

Conversion Technology E-Newsletter January 2015 01/09/2015

ANNOUNCEMENTS

Advanced Transportation Center Now Open For Business

The Advanced Transportation Center of Southern California (ATC) is now open to answer your consumer, business, and public sector questions about alternative fuels, and advanced transportation. ATC is also available to host advanced transportation meetings, collaborate on public and private grant opportunities in advanced transportation, getting the word out about your advanced transportation event and more. For more information, please visit their website at http://www.advancedtransportationcenter.org/

EVENTS

Alternative Technology Advisory Subcommittee (ATAS)

January 15, 2015 Alhambra, CA For more information regarding this meeting, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

VerdeXchange

January 25-27, 2015 Los Angeles, CA For more information regarding this meeting, please visit the website: <u>www.verdexchange.org</u>

Waste To Biogas & Clean Fuels Finance & Investment Summit

March 3 - 4, 2015 Santa Clara, CA For more information on this event, please visit the website: http://www.infocastinc.com/downloads_pdf/waste-15-agenda.pdf

Advanced Bioenergy Leadership Conference

March 11 - 13, 2015 Washington, DC For more information on this event, please visit the website: http://advancedbiofuelssummit.com/

BioCycle West Coast Conference 2015

April 13 - 16, 2015

Portland, Oregon For more information on this event, please visit the website: <u>http://www.biocycle.net/</u>

Waste Expo

June 1 - 4, 2015 Las Vegas, Nevada For more information on this event, please visit the website: http://www.wasteexpo.com

<u>NEWS</u>

Renewable Energy from Waste 2014: Making the Case for Conversion

Panelists say communications between stakeholders and a receptive public policy environment are keys to winning approval for waste conversion projects. Forming strong stakeholder partnerships and understanding the nuances of those partnerships are keys to winning support for waste-to-energy conversion projects. Those were the views from a panel of speakers who presented their experiences at the 2014 Renewable Energy from Waste Conference, held Nov. 17-20, 2014, in San Jose, California, during a session titled "Making the Case for Conversion." To read more, click here.

Genetically Modified Plants Could Lead to More Efficient Conversion of Plant Biomass to Biofuels

Plant geneticists have sorted out the gene regulatory networks that control cell wall thickening by synthesis of the three polymers, cellulose, hemicellulose and lignin. The most rigid of the polymers, lignin, represents "a major impediment" to extracting sugars from plant biomass that can be used to make biofuels and so their genetic advance is expected to "serve as a foundation for understanding the regulation of complex, integral plant component" and a map for how future researchers might manipulate the polymer-forming process to improve the efficiency of biofuel production. To read more, click here.

Vista Gives Completion Schedule for WTE Project

Vista International Technologies, Inc., a pioneer in efficient Waste-to-Energy (WTE) technology, is pleased to give investors an update on the completion of its pilot WTE project. This project represents the first commercial installation of the newest generation of the Company's patented Thermal Gasifier technology. To read more, click <u>here</u>.

Veolia Develops Anaerobic Digestion System For California's Napa Valley Wine Waste

Veolia Water Technologies in North America has developed a \$15 million anaerobic digestion (AD) system for winery and vineyard waste in American Canyon, Calif. The high-rate AD system can recycle 100 million gallons of wine-related waste from Napa Environmental Group. The AD system allows wineries and vineyards to avoid the effort and expense of onsite treatment, odors, septic tanks, leach fields or wastewater ponds. To read more, click here.

City Prefers Any New Garbage Plant To Be Energy Generator

The city prefers any new garbage processing plant be able to turn trash into treasure. Not only should a facility get rid of curbside trash, it should also pump out energy, according to the city's request for information on technologies in the marketplace. That's what Plasco Energy Group's technology does--superheat garbage to produce a gas that powers electricity generators, while repurposing the leftover "slag" for the construction industry. The method is called plasmagasification. To read more, click here.

Questions or Comments? Please email us at staff@socalconversion.org



Conversion Technology E-Newsletter - February 2015 02/13/2015

ANNOUNCEMENTS

A Bright Future For Waste Conversion

The Renewable Energy from Waste (REW) Conference attracted nearly 200 people to San Jose, California for a host of activities including preconference workshop, two days of educational sessions and tours of two of the leading facilities in the country for processing organic waste and producing energy. The city of San Jose was chosen as the location for the conference because of its approach to integrated waste management that has helped triple the citys commercial recycling rate and incorporate dry-fermentation anaerobic digestion (AD) to generate electricity. To read more about the conference and the state of waste conversion, click here.

EVENTS

Alternative Technology Advisory Subcommittee (ATAS)

February 19, 2015 Alhambra, CA For more information regarding this meeting, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

Waste To Biogas & Clean Fuels Finance & Investment Summit

March 3 - 4, 2015 Santa Clara, CA For more information on this event, please visit the website: <u>http://www.infocastinc.com/downloads_pdf/waste-15-agenda.pdf</u>

Southern California Waste Management Forum

March 11, 2015 Downey, CA For more information on this event, please visit the website: http://www.scwmf.org/web/forum-events/spring-conference/

Advanced Bioenergy Leadership Conference

March 11 - 13, 2015 Washington, DC For more information on this event, please visit the website: http://advancedbiofuelssummit.com/

BioCycle West Coast Conference 2015

April 13 - 16, 2015 Portland, Oregon For more information on this event, please visit the website: http://www.biocycle.net/

Waste Expo

June 1 - 4, 2015 Las Vegas, Nevada For more information on this event, please visit the website: <u>http://www.wasteexpo.com</u>

<u>NEWS</u>

California Energy Commission Awards Biogas Project \$5 Million In mid-December, Colony Energy Partners Tulare LLC was awarded a \$5 million grant from the California Energy Commission to construct an estimated \$25 to \$30 million biogas project in Tulare, California, that will produce 2.8 million diesel gallon equivalents of biogas each year, displacing diesel fuel used by trucks in the San Joaquin Valley. The grant was one of two approved through the Alternative and Renewable Fuel and Vehicle Technology Program, which supports the development and use of alternative and renewable fuel projects and advanced transportation technologies to help meet the states goals for reducing greenhouse gas emissions (GHG) and petroleum dependence in the transportation sector. To read more, click here.

Digester Mixing on Track as Biogas Energy Brings Landia's GasMix to North State Rendering

The rendering business is not known for its glamour or its cutting edge technology, but in North America's first project of its kind, that's all about to change for an industry that is positioned for growth. Biogas Energy has built an anaerobic digestion (AD) facility at North State Rendering in Oroville, California, that is already paying dividends, with uninterrupted biogas generating electricity, fuelling trucks and running boilers. The economics seriously stack up - not to mention the massive reduction in carbon footprint. To read more, click here.

First Closed-Loop Organics Waste Management System Moves Forward Iris Solutions has been selected by the city of Surrey to build the Surrey Biofuels Processing Facility project in Canada. According to the city, once the biofuel processing facility is operational, Surrey will be home to the first closed-loop fully-integrated organics waste management system in North America. The facility will be designed to receive and process 115,000 metric tons of organic waste annually. When completed, the facility will be the largest of its kind in Canada with a capacity to process 100 percent of the citys organic waste, along with commercial organic waste, helping Metro Vancouver achieve its regional 70 percent waste diversion target. To read more, click <u>here</u>. **New Company Aims to Turn Sandys Trash into Power; Air Advocates Skeptical** Sandy wants to host Utah's first waste-to-energy plant using a new technology that cooks trash into methane, which is then burned to generate electricity. While city officials say the \$125 million project will make Sandy the nation's first "total recycling city," clean-air advocates are deeply skeptical of Navitus Sustainable Industries' claims that its process would discharge far less pollution than traditional incineration. To read more, click <u>here</u>.

USDA Announces Funding for Renewable Energy and Energy Efficiency Projects

Sandy wants to host Utah's first waste-to-energy plant using a new technology that cooks trash into methane, which is then burned to generate electricity. While city officials say the \$125 million project will make Sandy the nation's first "total recycling city," clean-air advocates are deeply skeptical of Navitus Sustainable Industries' claims that its process would discharge far less pollution than traditional incineration. To read more, click here.

Plasco Offers Lesson in Sobering Reality

There were plenty of skeptics over Plasco Energy's chances of success, but nobody was celebrating its downfall this week. Just about everybody can agree with Mayor Jim Watson's sentiment that he wished Plasco had fulfilled its promise. At heart, we were all cheering for Plasco, our hometown entry in the trash-to-energy sweepstakes. So it was an unfortunate outcome for Ottawa on Tuesday, and a particularly sad one for the 80 people who lost their jobs, when the company filed for creditor protection. To read more, click <u>here</u>.

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Conversion Technology E-Newsletter - March 2015 03/12/2015

ANNOUNCEMENTS

Reimagine Phoenix Call for Innovators (CFI)

The City of Phoenix is asking for input from innovators with manufacturing processes and technologies that create new products or energy from items found in the trash. CFI responses will be used to craft future economic development opportunities for companies interested in growing in Phoenix. This is your chance to help re-shape how the city manages its trash. Find the CFI at: www.phoenix.gov/solicitations/277

Transforming Trash into Resources Pilot Program Request for Proposals (RFP)

Phoenix is also seeking innovators to repurpose/recycle the following items: carpeting and carpet foam, furniture, latex paint, mattresses, non-rechargeable batteries, palm fronds, and residential food waste. The city is looking to contract with businesses and non-profits for creative alternatives that divert these items from the landfill. Find the RFP at: www.phoenix.gov/solicitations/280

EVENTS

SWANAPalooza

March 16 - 19, 2015 New Orleans, LA For more information regarding this meeting, please visit the website: <u>https://swana.org/Events.aspx</u>

Alternative Technology Advisory Subcommittee (ATAS)

March 26, 2015 Alhambra, CA For more information regarding this meeting, please visit the website: <u>http://dpw.lacounty.gov/epd/tf/meetings.cfm</u>

Green California Summit

April 7-8, 2015 Sacramento, CA For more information regarding this meeting, please visit the website: http://www.green-technology.org/gcsummit/

BioCycle West Coast Conference 2015

April 13 - 16, 2015 Portland, Oregon For more information on this event, please visit the website: http://www.biocycle.net/

Waste Expo

June 1 - 4, 2015 Las Vegas, Nevada For more information on this event, please visit the website: <u>http://www.wasteexpo.com</u>

<u>NEWS</u>

64 Tons Per Day Gasification Plant Planned in Lebanon, TN

Nashville, Tennessee based waste to energy firm, PHG Energy, and the City of Lebanon, Tennessee, have signed a contract to develop a downdraft gasification plant that will cleanly convert up to 64 tons (58 tonnes) per day of blended waste wood, scrap tyres and sewer sludge. According to the company, the facility will provide an environmentally sustainable method of waste disposal while producing green power, generating up to 300 kW of electricity in the process. To read more, click <u>here</u>.

Gasification Plant Being Considered in Florida Keys

Yard waste from Monroe County, Florida will head west to a Lake Okeechobee town as a gasification plant is built in South Miami-Dade. Monroe County commissioners voted last week to sign a 30-month interim agreement with Energy 3, a Maryland firm pursuing efforts to build the new facility to convert Florida Keys yard waste into a synthetic fuel used by power plants. To read more, click <u>here</u>.

Dairy Farm AD Facility Operational in Tulare, CA

A first-of-its-kind anaerobic digester in California captures methane from agricultural waste and turns it into clean biogas to power an ethanol facility in Tulare County. The Calgren Ethanol Biodigester, which is now online, will power the production of tens of millions of gallons of ethanol, all consumed in California's Central Valley. To read more, click <u>here</u>.

0.8 MW AD facility operational in Lowell, MI

If the lights seem brighter in Lowell this week, it might have something to do with FOG, or maybe salad dressing. The Lowell Energy Anaerobic Digester - LEAD LLC - is now or will soon begin generating up to 800 kilowatts of power that will be purchased by the city-owned utility, Lowell Light & Power, and supplied to its 2,600 electricity customers. To read more, click <u>here</u>.

\$8 Million Dollar Anearobic Digestion Facility at Dairy Farm in Coopersville, MI

A large dairy farm is going to start producing electricity rather than smells from the manure produced by its 3,000-plus dairy cows, according to Sustainable Partners LLC (Spart), a

company that operates a similar power plant in Lowell. Spart announced it has been selected to build a 1.4 megawatt anaerobic digester at Beaver Creek Farm. Electricity generated by the \$8 million-plus digester will be used by the farm and sold to Consumers Energy. To read more, click <u>here</u>.

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Conversion Technology E-Newsletter - April 2015 04/15/2015

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Oregon Metro Releases Request for Expression of Interest to Manage MSW

The Parks and Environmental Service Department of Metro, a metropolitan service district located in Portland, Oregon, is inviting firms to prepare and submit responses to a Request for Expression of Interest (RFEOI) for managing municipal solid waste from the Metro region. They are seeking qualified, experienced and financially capable project developers and technology providers that are interested in implementing a project to help make best use of generated solid waste in an economically and environmentally sound manner. The RFEOI is available <u>here</u>.

CalRecycle Releases Two Reports: State of Disposal and State of Recycling

The California Department of Resources Recycling and Recovery (CalRecycle) recently released two major reports. <u>State of Disposal</u> discusses the disposal of solid waste in California, including the amounts and types of materials that are disposed, the facilities that handle disposed waste, the flow of disposed material into, out of, and within California, and how disposal is tracked. <u>State of Recycling</u> summarizes the current state of recycling in California, particularly with respect to the implementation of Assembly Bill 341 which established the statewide goal of 75 percent source reduction, recycling, or composting by 2020.

<u>EVENTS</u>

Alternative Technology Advisory Subcommittee (ATAS)

April 16, 2015 Alhambra, CA For more information regarding this meeting, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

CalRecycle Mandatory Commercial Organics Recycling Workshop

April 16, 2015 Sacramento, CA Webinar <u>Registration</u> For more information regarding this meeting, please visit the website: <u>http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1432&aiid=1303</u>

BioCycle West Coast Conference 2015

April 13 - 16, 2015

Portland, Oregon For more information on this event, please visit the website: <u>http://www.biocycle.net/</u>

CalRecycle Mandatory Commercial Organics Recycling Workshop

April 28, 2015 Diamond Bar, CA For more information regarding this meeting, please visit the website: http://www.calrecycle.ca.gov/Calendar/EventDetail.aspx?ID=3144&DS=ACES

Waste Expo June 1 - 4, 2015 Las Vegas, Nevada For more information on this event, please visit the website: http://www.wasteexpo.com

NEWS

Biosolids Gasification Plant Being Added to Wastewater Facility in San Jose

A wastewater facility in San Jose is making a major addition, bringing in new biomass gasification technology. The plan is to build a waste processing mega-facility at the <u>San</u> <u>Jos-Santa Clara Regional Wastewater</u> operation to generate synthetic fuels. To read more, click <u>here</u>.

\$50M Resource Recovery Facility with AD planned in Hawaii

BioEnergy Hawaii LLC (BEH) a designer, developer and operator of waste treatment and alternative energy systems, has announced plans for a fully integrated resource recovery facility to be located on the west side of Hawaii Island, Hawaii. To read more, click <u>here</u>.

Purdue Proposal to Build \$200M AD Facility in Maryland

A New Hampshire-based company has teamed with poultry giant Perdue to propose a \$200 million plant on the Eastern Shore to extract energy from chicken manure, offering its plan as a viable remedy for the farm pollution fouling the Chesapeake Bay. To read more, click <u>here</u>.

California Safe Soil Raising \$7.1M to Build Plant at McClellan

Food recycling and fertilizer company California Safe Soil LLC is raising money to build a new plant in 80,000 square-feet of warehouse space at McClellan Business Park. Safe Soil uses enzymes to digest supermarket food waste into liquid soil amendments. The company has operated a pilot plant in West Sacramento since 2012. The McClellan plant, when complete, will have a capacity 32 times larger than the existing plant, which may be kept. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - May 2015 05/14/2015

EVENTS

Alternative Technology Advisory Subcommittee (ATAS) May 21, 2015 Alhambra, CA For more information regarding this meeting, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

8th Making Cities Liveable Conference

July 6 - 7, 2015 Melbourne, Australia For more information regarding this meeting, please visit the website: <u>http://healthycities.com.au/abstracts.html</u>

California Resource Recovery Association (CRRA) 39th Annual Conference

August 4 - 7, 2015, 2015 Los Angeles, CA For more information on this event, please visit the website: <u>http://crra.com/</u>

<u>NEWS</u>

Experts Weigh In on New WTE, Recycling Laws in California

In September, California's Governor Jerry Brown signed three bills into law that aimed at increasing waste into energy conversion and recycling, including AB 1826, AB 1594, and SB 498. To read more, click <u>here</u>.

Battelle Team Passes Important DOE Pyrolysis Milestone

Scientists and engineers at Battelle Memorial Institute, Inc., demonstrated the durability of a continuous hydrotreatment process that converts bio oil from biomass pyrolysis into transportation and aviation fuels. To read more, click <u>here</u>.

Detroit Zoo Opens Crowdfunding Campaign for AD System

The Detroit Zoological Society and Michigan Economic Development Corp. recently announced a new crowdfunding campaign through Michigan-based crowdfunding platform Patronicity. The campaign will support an energy-producing biodigester that will harness the power of poo at the Detroit Zoo. To read more, click <u>here</u>.

CEC Awards \$5 Million for CA Forest Biomass Gasification Plant

The California Energy Commission (CEC) has awarded nearly \$5 million to Phoenix Energy for a proposed forest biomass gasification plant in North Fork, CA. The plant will be built by Phoenix Energy's joint venture North Fork Community Power. To read more, click <u>here</u>.

Gasification Plant Planned for San Jose

ICM Inc., based in Colwich, Kansas, has signed a contract with Florida-based JUM Global LLC, a global waste solution developer contracted with the city of San Jose, California, for a gasification demonstration unit using ICM's proprietary gasification technology. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - June 2015 06/11/2015

EVENTS

Alternative Technology Advisory Subcommittee (ATAS)

June 18, 2015, 9:00 a.m. Sanitation Districts of Los Angeles County, Joint Water Pollution Control Plant, Carson, CA For more information regarding this meeting, please visit the website: <u>http://dpw.lacounty.gov/epd/tf/meetings.cfm</u>

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California Resource Recovery Association (CRRA) 39th Annual Conference

August 4 - 7, 2015 Los Angeles, CA For more information on this event, please visit the website: <u>http://crra.com/</u>

Waste Conversion Technology Conference & Trade Show

August 17 - 19, 2015 San Diego, CA For more information on this event, please visit the website: http://wasteconversionconference.com/

WasteCon 2015 August 25 - 27, 2015 Orlando, FL For more information on this event, please visit the website: http://www.wastecon.org

<u>NEWS</u>

MSW and the Promise of Biotechnology

When it comes to its progress in achieving zero waste to landfills, the United States is on a par with Slovenia and the Czech Republic. Whats behind the resistance to CT in the U.S., and what can be done to shift the tide? To read more click, <u>here</u>.

Biomass Incentives for Farmers to Continue

The U.S. Department of Agriculture will resume incentives this summer for farmers, ranchers and forest landowners growing and harvesting biomass for renewable energy. To learn more, click <u>here</u>.

Anaerobic Digester Provides 8% of Energy Needs at Nestl's Fawdon Factory

Working to reduce the company's carbon footprint and environmental impact, management at Nestl UK & Ireland's Tyneside factory are working with Berkshire-based renewables firm Clearfleau to build a bespoke system for its Fawdon plant. To read more click <u>here</u>.

BioEnergy Hawaii Partners with Ulupono Initiative on Bioenergy Project

BioEnergy Hawaii LLC, a designer, developer and operator of waste treatment and alternative energy systems, has partnered with impact investment firm Ulupono Initiative to finance a resource recovery facility planned for the west side of Hawaii Island. To read more, click <u>here</u>.

World's Largest Gasification Plant Nears Completion

Air Products is due to begin processing 350,000 tonnes of RDF at its Tees Valley gasification facility in the coming months as the plant enters the final stages of commissioning. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - July 2015 07/13/2015

ANNOUNCEMENTS

In California, United Airlines announced a \$30 million direct investment in advanced biofuels developer Fulcrum BioEnergy, obtained an option to invest in five future commercial-scale aviation biofuels plants, and signed offtake agreements for up 90 million gallons of biofuels per year. The offtake contracts are worth an estimated \$1.58 billion over the 10-year offtake span, based on the current jet fuel price of \$1.76 per gallon. To read more, click here.

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Alternative Technology Advisory Subcommittee (ATAS)

August 20, 2015 Alhambra, CA For more information on this event, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

WasteCon 2015

August 25 - 27, 2015 Orlando, FL For more information on this event, please visit the website: <u>http://www.wastecon.org</u>

5th Low Carbon Earth Summit 2015

September 24 26, 2015 Xian Qujiang, International Earth Center, China For more information on this event, please visit the website: http://www.lcesummit.com/

<u>NEWS</u>

BioPower Subsidiary Green3Power to Build \$175M Renewable Energy Facility in St. Lucie County, FL

BioPower Operations Corporation (OTCQB: BOPO) announced today that its whollyowned subsidiary, Green3Power Operations Inc. (G3P), has won the award to build a \$175 Million renewable energy facility converting waste into ultra-low sulfur synthetic green No. 2 diesel fuel using G3P's exclusively licensed gasification technology and the Fischer-Tropsch process. To read more, click <u>here</u>.

Floridas Palm Beach County to Host Grand Opening of Waste-to-Energy Facility

The Solid Waste Authority of Palm Beach County held a ribbon cutting ceremony celebrating the grand opening of its advanced waste-to-energy facility, the Palm Beach Renewable Energy Facility 2. It is the considered cleanest and most-advanced power plant of its kind in North America. To read more, click <u>here</u>.

Linde Air Separation/Gasification Units Officially On-Stream in Texas

Linde North America celebrated the official start-up of its atmospheric gases unit and gasification train, along with associated supporting facilities, in La Porte, Texas. Customers, local and state officials and Linde executives who attended the ribbon-cutting event were given a tour of the new facilities as well as an explanation of the air separation and syngas processes and the markets served. To read more, click here.

New Hampshire Pilot to Fund Large-Scale Wood Heat Systems

New Hampshire has been selected to be the site of a pilot project designed to provide capital for community-scale wood heating systems. The project, called the NH T-RECs Enterprise Fund, will be the first financed by the Local Energy for America Fund (LEAF), a joint venture of the U.S. Endowment for Forestry and Communities and the US Forest Service. To read more, click <u>here</u>.

Biodiesel Firm Opening in Dain City, Ontario

By this fall, the largest producer of biodiesel in Canada will open its doors in Dain City, Ontario. Great Lakes Biodiesel, Inc. announced Wednesday that the company has reached the final stage of construction on a plant that will produce 170 million litres of biodiesel per year, making it the largest producer in the country of the cleaner-burning fuel. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - August 2015 08/13/2015

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August 20, 2015 Alhambra, CA For more information on this event, please visit the website: <u>http://dpw.lacounty.gov/epd/tf/meetings.cfm</u>

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5th Low Carbon Earth Summit 2015

September 24 26, 2015 Xian Qujiang, International Earth Center, China For more information on this event, please visit the website: http://www.lcesummit.com/

4th Annual Anaerobic Digestion and Biogas Summit 2015

December 2 - 3, 2015 San Francisco, CA For more information on this event, please visit the website: http://analysis.renewable-waste.com/events-list

<u>NEWS</u>

Federal Bioenergy Legislation Moves Forward

During the final week of July, three pieces of Federal legislation were introduced in Congress aiming to positively impact the biorefining industry. Two of the bills, H.R. 3390 and H.R. 3392, aim to benefit bioenergy technologies. A third bill, H.R. 3228, would limit Federal cellulosic biofuel requirements under the renewable fuel standard (RFS) pending the findings of comprehensive study National Academy of Sciences. To read more, click <u>here</u>.

MassCEC Awards 1.1 Million to Biogas Projects

Massachusetts Clean Energy Center (MassCEC) CEO Alicia Barton recently announced \$1.1 million in funding for three projects across Massachusetts that will convert organic materials into energy. To read more, click <u>here</u>.

Renewable Energy Group Announces \$31 Million Upgrade of Danville, IL, Biorefinery

Renewable Energy Group, Inc. announced last month that it will invest \$31 million to upgrade and enhance the Companys Danville, Illinois biodiesel refinery. To read more, click <u>here</u>.

California Funds 5 Dairy Digester Projects

The California Department of Food and Agriculture has awarded \$11.1 million to support five anaerobic digestion projects at dairy operations around the state. The projects will reduce greenhouse gas emissions from dairy manure. These five projects are expected to produce over 30 million kilowatt hours annually. To read more, click <u>here</u>.

Big Blue Bus Announces Plan to Convert Fleet to Renewable Natural Gas (RNG) Santa Monica, CA

The City of Santa Monicas Big Blue Bus (BBB) announced today that it has become one of the countrys first municipal transit authorities to convert its fleet to renewable natural gas (RNG), rated 90% cleaner than diesel and considered the cleanest transportation fuel available. Earlier this year, BBB modified its original agreement with Clean Energy Fuels Corp. to transition the supply of Liquefied Natural Gas (LNG) for its fleet to Clean Energys Redeem renewable LNG (Redeem), which is non-fracked methane harvested from organic waste in landfills. To read more, click here.

12 Points that Explain the State of the WTE Market

Heres a look at some of the key information on the state of waste-to-energy in the United States. The nations waste-to-energy facilities process in excess of 30 million tons of trash per year, sell more than 14.5 million megawatt hours to the grid, and recover more than 730,000 tons of ferrous metals for recycling. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - September 2015 09/10/2015

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5th Low Carbon Earth Summit 2015

September 24 26, 2015 Xian Qujiang, International Earth Center, China For more information on this event, please visit the website: http://www.lcesummit.com/

Gasification Technologies 2015 Conference

October 11 14, 2015 For more information on this event, please visit the website: http://www.gasification.org/events/2015-gasification-technologies-conference/

4th Annual Anaerobic Digestion and Biogas Summit 2015

December 2 3, 2015 San Francisco, CA For more information on this event, please visit the website: http://analysis.renewable-waste.com/events-list

<u>NEWS</u>

Nature's Methane reaffirms commitment to Louisville

Nature's Methane LLC is pursuing plans for a biofuel facility in Louisville, Kentucky. The company said it would be working with Heaven Hill Distilleries Inc., which would send production waste such as grain to Nature's Methane for reprocessing through anaerobic digestion into biofuel. To read more click here.

Food Waste and Beef Fat Will Be Making Airplanes Soar United has purchased 15 million gallons of renewable jet fuel made from beef tallow and plans to use the fuel this year for Los Angeles-to-San Francisco flights. The airline has also invested \$30 million in Fulcrum BioEnergy, Inc., which uses household garbage, including food waste, for its fuel feedstock. FedEx and Southwest Airlines recently each bought 3 million gallons of jet fuel that will be made from forest waste. FedEx has a goal to get 30 percent of its jet fuel from alternative sources by 2030. UPS announced it would purchase 46 million gallons of renewable diesel made from used cooking oils, animal fats and algae in the next three years for its delivery trucks. To read more click here.

Sevier Solid Waste Building Biomass Gasification Plant with Clean Energy Tennessee Grant

A new biomass gasification plant capable of converting more than 30 tons of composted material daily into thermal energy while producing a valuable high-carbon biochar will be built in Tennessee, to be completed in 2016. The Sevier Solid Waste facility processes more than 100,000 tons of garbage annually and 60% of waste processed is made into compost. The carbon footprint of the facility will be reduced by over 450 tons of CO2 emissions each year. The cost of the project is \$2.25 million and utilizes a \$250,000 Clean Energy Tennessee Grant. To read more click here.

CR&R to Build New \$100M Anaerobic Digestion Plant in California CR&R Waste and Recycling Services in Perris, CA, expects to have a \$100 million anaerobic digester complex up and running by early 2016. The plant will be able to process 84,000 tons of waste each year. The digesters take in food scraps and combine them with yard waste to yield fertilizer and a form of natural gas that is capable of powering about 45% of the trucks in the companys trash hauling and street-sweeping fleet. To read more click <u>here</u>.

Governor Cuomo Announces Innovative Clean Energy Project on Long Island Under Reforming the Energy Vision

The first large-scale anaerobic digester in the New York City Metropolitan Area will process 120,000 tons of food waste, 30,000 tons of fats, oils and greases, and 10,000 tons of grass clippings from the Long Island region annually into clean energy, advancing communities toward a more sustainable future. The project, which is scheduled to be completed in August 2016, is expected to reduce greenhouse gas emissions by approximately 40,000 tons annually, equivalent to removing 8,125 cars from the road. It will be operated located at a 62-acre facility in Yaphank, Suffolk County. To read more click <u>here</u>.



Conversion Technology E-Newsletter - October 2015 10/15/2015

EVENTS

Alternative Technology Advisory Subcommittee Meeting (ATAS) October 15, 2015 Alhambra, CA For more information on this event, please visit the website: http://dpw.lacounty.gov/epd/tf/meetings.cfm

Gasification Technologies 2015 Conference

October 11 14, 2015 For more information on this event, please visit the website: <u>http://www.gasification.org/events/2015-gasification-technologies-conference/</u>

Los Angeles Cleantech Incubator (LACI) Clean Tech Global Showcase 2015 October 21-22, 2015 Los Angeles, CA http://glosho.la/

4th Annual Anaerobic Digestion and Biogas Summit 2015 December 2 3, 2015 San Francisco, CA For more information on this event, please visit the website: http://analysis.renewable-waste.com/events-list

VerdeXchange Conference

January 24-26, 2016 Los Angeles, CA For more information on this event, please visit the website: <u>http://www.verdexchange.org/</u>

NEWS

Bio-gas Plant at Toronto Zoo Should Start Operations by Late 2016, Early 2017 Ontarios government approved the operation of a proposed bio-gas plant at the Toronto Zoo. Zoo animal manure and grocery store waste will be converted into compost and electricity. The 500-kilowatt anaerobic digester will replace the zoos open-air composting operation. To read more, click <u>here</u>.

Enerkem Raises Funds for Expansion, Begins Biofuel Production in Edmonton Clean-tech company Enerkem, Inc., has raised \$152.6-million for future expansion and is now at full scale in the production of biofuel from non-recyclable municipal garbage at its Edmonton facility. It will eventually be able to produce 38 million liters of ethanol a year. Ethanol production is scheduled to begin in the second half of 2016. To read more, click <u>here</u>.

Efforts to Recycle Food Waste Ramping Up in Connecticut State officials granted the first permit for a new anaerobic digestion facility in Bridgeport four years after state legislators required certain commercial operations to recycle organic material. There are three other similar digester facilities proposed two in Southington and one in North Haven. They are in various stages of permitting. To read more, click <u>here</u>.

GE, Phoenix Energy Progress California Biomass Gasification Plans GEs Distributed Power business, Western Energy Systems, will supply technology to Phoenix Energys planned biomass gasification plant in North Fork, California. The GE gasification solution will be used to convert excess forest biomass to electricity, heat and biochar. Phoenix Energy plans to commence operation of the plant in the fourth quarter of 2016. To read more, click <u>here</u>.

Sendik's Stores to Grind out Energy from Food Waste Sendik's is installing grinding systems that will help turn scraps into energy. The grocery store chain will add systems at 11 of its 12 local stores as well as its distribution center. The company expects to eliminate the equivalent of 4.7 million car miles worth of greenhouse gas emissions through the waste to energy process. The food waste is expected to generate enough natural gas to heat 1,500 homes for a month, and create more than 407,000 pounds of fertilizer. To read more, click <u>here</u>.



Conversion Technology E-Newsletter - November 2015 11/12/2015

ANNOUNCEMENTS

Southern California Waste Management Forum to Host Annual Conference

The Southern California Waste Management Forum will be hosting its annual conference and exhibit at the Sheraton Fairplex Hotel in Pomona on November 18, 2015. The Forum will welcome a panel of six waste industry experts from the public, private, and non-profit sectors to discuss a wide array of important topics confronting the future of Californias waste management sector. The panelists will engage in issues such as managing organic and pharmaceutical materials, conversion and renewable energy technologies, public outreach and messaging, and a broad swath of other policy and educational related issues specific to these topics. То read more. click here.

EVENTS

Alternative Technology Advisory Subcommittee Meeting (ATAS) December 15, 2015 Alhambra, CA For more information on this event, please visit the website: <u>http://dpw.lacounty.gov/epd/tf/meetings.cfm</u>

VerdeXchange Conference

January 24-26, 2016 Los Angeles, CA For more information on this event, please visit the website: <u>http://www.verdexchange.org/</u>

Global Waste Management Symposium

January 31 February 3, 2016 Palm Springs, CA For more information on this event, please visit the website: http://www.wastesymposium.com/ws16/public/enter.aspx

BioCycle West Coast Conference

April 4 7, 2016

San Diego, CA For more information on this event, please visit the website: <u>http://biocyclewestcoast.com/</u>

<u>NEWS</u>

Constellation and LA Sanitation Start Construction on Biogas-Fueled Cogeneration Plant

Constellation, a subsidiary of Exelon Corporation, and LA Sanitation announced the start of construction of a 25-megawatt (net) biogas-fueled cogeneration plant, which will use steam and electricity to power LA Sanitations Hyperion Water Reclamation Plant. The plant is expected to generate more than 173 million kilowatt-hours of electricity per year and supply up to 70,000 pounds per hour of steam. The plant is expected to avoid the release of approximately 100,000 metric tons of carbon dioxide each year, or the equivalent emissions from over 21,000 passenger vehicles annually. Commercial operation of the Hyperion cogeneration plant is scheduled for the end of 2016. To read more, click here.

Fueling Trucks with Garbage

The City of Manteca, California plans to take food waste and combine it with other organic waste at the citys wastewater treatment plant to produce methane gas to eventually power a municipal fleet of 30 solid waste trucks, resulting in cleaner air and lower fuel costs. Food waste collected from Manteca and the nearby city of Tracy is expected to be enough to fuel 30 trucks. Food waste will be separated from the rest of the garbage at Lovelace Transfer Station and then trucked to the wastewater treatment plant. To read more, click <u>here</u>.

California Adopts Four Laws to Develop Recycling, Composting, Waste Reduction

California has adopted four new laws addressing organics, recycling and waste diversion. AB 1045 requires state entities to work together for the development and deployment of composting. AB 876 requires local governments to plan for the building of sufficient composting and anaerobic digestion infrastructure to process for a 15-year period in their jurisdictions. AB 199 creates a sales-and-use tax exemption for businesses on purchases of equipment used for recycling and composting. AB 888 bans personal care products containing plastic microbeads that are designed to be rinsed down the drain. To read more, click here.

An Embattled EPA Declares Biofuels Volumes for 2016

The EPA called for an increase in the amount of ethanol and other renewable fuels blended into the nations overall fuel supply next year. The EPA set out a goal of 18 billion gallons of renewable fuels overall for 2016, far less than the renewable fuel level anticipated by the statute at issue, a 2007 law that envisioned 22.25 billion gallons by 2016. The goal of the legislation was to ensure the blending of ever-increasing amounts of biofuels into the nations transportation fuels, supplanting more and more petroleum and ultimately culminating in 36 billion gallons of renewable fuels by the year 2022. To read more, click <u>here</u>.

Manure from Millions of Hogs Fuels Natural Gas Project

A joint project in northern Missouri involving Roeslein Alternative Energy and Smithfield Food Hogs Production will convert manure from 2 million hogs on nine farms into renewable natural gas, with a goal of selling it as soon as 2016. The first phase, with an estimated cost of \$120 million, will use impermeable covers to turn lagoons containing manure into anaerobic digesters, which decompose the manure and force biogas to the top. Special machines collect and clean the biogas, leaving more than 98 percent methane with nearly the same chemical composition as natural gas. Developers expect the first phase to produce about 2.2 billion cubic feet of natural gas, which will go into the national natural gas pipeline. The second phase would add native prairie grasses planted on erodible or marginal farm land to the manure to increase the biomass. To read more, click <u>here</u>.



VerdeXchange Conference 2016 12/23/2015

Greetings and Happy Holidays,

We would like to thank all of our readers for your support in 2015 and wish you all Happy Holidays!

We look forward to an exciting New Year starting with a Conversion Technology Panel at the VerdeXchange Conference in Los Angeles on January 26, 2016. The panel will be moderated by Coby Skye of Los Angeles County Department of Public Works and will feature noted speakers from both the public and private sectors such as Enrique Zaldivar, Director of the City of Los Angeles Bureau of Sanitation, Paul Relis, Senior Vice President at CR&R, Inc., and other accomplished environmental professionals and civic leaders. Further details highlighting the events program, speakers, and venue can be found at <u>www.verdexchange.com</u>.

To encourage participation, we would like to provide you with a 20% off registration discount code VX16PW. We hope you can join us, and we look forward to seeing you there.

Questions or Comments? Please email us at staff@socalconversion.org.