

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

Minutes for October 15, 2020

WEB CONFERENCE

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

SUBCOMMITTEE MEMBERS PRESENT:

Steve Cassulo, rep by Brenda Eells, Waste Connections
Tim Hall, rep by Michelle Dewey, 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
Eugene Tseng, UCLA Solid Waste Program
Carolyn Watson, rep by Dorcas Dee Daniel-Lugo, Los Angeles County Department of Public Health

SUBCOMMITTEE MEMBERS NOT PRESENT:

Chris Coyle, Republic Services, Inc. – Sunshine Canyon Landfill
Alex Helou, City of Los Angeles
Kay Martin, Bioenergy Producers Association
Rob Williams, UC Davis Policy Institute for Energy, Environment and the Economy

OTHERS PRESENT:

Traecey Anthony, Alternative Resources, Inc.
Kieran Mitchell, Caribou Biofuels
Carol Oyola, Los Angeles County Public Works
David Rosen-Hoist, Caribou Biofuels
Sarah Solomon, Los Angeles County Public Works
Kawsar Vazifdar, 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 10:01 a.m. He announced, "The Great Shakeout Earthquake Drill: Drop, Cover and Hold On", California earthquake drill, that would occur at 10:15 a.m.

II. APPROVAL OF SEPTEMBER 17, 2020 SUBCOMMITTEE MINUTES

A motion to approve the minutes from the September 17, 2020 meeting was made by Mr. Mike Mohajer and seconded by Mr. Eugene Tseng. The motion passed unanimously.

III. PRESENTATION – CARIBOU BIOFUELS

Mr. Kieran Mitchell gave a presentation on Caribou Biofuels, a company in California commercializing a pyrolysis and gasification technology that turns forestry waste, agricultural waste and municipal solid waste (MSW) into a syngas that can be used to make fuel or electricity and biochar. He explained that an advantage of this technology is that the fuel does not require additional processing or refining, and the system is small and compact.

The presentation was interrupted for a few minutes for the earthquake drill.

Mr. Mitchell resumed explaining how this technology can also produce hydrogen, but the lead engineers chose not to pursue hydrogen production because of safety issues. He noted that the technology is significantly less expensive than comparable technologies. He added that producing gasoline results in much higher revenues than electricity generation.

Mr. Tseng asked if Caribou has tested mixed municipal solid waste (MSW), rather than very clean source-separated feedstock. Mr. Mitchell responded that they have and that the system is ideal for mixed MSW including steel, rocks, food waste, plastic waste, and more.

Mr. Tseng mentioned that the mixed MSW stream is highly variable in terms of carbon and moisture content and asked how Caribou deals with the different amounts of residence time that are required. Mr. Tseng also asked if the technology is a continuous feed technology. Mr. Mitchell responded that it is a continuous feed technology and that testing has shown that the technology can handle mixed feedstocks.

Mr. Tseng questioned whether the production of biochar would offer financial benefits, since there are limits on the amount of biochar that can be used in concrete mixtures and asked if Mr. Mitchell was referring to the financial benefits of using biochar as a fuel in the production of cement rather than using it for finished concrete. Mr. Mitchell responded that the properties of biochar can offer specific advantages, such as producing a concrete that is lightweight and can absorb sound.

Mr. Sheppard asked if the Department of Energy (DOE) demonstration project would be sited in the City of Modesto in California. Mr. Mitchell responded that the City of Modesto is one option, but that the demonstration project will likely be sited at the Rochester Institute of Technology in New York.

Mr. Wayde Hunter asked about the cost of a portable unit. Mr. Mitchell responded that the initial units are projected to be \$500,000 to \$600,000 each since they are prototypes, but that mass manufacturing will reduce the price to \$200,000 to \$300,000.

Mr. Tseng suggested that Mr. Mitchell review the Assembly Bill 1126 requirements for a gasification facility to ensure that the technology would not be an incinerator. Mr. Mitchell responded that Caribou has been working with South Coast Air Quality Management District, San Joaquin Air Quality Management District, and the California Air Resources Board to address this issue. Mr. David Rosen-Hoist added that Caribou Biofuels is analyzing the standards for each air quality district to ensure compliance.

Mr. Sheppard thanked Caribou Biofuels for their presentation.

IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION

Ms. Sarah Solomon provided the following update:

- CalRecycle has resubmitted the Senate Bill 1383 (SB 1383) regulatory package to the Office of Administrative Law for approval.
- Governor Gavin Newsom approved Assembly Bill 3163 (AB 3163), which expands the definition of biomethane to include the methane produced from non-combustion thermal conversion, gasification, or pyrolysis of organic waste.

Mr. Sheppard commented that last year the County sponsored Assembly Bill 2612 (AB 2612) related to funding for additional recycling infrastructure and organic waste processing infrastructure was not passed due to the focus on COVID-related bills. The County is currently considering pursuing a bill in the coming year related to infrastructure funding and will keep both the ATAS and Task Force informed.

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

Ms. Solomon mentioned the following conferences that are also listed in the Conversion Technology (CT) Newsletter.

- Biocycle REFOR 2020 – October 19 – 22, 2020, in Raleigh, NC – Cancelled
- Paper and Plastics Recycling Conference – live broadcast scheduled on October 20 - 22, 2020.

- VERGE 2020 Conference – held virtually on October 27 – 29, 2020.
- Annual Southern California Waste Management Forum Conference - held virtually on November 5, 2020.
- CSAC 126th Annual Meeting/CEAC Fall Conference – held virtually on November 12 - 19, 2020.
- National Zero Waste Conference – held virtually on December 1 - 3, 2020.

Mr. Mohajer stated that he asked CalRecycle at last month's Subcommittee meeting whether or not AB 3163 materials would be considered disposal under Assembly Bill 939 (AB 939) and asked if Public Works had received a written response from CalRecycle. Mr. Sheppard answered that Public Works received a written response from Ms. Michelle Dewey of CalRecycle and that he would forward the response to Mr. Mohajer, as well as the other Subcommittee members. Mr. Sheppard added that CalRecycle is counting AB 3163 material as disposal. Ms. Dewey added that livestock waste and municipal sewage sludge or biosolids do not fall under the definition of biomass, so the production of biomethane from those feedstocks would be considered transformation for the purposes of AB 939. Mr. Mohajer responded that counting AB 3163 materials as disposal is a disincentive to produce biomethane from these materials, and that CalRecycle must work with the legislature to change the law. Mr. Mitchell reiterated Mr. Mohajer's concern. Mr. Sheppard commented that the ATAS strongly advocates to change the definition of biomass and that the Task Force will also continue to advocate for this change.

VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Traacey Anthony of Alternative Resources, Inc. (ARI) gave the following update:

- Clements Environmental provided additional information for thresholds associated with Title V permitting for composting and anaerobic digestion (AD) and has reached out to the air management districts for more information on ammonia emissions.
- ARI prepared a draft fact sheet for Public Works' review comparing AD development and implementation for source-separated organic waste and municipal solid waste in Europe versus the United States.
- ARI responded to Public Works' questions on small-scale organic waste processing technologies.
- ARI performed end-product market research for compost and mulch availability and quality in association with the SB 1383 procurement strategy.
- ARI continued research for additional sites on the list of potential sites for CT development.

Mr. Sheppard mentioned that no feedback was received from the Subcommittee on the facility permitting pathway flowcharts and they were posted on the Southern California Conversion Technology website.

Mr. Sheppard asked Mr. Kevin Mattson to provide an update on the project that he will be presenting at a future Subcommittee meeting. Mr. Mattson stated that the new Sun Valley Recycling Park Transfer Station began operating this week and that they are commissioning the organics processing facility.

VII. PUBLIC COMMENTS

No comments.

IX. ADJOURNMENT

The meeting adjourned at 11:03 a.m. The next ATAS meeting is tentatively scheduled remotely for Thursday, November 19, 2020, at 10 a.m.