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

Minutes for April 21, 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) Hanson-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, 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
Ron Kent, rep by Flavio Da Cruz, Southern California Gas Company

SUBCOMMITTEE MEMBERS NOT PRESENT:

OTHERS PRESENT:
Christine Arbogast, Tetra Tech
Janelle Auyeung, CalRecycle
Kendal Asuncion, Bloom Energy
Ivor Castelino, Bloom Energy
Charles Darensbourg, Los Angeles County Public Works
Tom C. Fang, Los Angeles County Sanitation Districts
Patrick Holland, Los Angeles County Public Works
Carol Oyola, Los Angeles County Public Works
Tanya Peacock, Bloom Energy
Kawsar Vazifdar, Los Angeles County Public Works
Jeffrey Zhu, Los Angeles County Public Works
Narek Vartunian, Los Angeles County Public Works
Tran Kiem, Los Angeles County Public Works

I. CALL TO ORDER

Mr. Christopher Sheppard called the meeting to order at 10:01 a.m.

II. APPROVAL OF MARCH 17, 2022 SUBCOMMITTEE MINUTES

A motion to approve the minutes from the March 17, 2022 meeting was made by Mr. Mike Mohajer and seconded by Mr. Wayde Hunter. The motion passed unanimously.

III. PRESENTATIONS – BLOOM ENERGY

Ivor Castelino with Bloom Energy (BE) presented on their fuel cell technology that converts biogas into electricity. Each fuel cell can hold 25 watts of power and fuel cells are stacked together into a module with a minimum capacity of 250 kilowatts. Their fuel cell technology uses an electrochemical reaction to produce electricity with no combustion, with little to no emissions, and with no water during normal operation. BE currently has over 700 megawatts of fuel cell power generating systems deployed across 700 sites in four different countries.

BE's technology is able to integrate with wastewater treatment plants to eliminate local air pollutants from flaring or combusting wastewater digester biogas and generate forty percent more power from the biogas with compromising the technology of the wastewater treatment plant.

Mr. Mohajer asked if a refuse collection truck could go to BE's facility for processing. Mr. Castelino responded that BE uses digester biogas from existing facilities.

Mr. Wayde Hunter asked how BE would handle methane at a landfill. Mr. Castelino responded that landfill methane tends to have lower methane content than digester biogas, which means the systems would not operate at maximum efficiency. Mr. Hunter asked how contaminants are removed from landfill methane. Mr. Castelino responded that they have equipment which filters sulfur, siloxane, and other contaminants. Mr. Castelino added that the technology meets California emissions standards.

Mr. Eugene Tseng asked if BE has experience working with biogas from high solids dry fermentation digestion facilities or from wet digestion facilities that process food waste and green waste. Mr. Castelino responded that BE has analyzed those biogas compositions and did not have any concerns.

Mr. Sheppard asked if the level of effort to clean up dry fermentation biogas would be less than landfill gas. Mr. Castelino responded that it would because dry fermentation biogas contains fewer contaminants.

Mr. Sheppard asked if there are any special cooling or heating needs for the fuel cells or if there are any other external power needs for the facility. Mr. Castelino responded that they do not need any special cooling or heating needs. He added that they need a gas connection from either the digester or the natural gas pipeline, a water line connection for system startups, and an electrical output connection.

Mr. Sheppard asked if they need wastewater discharge for instances when they cycle down a cell and have to discharge the water. Mr. Castelino responded they do not need wastewater discharge for the fuel cells, but they do need wastewater discharge for the biogas conditioning equipment.

Mr. Tom Fang asked if there is a minimum methane content needed for the gas blender or if the blender is optional. Mr. Castelino responded that if you do not need consistent electrical output then you do not need a gas blender.

Mr. Fang asked if more electricity is generated when heat is not being captured or if it is just wasted heat. Mr. Castelino responded it is just wasted heat and does not impact the electrical efficiency.

Mr. Sheppard asked if BE utilizes any state or federal incentives or financing that make their project more viable as a developer. Mr. Castelino responded that they only utilize the federal investment tax credit that is available to all alternative technologies.

Mr. Sheppard asked if the power supplied from fuel cells qualifies for Renewable Portfolio Standard credit. Ms. Tanya Peacock with BE responded that it qualifies only if the biogas is generated in California. She added that California now has a renewable gas standard that establishes biomethane procurement targets for gas utilities and directs them to prioritize biomethane procurement from facilities that use non-combustion technologies such as fuel cells.

IV. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Arbogast stated that Tetra Tech has been:

- Continuing to evaluate potential sites for organic waste processing facilities at closed landfill sites.
- Supporting Public Works with Senate Bill 1383 (SB 1383) planning efforts.

Mr. Sheppard mentioned that Public Works is working to release the Request for Proposals for the Calabasas Anaerobic Digestion Facility.

Mr. Mark McDannel mentioned that the Sanitation Districts entered into a contract with Clean Energy Fuels to design and build an expansion to their biogas

conditioning system in Carson. They are currently in the design phase and expect to begin construction next year.

Mr. McDannel also mentioned that the Sanitation District entered into a series of contracts for their Calabasas Landfill Gas-to-Energy Facility. Mr. Sheppard asked if the fueling station will use gas from the food waste or wastewater. Mr. McDannel responded that at the treatment plant, food waste increases the gas overall and that it is not the physical food waste gas but adding the gas into the total flow from the treatment plant.

V. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGLISLATION

Ms. Kawsar Vazifdar provided the following update:

- At their April 19, 2022 meeting, CalRecycle stated that they anticipate approving the SB 1383 local assistance grant program awards later this month. The first-round payments will be processed as soon as possible and checks will be distributed in early May 2022. For jurisdictions that did not qualify for the first round of payments, the second round of payments will tentatively be distributed in the fall. Final approval of second round payments is contingent on CalRecycle verifying that jurisdictions submitted and adopted an ordinance or similarly enforceable mechanism by June 14, 2022. Jurisdictions are advised not to incur any costs until they receive notification from their CalRecycle grant manager.

- CalRecycle also mentioned that they posted a notice of funds available for their new co-digestion grant program. The program offers $20 million in grants to help build and expand food waste co-digestion projects at existing wastewater treatment facilities. Applications for this grant program are due May 19, 2022.

Mr. Ben Lucha asked about the status of Assembly Bill 1857 (AB 1857). Mr. Sheppard responded that the bill moved from the Assembly Committee on Natural Resources to the Appropriations Committee. The bill was opposed by the Rural County Representatives of California and received in-between responses from Waste Management and the Bioenergy Association of California seeking more clarity. The current AB 1857 language requires additional review and approval by CalRecycle prior to the development of any new transformation, engineered municipal solid waste, or disposal facilities. Mr. Sheppard also mentioned that there will be additional discussion at the Task Force meeting during the Legislative Update. Mr. Mohajer commented that the analysis of AB 1857, prepared by a former CalRecycle legislative analyst, indicated no opposition to the bill.

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:

- NACE Annual Conference 2022: April 24 – 27, 2022, Buffalo, NY
- SB 1383 Procurement Webinar: May 3, 2022, Virtual
- 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
- Southern California Waste Management Forum (SCWMF) Annual Business Meeting & Spring In-Person Conference: June 8, 2022, Buena Park, CA
- VerdeXchange 2022: June 19 - 22, 2022, Los Angeles, CA
- SWANA Workshop: June 23, 2022, Ontario, CA
- A&WMA 115th Annual Conference & Exhibition: June 27 – 30, 2022, San Francisco, CA

Mr. Mohajer mentioned that the SCWMF conference will include a presentation on the Los Angeles County Organic Waste Capacity Plan which is due to CalRecycle by August 2022. He also mentioned that the SWANA workshop will have discussions about SB 1383.

VII. PUBLIC COMMENTS

No public comment.

Mr. Dennis Montano announced that tomorrow will be his last day working with Sunshine Canyon Landfill and thanked everyone.

VIII. ADJOURNMENT

The meeting adjourned at 10:57 a.m. The next ATAS meeting is tentatively scheduled for Thursday, May 19, 2022, at 10 a.m.