

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

Minutes for February 17, 2022

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
Dorcas Dee Daniel-Lugo, Los Angeles County Department of Public Health
Michelle Dewey, California Department of Resources Recycling and Recovery
(CalRecycle)
Wayde Hunter, North Valley Coalition of Concerned Citizens, Inc.
Ben Lucha, City of Palmdale
Kay Martin, rep by Jim Stewart, Bioenergy Producers Association
Kevin Mattson, Waste Management
Mark McDannel, rep by William Chen, Los Angeles County Sanitation Districts
Mike Mohajer, Los Angeles County Integrated Waste Management Task Force
Darshna Patel, City of Los Angeles
Christopher Sheppard, Los Angeles County Public Works
Eugene Tseng, UCLA Solid Waste Program

SUBCOMMITTEE MEMBERS NOT PRESENT:

Alex Helou, City of Los Angeles
Ron Kent, Southern California Gas Company

OTHERS PRESENT:

Christine Arbogast, Tetra Tech
Charles Darensbourg, Los Angeles County Public Works
Patrick Holland, Los Angeles County Public Works
Carol Oyola, Los Angeles County Public Works
Narek Vartunian, 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 10:03 a.m.

II. **APPROVAL OF JANUARY 20, 2022 SUBCOMMITTEE MINUTES**

A motion to approve the minutes from the January 20, 2022 meeting was made by Mr. Mike Mohajer and seconded by Mr. Wayne Hunter. The motion passed unanimously.

III. **PRESENTATION – Electro-Active Technologies**

Mr. Alex Lewis, co-founder and CEO of Electro-Active Technologies (EAT) based in Knoxville, Tennessee, presented on their technology. He stated that EAT has an onsite modular system which processes the liquid fraction of organic waste to produce hydrogen. He said that the hydrogen is further processed for use in different types of fuel cells and that the residuals can be used for composting, animal feed, and other applications.

Mr. Lewis said that EAT has had conversations with transport agencies such as SunLine Transit in Southern California and AC Transit in the Bay area about co-locating systems to create renewable hydrogen. He stated that they are currently developing pilot scale projects in California, New York, Tennessee, and Korea.

Mr. Eugene Tseng asked about the contamination tolerance of the technology. Mr. Lewis responded that it can tolerate contamination because of their pre-treatment step, but they are still conducting testing. Mr. Tseng asked how durable the microbes in the system are. Mr. Lewis responded that the microbes can handle fluctuations and variations. He added that they also perform an enrichment and adaptation period for every customer to ensure microbe durability. Mr. Tseng asked how the system handles salt. Mr. Lewis responded that EAT has tested a range of salt concentrations, but they still need to conduct more testing to validate the upper limit of salt concentration. He added that the system requires a certain minimum amount of salt and their process can add salt or dilute with water. Mr. Tseng explained that the 20 percent solid fraction remaining after the liquid extraction process can contain 30 to 35 percent contamination, due to the high contamination rate of source-separated organic waste. Mr. Lewis responded that EAT is interested in discussions with waste haulers to understand contamination levels in various feedstocks.

Mr. Sheppard asked how long it takes for the microbes to adapt to the waste stream. Mr. Lewis responded the timeframe can vary based on the waste stream, but it usually takes no more than a month at most. Mr. Sheppard asked about the smallest amount of feedstock their technology can handle. Mr. Lewis responded that fuel cell technology is not economical at a small scale. He added that pilot-scale systems

that process 450 pounds of waste per day and make less than a one kilogram of hydrogen per day can be economical on their own, but do not produce enough hydrogen to supply a fuel cell technology. He continued that EAT expects that the minimum size for economic feasibility is two wet tons of waste per day to produce ten kilograms of hydrogen per day. Mr. Sheppard asked if EAT can connect to existing natural gas systems. Mr. Lewis responded that they want to discuss the blending of hydrogen and natural gas networks with companies such as SoCalGas. He also stated that they want to discuss the blending of hydrogen into combustion engines with companies such as Mitsubishi. Mr. Sheppard asked about the maintenance required, such as replacing cathodes and plates. Mr. Lewis responded that they are currently in the early stages of analyzing the lifetime of membranes in the system that separate the anode and cathode.

IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION

Ms. Kawsar Vazifdar provided the following update:

- At CalRecycle's February 15, 2022 meeting, they reminded jurisdictions who need more time to fully implement the Senate Bill 1383 (SB 1383) requirements that they may apply for a waiver or Notice of Intent to Comply (NOIC) under Senate Bill 619. The deadline to submit a NOIC is March 1, 2022.
- CalRecycle mentioned they received 475 applications for the SB 1383 Local Assistance Grant Program and will announce the awards at a future meeting.
- Assembly Bill 1857 (AB 1857), introduced on February 8, 2022, is a bill that will remove the diversion credit for municipal solid waste transformation and redefine the practice of transformation as disposal. The bill eliminates existing diversion credits for incineration and will reduce the number of options for local jurisdictions to comply with Assembly Bill 939. Pursuant to Section 40201 of the Public Resource Code, transformation includes incineration, pyrolysis, distillation, or biological conversion other than composting. This bill as written, prohibits the development of any solid waste facility that uses incineration technology as well as the other technologies included in the definition of transformation.

Mr. Sheppard added that there will be a presentation on AB 1857 at today's Task Force meeting. He also noted the concern with the broad definition of transformation and its potential effect on conversion technology (CT) development. Mr. Mohajer added that this bill is sponsored by California Against Waste and other environmental organizations that believe all transformation facilities are incineration. He stated that if the existing bill language becomes law, California will be limited to composting, anaerobic digestion, and biomass gasification. He encouraged supporters of CTs to write letters to the bill author. He added that the bill would also remove the ten percent diversion credit that cities receive for sending waste to the Southeast Resource Recycling Facility in Long Beach and the Covanta Resource Recycling Facility in Stanislaus.

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

Ms. Vazifdar provided an update on events and conferences, which can also be found in the [Conversion Technology newsletter](#) and Subcommittee meeting minutes:

- International Biomass Conference & Expo: March 14 - 16, 2022, Jacksonville, FL
- SWANA SOAR 2022: March 21 - 24, 2022, Kansas City, MO
- CEAC Spring Conference 2022: March 23 - 25, 2022, Monterey, CA
- SWANA 51ST Annual Western Regional Symposium: April 4 – 7, 2022 Fish Camp, CA
- Tcibiomass: April 19 – 21, 2022, Denver, CO
- NACE Annual Conference 2022: April 24 – 27, 2022, Buffalo, NY
- Waste Expo 2022: May 9 – 12, 2022, Las Vegas, NV
- RNG Summit 2022: May 17 – 19, 2022, Houston, TX
- Biogas Americas 2022: May 23 – 26, 2022, Las Vegas, NV

Ms. Dee Hanson-Lugo mentioned the virtual CalRecycle Technical Training Series on SB 1383, which will take place for two days in March and two days in April. Mr. Sheppard asked Ms. Dewey if she knew the dates. Ms. Dewey responded that she would find out the dates and share them with the Subcommittee.

Mr. Mohajer mentioned that those interested in attending the SWANA 51st Annual Western Regional Symposium in Yosemite should book accommodations which are filling up quickly.

VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Christine Arbogast of Tetra Tech provided the following update:

- Supporting Public Works with SB 1383 planning efforts.
- Supporting Public Works in evaluating closed landfill sites for potential organic waste processing and thermal CT facilities.

Mr. Sheppard mentioned that a presentation would be made at a future Subcommittee meeting on the results of the evaluation of potential sites for organic waste processing and thermal CT facilities. He also mentioned that Public Works is moving forward with the anaerobic digestion facility at the Calabasas Landfill and hopes to release the Request for Proposals in March 2022. Lastly, he added that there will be a presentation at today's Facility and Plan Review Subcommittee regarding the CT website, including the database of information on CT operators/developers and finance companies. Mr. Sheppard suggested providing a similar presentation on these resources at the next ATAS meeting. Mr. Tseng

advised Mr. Sheppard that the YouTube links on the conversion technology website are not working.

Mr. Ben Lucha mentioned True North Renewable Energy has been fully permitted for their facility in Mohave in Kern County. Mr. Sheppard commented that when local health officer orders are lifted, the Subcommittee may tour local facilities.

Mr. Mohajer asked for an update adding a representative to the Subcommittee from the Hacienda Heights Improvement Association as required by the Puente Hills Landfill Conditional Use Permit. Mr. Sheppard responded that they are working with County Counsel to determine the process for filling vacant seats.

VII. PUBLIC COMMENTS

No public comment.

VIII. ADJOURNMENT

The meeting adjourned at 11:02 a.m. The next ATAS meeting is tentatively scheduled for Thursday, March 17, 2022, at 10 a.m.