today's petroleum use in cars and trucks by up to 50 percent; (Pillar 2) increase from one-third to 50 percent 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 eliminating organics from the

landfill by 2025; and (Pillar 5) manage farms and rangelands, forests and wetlands so they can use compost and store carbon.

SB 350 (DeLeon) was signed into law this year addressing two of the pillars by increasing renewable energy to 50% by 2030 and double energy efficiency. The governor's office is now hosting a series of Pillar Symposiums – 2030 Climate Change Commitments – to build all of the *Five Pillars* into the AB 32 Scoping Plan Update to 2030, which will be ready for adoption in fall 2016.

Organics recycling is locally managed within the California communities being served, having sustained compost markets while building healthy soils. Other types of recyclable material markets (paper, plastics, and metals) are globally dependent and volatile in pricing, beholden to port labor strikes and China's Green Fence.

As recycling sputters along against the macro-economics of international demand and oil supply, compost is evolving from being just a landfill diversion strategy into a sustainable agricultural practice that sequesters carbon in the ground for centuries. Compost use on our working lands as a carbon sink to reduce greenhouse gas emissions could be on the scale of forestry in the near future where local off-sets can be generated on California soil instead of just buying carbon credits from the Amazon rain forest.

CCC members have been actively building the organic waste recycling infrastructure, developing compost markets (Pillar 5) for decades, and expanding their facilities to process the upcoming elimination of organics from the landfills by 2025 (Pillar 4). The success of these organics recycling programs has been anchored

in these companies being pillars in the communities that they serve. The owners are typically second or third generation families and serving on many local boards and commissions and always give back to their community.

These *Five Pillars* are the structural elements needed to achieve the goals to reduce greenhouse gases to 40% of the 1990 levels by 2030 as proposed in SB 32 and Executive Order B-30-15. Compost is the mortar that binds these pillars together. Eliminating organics from the landfills

will mitigate methane generation as a short-lived climate pollutant (Pillar 4) and instead create biomethane at anaerobic digestion facilities to generate more renewable energy (Pillar 2) and carbon negative fuel for the CNG fleet that collects the organics (Pillar 1) to displace diesel. The diverted food waste and digestate can be composted to sequester carbon and promote healthy soils (Pillar 5).

Recycling and composting is all about location and being local. The Central Valley is the bread basket of the world and has over 25 million acres of agriculture in production which is the market for all of that compost. Replicating community-scale anaerobic digestion and composting at the local level is one of the most cost effective greenhouse gas reduction strategies. We are the Pillars in the Community!

The success of these organic recycling programs has been anchored in these companies acting as pillars in the communities that they serve.

### Legislative Update

### Organic<sup>\$</sup> Incentive<sup>\$</sup>

The Legislature provided assistance to promote the development of the compost and anaerobic digestion infrastructure in 2015 with the passage of AB 1045 to encourage permit streamlining and with AB 867 to plan for 15 years of capacity.

AB 199 also passed which will allow California sales tax exclusion on compost and biomass equipment. There are rumors that the Legislature may convene in early 2016 to allocate the cap-and-trade auction revenues that may results in \$30 million to CalRecycle for compost and AD and \$20 million to CDFA to fund the

Healthy Soil Initiative, which will set the tone on how to spend these dollars in the future (See below on the upcoming Three-Year Investment Plan workshops).

The Legislature will be back in 2016 on a series of 2-year bills listed to the right. The biomass industry is hurting and will need cap-and-trade pricing support with AB 590. The Renewable Gas Standard with SB 687 will promote AD biomethane and the RNG fleet. Carbon farming will be back with SB 367 and AB 761. And "food waste" may further be defined with AB 1103.

### Climate Investments Three-Year Plan

State law requires CARB to develop guidance for all State agencies that receive appropriations from the Greenhouse Gas Reduction Fund, including guidance on reporting, guantification methods, and maximizing benefits to disadvantaged communities.

To comply with this law, CARB has developed draft Funding Guidelines to help these agencies use their appropriations in a way that reduces greenhouse gases, furthers the purposes of AB 32, maximizes benefits to disadvantaged communities,

and meets the other statutory requirements. The Fund has \$2.2 to \$2.7 billion for 2015-2016, and could increase to \$5 to \$10 billion by 2020.

The State of California invites you to participate in a series of public workshops to provide input on a Concept Paper for the Cap-and-Trade Auction Proceeds Second Investment Plan (Fiscal Years 2016-2017 through 2018- have been filed and will be present-19). Three workshops covering the same material will be held across the State starting in Sacramento on Nov.

3, Fresno on Nov. 4 and LA on Nov. 5. In the Short-Lived Climate Pollutant Strategy, CalRecycle requests \$100 million per year for 5 years for \$500 million. Developing the 100 facilities needed by 2020 will cost at least \$1.5 billion, where CalRecycle requests to

receive 1/3 of the capital funded.

Anaerobic digestion with composting is the only program that intersects all three key sectors of the investment priorities and the 5 pillars of the governor's vision for 2030 that diverts waste

with methane mitigation, produces clean fuels and clean energy and makes compost for our working lands by sequestering carbon in the soils.

Edgar & Associates performed a marginal cost evaluation of anaerobic digestion and covered compost and determined both to be the most cost-effective program. Comments ed again during these workshops to provide the cost-effective metrics to validate more funding.

### 2-Year Bill Watch

#### 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: Held in Senate Appropriations

#### SB 687 (Allen)

TOPIC: This bill would have required CARB, in consultation with the CEC, to adopt a carbon-based renewable gas standard that requires all gas sellers to provide specified percentages of renewable gas meeting certain deliverability requirements, to retail end-use customers for use in California, that increases over specified compliance periods.

STATUS: Held in Senate Appropriations Committee. Sponsored by BAC.

### **SB 367 (Wolk)**

TOPIC: The 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. 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 projects.

STATUS: Held at Assembly Appropriations. SUPPORT

### AB 1103 (Dodd)

TOPIC: This bill 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: Two-year bill sponsored by CRRC.



### **Regulatory** Affairs

### The Organic Waste Recycling Plan

On and after January 1, 2016 local jurisdictions must have an AB 1826 Organic Waste Recycling Program in place to phase-in the collection of commercial organic waste and will now need to identify 15 years of organic processing capacity per the recently signed AB 876. CARB is proposing to effectively eliminate the disposal of organics by 2025 to mitigate methane as part of their Short-Lived Climate Pollutant strategy, as authorized by SB 605. There is now legislative certainty, with these laws and data from the recently released CalRecycle 2014 Waste Characterization Study, to prepare The Organic Waste Recycling Plan to 2030, which could be called "The Plan Before the Ban". or even a "Zero Waste Organics Plan".

With AB 1826 phase-in collection to 2020, AB 1594 phase-out green waste ADC credits by 2020, 90% diversion of all organics by 2025, and organic processing capacity to 2030, there will be over 14.5 million tons of organic waste coming onto the market statewide that needs a home (see attached White Paper.) This looks much like the AB 939-required "Composting Component" as part of the Source Reduction and Recycling Element (SRRE) that each jurisdiction had to prepare and adopt in the mid 1990s.

We asked CalRecycle to adopt AB 1826 regulations to define "food waste". certify "self-haulers", and determine the process and enforcement features of this law. AB 341 has four pages of regulations for mandatory commercial recycling with requirements to submit documents to CalRecycle. AB 939 had SRRE regulations, required documents, and an approval process with enforcement to develop the recycling industry

AB 1826 AB 1594 **Increase Organics Decrease Organic** Collection ADC Use

that we have today. Embarking on a comparable mission to the grand scale of AB 939 to now get organics out of the landfill, CalRecycle had the authority to inspire the industry to submit a Plan on January 1, 2016, not after.

Unfortunately, the AB 1826/AB 827 Organic Waste Recycling Plan need not be adopted, filed, approved, or blessed by CalRecycle or the local jurisdiction. There will be no regulations, only guidance. CalRecycle is informing all stakeholders that you do not have to provide a written implementation plan to CalRecycle (as you did with the AB 341 mandatory commercial recycling plan), but will instead implement a Mandatory Commercial Organics Recycling program by January 2016, and report in the August 2017 Annual Report. CalRecycle has been rolling out the AB 1826 tools, but will roll over on any enforcement of the Organic Waste Recycling Program until well after the submittal of the Annual Report in August 2017, and most likely there will not be any enforcement until 2019.

Many haulers and operators are not waiting for the jurisdictions to prepare the Organic Waste Recycling Plan since there are local government staffing issues coupled with a lackluster response by CalRecycle staff to have jurisdictions submit a plan anytime soon. Many haulers and operators are determining the cubic yards for phasedin collection and the increasing organic tonnages for processing and designing programs which could be co-located at their existing facilities. Programs need to be CEQA-ready for grant funding, and operators need to act sooner rather than later since it takes well over two years to permit organic recycling facilities.





**Organics/Methane** 

**Organics Processing** 

### **Regs** Watch

### WASTE DISCHARGE **REQUIREMENTS FOR COMPOSTING FACILITIES**

The State Water Resources Control Board (SWRCB) has concluded its efforts to establish statewide regulations for composting facilities. The SWRCB adopt the WDRs at their August 4, 2015 Board Meeting. The SWRCB officially released final language on August 31, 2015, which can be found on the Board's composting website.

Existing composting operations, except those with individual WDRs, general WDRs, or conditional waivers of WDRs are required to seek coverage under this General Order by submitting a complete Notice of Intent (NOI), and a Technical Report with information requested in the General Order. The NOI, Technical Report must be submitted by August, 4, 2016 and shall include a proposed schedule for full compliance which must be as short as practicable but may not exceed 6 years from the date of the NOI.

Now is a good time to start planning to develop a Technical Report by beginning to work with a qualified engineer.

#### **TITLE 14/27**

#### **Revision to Compostable Materials** & Transfer/Processing Regulations.

CalRecycle has completed updating the Title 14/27 regulations to address a broad list of topics, mainly related to the expanding diversion of organic materials from landfills.

The final version of proposed language contained no new revisions addressing many issues raised, including extending the implementation deadline for physical contaminant limits for compost beyond January 2018. Additionally, limits on land application of green waste to agricultural sites continue to allow up to three applications of twelve inches each annually.

The regulations, along with the corresponding Negative Declaration required under CEQA, were officially approved by Director Scott Smithline on August 5, 2015. The final regulations package was submitted to the Office of Administrative Law on September 29, 2015, with the regulations expected to take effect on January 1, 2016.

### CCC News



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**

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# Back to the Future is Now with Zero Waste Energy, LLC

### October 21, 2015 was Back to the

*Future Day* where some of those predictions back from the '80s did come true and others did not. The Cubs did not win the World Series as they lost to the Mets in the playoffs that day. But we do have drones, flat screens and biometric identification, and do not have self-lacing shoes, hover boards, and flying cars. Pepsi Perfect had a limited release, and we are have

just begun making transportation fuel out of food waste. Whereas that banana peel is not yet propelling a flying DeLorean, food waste is making renewable natural gas for a

carbon-negative garbage truck. Back to the Future is Now with Zero Waste Energy, LLC.

On October 21, 2015 - Back to the Future Day, the American Biogas Council did award the Blue Line Biogenic CNG Facility the merchant Biogas Project of the Year for their successful operation of a dry biogas system which uses commercial and residential yard and food waste to generate 120,000 diesel gallon equivalents of renewable natural gas each year for waste hauling vehicles and organic-certified compost. This exceptional physical plant plus the integration of dry digestion and vehicle fueling, where each collection vehicle will collect enough organic material on its route to fuel the vehicle for the day, sets it apart from its peers.

#### ZWE's SMARTFERM technology

features a dry anaerobic digestion, 21 day batch cycle that generates no waste stream. The AD process utilizes a bacterial percolate and thermophilic mode of operation with operating temperatures up to 131°F which maximizes methane extraction and kills pathogens in the resulting digestate. Though dependent on the specific feedstock, methane content averages approximately 60%. One of the most attractive features of SMARTFERM is its flexibility, fully functional with a feedstock ranging to all blends of source separated organics.

The co-location of food waste diversion programs with anaerobic digestion operations, where the current facility is located and where the collection fleet is parked, is a natural fit to enable emerging technologies. Having



long-term exclusive franchises with the collection of sourceseparated organic waste guarantees a feedstock to produce a clean organic compost.

These exclusive franchises provide the revenue streams to finance the expensive compost and anaerobic digestion infrastructure. The City of Los Angeles recently endorsed "*A Blueprint for Cities – Cleaning Up Waste and Recycling Management and Securing the Benefits*" that have parlayed these concepts into a 78-page report which promotes the exclusive franchise and the source-separation of organics to get to zero organic waste by 2025 while using a CNG fleet.

The metrics of this ZWE technology were profiled at California Energy Commission's (CEC) First Annual Technology Merit Review in September 2015. Representing CEC funding recipients, the merit review workshop was focused on biomethane fuels and the deployment of grant dollars to build facilities. CEC realized the beauty of this business model that is communityscale and can be replicated where contracts on feedstock and off-take agreements are embedded with the project developer. With the Governors' Five Pillars program taking California to 2030, the state is realizing that this community-scale model weaves all of the five pillars together for a net-zero facility with carbon negative RNG fueled by zero organic waste.