

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

**Minutes for January 20, 2022**

**WEB CONFERENCE**

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

SUBCOMMITTEE MEMBERS PRESENT:

Steve Cassulo, Waste Connections  
Dorcas Dee Daniel-Lugo, Los Angeles County Department of Public Health  
Michelle Dewey, California Department of Resources Recycling and Recovery  
(CalRecycle)  
Ron Kent, rep by Flavio Da Cruz, Southern California Gas Company  
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

SUBCOMMITTEE MEMBERS NOT PRESENT:

Chris Coyle, Republic Services

OTHERS PRESENT:

Kris Ferguson, Tetra Tech  
Charles Darensbourg, Los Angeles County Public Works  
Scott Gardner, H Cycle  
Karim Ibrik, H Cycle  
Robert Morgan, H Cycle  
Carol Oyola, Los Angeles County Public Works  
Coby Skye, 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 10:01 a.m.

## **II. APPROVAL OF NOVEMBER 18, 2021 SUBCOMMITTEE MINUTES**

A motion to approve the minutes, as amended, from the November 18, 2021 meeting was made by Mr. Mike Mohajer and seconded by Mr. Wayde Hunter. The motion passed unanimously.

## **III. PRESENTATION – H CYCLE**

Mr. Scott Gardner presented on H Cycle's advanced gasification technology, licensed from Omni Conversion Technologies (CT), which processes municipal solid waste (MSW), forest waste, and agricultural waste to produce hydrogen. H Cycle has secured exclusive rights to deploy the technology in the Western United States, including California, as well as Japan and Korea.

The Omni CT unit has three stages of processing, including horizontal and updraft gasification chambers, a plasma finishing step to polish the syngas, and cleaning of tars and residues. The unit can process 300 to 350 tons per day of wet waste to produce 12 to 18 tons per day of syngas. The syngas goes through further treatment to make hydrogen. H Cycle will also consider capturing the emitted carbon dioxide and sending it to sequestration sites in California.

Omni CT ran a commercial scale demonstration facility in Ottawa, Canada from 2007 to 2015. The facility was able to process up to 100 tons per day of MSW with no significant screening and sorting before processing. Independent studies suggested the technology was ready for large scale operations.

H Cycle is considering several sites in California including in the Bay area, the Central Valley, and the Los Angeles region. They are working on waste supply agreements with processing companies and are also working closely with a private processing company for their first project in Los Angeles.

Mr. Eugene Tseng asked how H Cycle plans to remove plastics from the feedstock. Mr. Karim Ibrik responded that they target feedstock that contains less plastic. Mr. Tseng commented that the City of Los Angeles has waste characterization data that H Cycle should review. Mr. Tseng mentioned that he has been to the Ottawa Facility multiple times and that the facility lacked effective pre-processing. Mr. Tseng also stated that there are two laws regarding feedstock standards for non-combustion technologies in California; Assembly Bill 1126 and Senate Bill 498. Mr. Tseng recommended that H Cycle become more aware of performance requirements for moisture content, ash content, and the removal of chlorinated plastics. He mentioned that Toyota is looking into the hydrogen market and offered

to get H Cycle in contact with them. Lastly, Mr. Tseng suggested H Cycle contact the Local Enforcement Agency (LEA) if they plan on developing a facility in the Los Angeles region.

Mr. Mark McDannel asked what tipping fees and hydrogen prices H Cycle assumed in their economics. Mr. Gardner responded that H Cycle is seeking to have tipping fees equivalent to or less than the costs for materials recovery facilities and processing facilities to transport and dispose waste at landfills. He could not share the hydrogen prices.

Mr. Tseng asked what H Cycle's approach is for making a uniform feedstock. Mr. Ibrik responded that they remove large materials, ferrous and non-ferrous materials, plastics, and fines and then shred the material. The remaining wet material is dried to reach a target moisture in the 10 to 15 percent range and dry stored for two days to mix and buffer the material for uniformity before processing.

Mr. Sheppard asked about their ideal waste stream. Mr. Ibrik responded that they look for materials to optimize the carbon intensity score and that have energy content to make hydrogen. The ideal materials are food waste, green waste, and unrecyclable paper, and materials recovery facility fines from wet routes. Mr. Gardner emphasized that H Cycle can be a complement to anaerobic digestion and composting facilities, but there are challenges with contaminated feedstock.

Mr. Mohajer reminded H Cycle that a facility will need a land use permit and will need to be sited in an appropriate zone with a consideration of Environmental Justice (EJ) issues. The facility may also require an Environmental Impact Report as part of the California Environmental Quality Act (CEQA) process. Mr. Gardner responded that he and H Cycle's Chief Executive Officer are both experienced in permitting power plants in California and have experienced a full CEQA review. He stated that H Cycle is taking CEQA and EJ into consideration as part of the site selection process.

#### **IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION**

Mr. Darensbourg provided an update on policy and legislation.

- At their January 18, 2022 meeting, CalRecycle reminded local jurisdictions who are not prepared to comply with Senate Bill (SB) 1383 and are not eligible for waivers or exemptions that they have a new compliance pathway through Senate Bill 619 (SB 619). CalRecycle held its second webinar on SB 619 last week and the recording is posted on CalRecycle's website.
- CalRecycle is now accepting Notifications of Intent to Comply (NOIC) through Tuesday, March 1, 2022 from jurisdictions that are unable to fully implement SB 1383 regulations due to COVID-19. CalRecycle will not approve an NOIC

without written evidence that it has been adopted by the governing body of the local jurisdiction. An NOIC must include the following:

- Description of the continuing violations.
- Detailed explanation of the reasons for noncompliance, supported by documentary evidence.
- Description, if any, of impacts of COVID-19 on compliance.
- Description of proposed actions to remedy the violations within the specified timelines, and a proposed compliance schedule.

If a local jurisdiction fails to adhere to the proposed actions and schedule described in an NOIC, CalRecycle may revoke its approval and impose administrative civil penalties for violations.

- CalRecycle stated they completed a three-part local enforcement agency (LEA) training series that focused on the regulatory requirements for solid waste facilities and operations as well as the roles and responsibilities of solid waste enforcement agencies. CalRecycle continues to put out guidance for facility operators and LEAs. All guidance can be found on CalRecycle's Short-Lived Climate Pollutant homepage. CalRecycle is also planning an SB 1383 overview for their technical training series in March 2022.
- CalRecycle's SB 1383 Local Assistance Grant Program for Fiscal Year 2021–22 will provide \$57 million in funding to local jurisdictions to assist with SB 1383 implementation. The application due date is February 1, 2022.

Ms. Michelle Dewey informed the Subcommittee that at CalRecycle's public meeting, they presented the eligibility and scoring criteria for a new co-digestion grant program that will provide \$20 million in funds for co-digestion projects at wastewater treatment facilities. CalRecycle is currently accepting public comments that are due January 21, 2022. Mr. Sheppard asked if the grant funding was only available for this year or over two years. Ms. Dewey responded that she believed it was \$10 million for Fiscal Year 2021-22 and \$10 million for Fiscal Year 2022-23.

Mr. Sheppard asked Mr. Tseng if he had any updates on high diversion facility certification. Mr. Tseng responded that the City of Los Angeles and the Los Angeles County LEAs had a productive discussion with CalRecycle on how to prepare the alternative SB 1383 waste characterization and obtain the necessary data when it is not physically possible to sort the disposed and recovered materials. Waste Management and the LEA submitted the alternative methodology and CalRecycle will soon provide comments. The target date for the process to be approved is before the end of February.

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

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

- Compost 2022: January 24 – 27, 2022, Austin TX
- Zero Waste Symposium 2022: February 8, 2022, Virtual
- Global Waste Management Symposium 2022: February 14 - 17, 2022, Indian Wells, CA
- VerdeXchange Conference 2022: March 6 - 9, 2022, Los Angeles, CA
- 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

Mr. Kevin Mattson added that Waste Management will have their Annual Sustainability Forum on February 9, 2022, at 9 a.m., and it will be virtual.

## **VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT**

Mr. Kris Ferguson of Tetra Tech stated that Tetra Tech:

- Continued to support Public Works with SB 1383 planning efforts.
- Finalized fact sheets on anaerobic digestion technologies.
- Continued to support Public Works on evaluating closed landfill sites for potential organic waste processing and thermal conversion facilities.

Mr. Sheppard added that one of the recommendations on the Board Report titled Enhancing Countywide Solid Waste Management through Expanded Program and Infrastructure Investments was to release a Request for Proposals (RFP) for an anaerobic digestion facility at the Calabasas Landfill. Public Works is moving forward on an RFP with a goal to release it at the beginning of 2022. Mr. Mohajer asked if the Board Report was disseminated to the Subcommittee. Mr. Sheppard responded he would have it disseminated if it was not already.

## **VII. PUBLIC COMMENTS**

Mr. Mohajer asked about the status of including representatives from the Hacienda Heights Homeowners Association and community surrounding Chiquita Canyon Landfill on the Subcommittee. Mr. Sheppard responded he would look into including these representatives and report back at the next Subcommittee meeting.

## **VIII. ADJOURNMENT**

The meeting adjourned at 11:01 a.m. The next ATAS meeting is tentatively scheduled virtual for Thursday, February 17, 2022, at 10 a.m.