Alternative Technology Advisory Subcommittee
Los Angeles County Solid Waste Management Committee/
Integrated Waste Management Task Force

Minutes for June 18, 2020

WEB CONFERENCE

Los Angeles County Public Works
900 South Fremont Avenue
Alhambra, CA 91803

SUBCOMMITTEE MEMBERS PRESENT:
Steve Cassulo, Waste Connections
Chris Coyle, rep by Dennis Montano, Republic Services – Sunshine Canyon Landfill
Tim Hall, California Department of Resources Recycling and Recovery (CalRecycle)
Wayde Hunter, North Valley Coalition of Concerned Citizens, Inc.
Ron Kent, rep by Paul Ghougassian, Southern California Gas Company
Ben Lucha, City of Palmdale
Kevin Mattson, Waste Management
Mark McDannel, County Sanitation Districts of Los Angeles County
Mike Mohajer, Los Angeles County Integrated Waste Management Task Force
Christopher Sheppard, Los Angeles County Public Works
Carolyn Watson, rep by Dorcas Dee Hanson-Lugo, Los Angeles County Department of Public Health

SUBCOMMITTEE MEMBERS NOT PRESENT:
Alex Helou, City of Los Angeles
Kay Martin, Bioenergy Producers Association
Eugene Tseng, UCLA Solid Waste Program
Rob Williams, UC Davis Policy Institute for Energy, Environment and the Economy

OTHERS PRESENT:
Jeff Anderson, Full Cycle Bioplastics
Tracy Anthony, Alternative Resources, Inc.
Jim Osborn, Los Angeles County Public Works
Carol Oyola, Los Angeles County Public Works
Sarah Solomon, Los Angeles County Public Works
Kawsar Vazifdar, Los Angeles County Public Works
Elizabeth Zaragoza, Los Angeles County Public Works
Jeffrey Zhu, Los Angeles County Public Works

I. CALL TO ORDER

Mr. Christopher Sheppard called the meeting to order at 10:04 a.m.

II. APPROVAL OF FEBRUARY 20, 2020, and May 21, 2020 SUBCOMMITTEE MINUTES

A motion to approve the minutes from the February 20, 2020, and May 21, 2020, meeting was made by Mr. Mike Mohajer and seconded by Mr. Wayde Hunter. The motion passed unanimously.

III. PRESENTATION FULL CYCLE BIOPLASTICS

Mr. Jeff Anderson is the co-founder and co-inventor of Full Cycle Bioplastics (FCB) and presented on its technology. FCB converts organic waste to high-value biodegradable plastic called PHA. The plastic is industrial and home compostable, and is also certified as fish food additive for agriculture.

Mr. Anderson stated that FCB co-locates with composting and anaerobic digestion facilities. He explained that the food waste is collected and then broken down using a bacterial process that turns food waste to PHA. The PHA can be used to make products such as bottles, cups, bags, etc. These bioplastic products can be discarded in the organic waste bins, instead of recycling bins, where they can be processed at a composting facility again to create virgin PHA. Mr. Anderson explained that FCB works together with clients on making backend products at facilities. FCB makes sure there is a market for those products, to avoid waste haulers or municipalities having to become involved in marketing and selling the product.

Mr. Anderson explained that the technology breaks down food waste using the acid phase of anaerobic digestion and then feeds the volatile fatty acid stream to bacteria that produce PHA. Mr. Anderson stated that FCB can process cellulose, forestry waste, green waste, and food waste. The type of feedstock will determine what hydrolysis breakdown step is used to obtain the volatile fatty acids in the most cost-effective way. The system can process various different feedstocks because the true feedstock is the volatile fatty acids.

Mr. Anderson stated that FCB is preparing to build their first commercial scale facility, following the success of their demonstration facility built at Google's headquarters campus in Mountain View, California. Google generates four tons per day of pre-consumer food waste from their commercial kitchen. FCB creates compost, PHA, and treated greywater from the food waste. Google has expressed an interest to use the PHA to make their food packaging.

Mr. Anderson stated that FCB is currently looking for commercial scale partners. FCB is willing to fully finance the projects and not have waste haulers, compost facilities, or municipalities invest any capital.

Mr. Tim Hall asked how long it takes to compost the bioplastic at an industrial facility. Mr. Anderson responded that PHA can take anywhere from two weeks to two months, depending on how it is pre-processed.

Mr. Mark McDannel asked Mr. Anderson to address co-digestion at wastewater treatment plants as well as wet or dry standalone food digestion systems and how they would compare to FCB. Mr. Anderson responded that producing PHA is two to three times more profitable than producing methane through anaerobic digestion facility. The facilities finance themselves quickly with no subsidies.

Mr. Sheppard asked if any jurisdictions have authorized placing PHA products into the green bin. He also asked how would FCB label or differentiate their packaging so that consumers would understand how it should be handled. Mr. Anderson responded that PHA is a certified compostable plastic and that it can go into the green bins. He noted that PHA is now suffering from the reputation that PLA (Polylactic Acid) has regarding compostability. PLA is the leading bioplastic in the market and is technically a certified compostable, but most waste haulers pull it out of their organic waste stream because it takes too long to break down. Mr. Anderson stated that FCB is planning to differentiate both the technology and the certification, as well as the education, from PLA.

IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION

Ms. Kawsar Vazifdar gave an update on policy and legislation. She reminded the members that the California Office of Administrative Law (OAL) disapproved the Senate Bill 1383 rulemaking package. CalRecycle prepared a fourth formal draft to address some of the reasons the OAL disapproved the regulations. The fourth formal draft was also released for a 30-day comment period that ended on May 20, 2020. CalRecycle has until September 2020 to resubmit the rulemaking package to the OAL to reconsider for approval.

V. UPDATE ON CONVERSION TECHNOLOGY EVENTS/MEETINGS/OUTREACH ACTIVITIES

Ms. Vazifdar mentioned the following conferences that are also listed in the Conversion Technology Newsletter, as well as in the ATAS minutes.

- Resource Recycling Conference – August 10-12, 2020, postponed to 2021 in Austin, TX.
- California Resource Recovery Association 44th Annual Conference and Trade Show – August 16-20, 2020, will be held virtually, unsure if entire conference and trade show is virtual.
- Waste Conversion Technology Conference – August 17-19, 2020, postponed to August 16-18, 2021, in San Diego, CA.
- County Engineers Association of California Policy Conference – August 19 and 20, 2020, will be held virtually.

- Biogas: Driving the US Circular Economy Conference – September 10, 2020, will be held as a live Webcast.
- 2020 NetZero Conference – September 15 and 16, 2020, will be held virtually.

Mr. Mohajer mentioned that the Southern California Waste Management Forum annual conference is scheduled for November 5, 2020. This conference is typically held at the Sheraton in Pomona, California, but this year will most likely be a virtual conference instead.

VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Vazifdar provided the following update on behalf of Mr. Jim Osborn of ARI:

- ARI prepared a draft economic analysis to consider the use of a small-scale anaerobic digestion technology at Public Works Headquarters as staff was considering applying for United States Environmental Protection Agency anaerobic digestion funding opportunity, but ultimately decided not to pursue this opportunity.

Ms. Vazifdar asked if anybody else had any project development updates. Mr. McDannel mentioned that the Sanitation Districts' biogas conditioning system, which will produce fuel for vehicles, is in final construction and should begin operating in August 2020. The new slurry receiving station, which can accept food waste slurry for direct injection into the digesters rather than the headworks, is being built in two phases. Phase 1 startup is in August or September and Phase 2 startup is by the end of the year. As a design-bid-build project, the budget was estimated to be $25 million, so the Sanitation Districts decided to have their staff build it for under $3 million. Mr. McDannel commented that they would be able to take several hundred tons of food waste by the end of the year, but did not know the exact amount. The Sanitation Districts were previously receiving about 330 tons per day of slurry and since COVID-19, the amount of incoming slurry has decreased to about 280 tons per day.

Kevin Mattson of Waste Management commented they are working in a partnership with Hitachi Zosen INOVA at their Lancaster Landfill to build a plug flow digester. He will provide an update at next month's Subcommittee meeting.

VII. PUBLIC COMMENTS

No comments.

IX. ADJOURNMENT

The meeting adjourned at 11:58 a.m. The next ATAS meeting is tentatively scheduled remotely for Thursday, July 16, 2020, at 10 a.m.