

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

June 15, 2023

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

SUBCOMMITTEE MEMBERS PRESENT:

Steve Cassulo, Waste Connections

William Chen, rep by Sam Shammas, Los Angeles County Sanitation Districts

Michelle Dewey, California Department of Resources Recycling and Recovery
(CalRecycle)

Kate Downey, rep by Rachelle Huber, Republic Services

Ron Kent, rep by Ethan Simonoff, Southern California Gas

Ben Lucha, Antelope Valley Resident

Dee Hanson Lugo, rep by Karen Gork, Los Angeles County Department of Public
Health

Kay Martin, rep by James Stewart, Bioenergy Producers Association

Mike Mohajer, Los Angeles County Integrated Waste Management Task Force

Fahim Rahimi, Los Angeles County Public Works

James Roska, rep by Ronaldo Milo, City of Los Angeles Bureau of Sanitation

SUBCOMMITTEE MEMBERS NOT PRESENT:

Wayde Hunter, North Valley Coalition of Concerned Citizens, Inc.

Kevin Mattson, Waste Management

Eugene Tseng, UCLA Solid Waste Program

OTHERS PRESENT:

Dr. Robert Do, SG H2 Energy

Marrion Gestat, Tetra Tech

Josephine Chen, Los Angeles County Public Works

Tran Kiem, Los Angeles County Public Works

Henry Kong, Los Angeles County Public Works

Darren Kwan, Los Angeles County Public Works

Genevieve Osmena, Los Angeles County Public Works

Carol Saucillo, Los Angeles County Public Works

Airon Tee, Los Angeles County Public Works

Kawsar Vazifdar, Los Angeles County Public Works

I. CALL TO ORDER

Mr. Fahim Rahimi called the meeting to order at 10:03 a.m.

II. APPROVAL OF MAY 18, 2023, SUBCOMMITTEE MINUTES

Mr. Mike Mohajer made a motion to approve the May 18, 2023 minutes and Mr. Ben Lucha seconded. Minutes approved with three abstentions.

III. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Marrion Gestat from Tetra Tech provided the following update:

- Tetra Tech is continuing their ongoing efforts on the Long-Term Solid Waste Disposal Needs Study for the Antelope Valley required by the Lancaster Landfill Conditional Use Permit, Condition 92. The study will include a high-level review of economic, environmental, and technical considerations for thermal conversion technology facilities.
- Tetra Tech supported Public Works with the preparation of a grant application for the CalRecycle Organics Grant Program, Cycle 7 for the development of a proposed anaerobic digestion facility at the Calabasas Landfill. The application was submitted on May 2, 2023, for \$5 million. Notifications of award are tentatively expected in October 2023.

IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION

Ms. Kawsar Vazifdar provided the following update:

- CalRecycle's most recent monthly meeting was on May 16, 2023. A summary of the meeting was provided at last month's ATAS meeting. The next CalRecycle monthly meeting will be held on June 20, 2023.
- CalRecycle hosted a Senate Bill (SB) 1383 chat on May 24, 2023. The topic was edible food recovery specifically for prepared foods.
- CalRecycle will be hosting the next SB 1383 chat on June 21, 2023. The topic will be ideas and options for procurement.

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

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

- California Hydrogen Leadership Summit: June 20, 2023, Sacramento, CA
- California Resource Recovery Association Conference and Tradeshow: August 13 - 16, 2023, Burlingame, CA
- Resource Recycling Conference: August 14 - 16, 2023, Orlando, FL
- County Engineers Association of California Policy Conference: August 24 - 25, 2023, Sacramento, CA
- American Public Works Association - Public Works Expo 2023: August 27 - 30, 2023, San Diego, CA
- Southern California Waste Management Forum Annual Conference: November 8, 2023, Ontario, CA

VI. PRESENTATION BY SG H2 Energy

Dr. Robert Do, of SG H2 Energy (SGH2), provided a [presentation](#) on their technology which uses gasification to process waste such as paper, plastic, tires, and textiles and create renewable hydrogen.

Ms. Rachelle Huber asked if a 120 ton per day plant would require five acres of land. Dr. Do explained that the requirement is based on SGH2's standard module plants, which process 120 tons of biomass per day creating 12 tons of hydrogen. He stated that additional land may be required for storage of the produced hydrogen and for transportation vehicles. Ms. Huber asked if SGH2's processes include the input of the feedstock. Dr. Do replied that space would be needed to store feedstock, but co-location with a landfill would reduce the amount of space required. Dr. Do explained that the ideal feedstock needed to produce hydrogen should have a minimum heating value of 4,000 kilocalories and that it should have a moisture content of 15 percent or less.

Ms. Huber asked about the California Environmental Quality Act (CEQA) timeline for SGH2's plant in Lancaster, California. Dr. Do responded that they completed CEQA in December 2022 and are currently finalizing their project labor agreement. He stated that they hope to start construction at the end of summer 2023. He continued that construction would take 18 months and the plant is expected to begin producing hydrogen by the second quarter of 2025. Ms. Huber asked about benefits for landfill owners partnering with SGH2. Dr. Do responded that SGH2 will negotiate with landfill owners to provide a share of profits.

Mr. Lucha asked what happens to the carbon monoxide that is produced through SGH2's process. Dr. Do explained that the gasification process captures the heat and carbon monoxide. He added that a water-gas shift process is used to add hot steam into the carbon monoxide to produce additional hydrogen.

Mr. Ronaldo Milo asked how existing SGH2 project plants can be expanded. Dr. Do explained that they can add additional gasifiers to an existing plant. Mr. Milo asked how much electricity is used by each plant and how the power is supplied. Dr. Do responded that their plants require baseload power, and that they are currently working with Southern California Edison and the City of Lancaster to potentially use renewable power provided by the Lancaster Community Choice Aggregation. Dr. Do added that the plants are also able to produce up to two kilowatts of power that may be eligible for credits from energy providers.

Mr. Milo asked for clarification on the production costs of SGH2 plants and if the figures presented were actual projected costs. Dr. Do responded that the costs are before any subsidies. Mr. Milo asked about the yearly cost to purchase hydrogen from the plants. Dr. Do replied that hydrogen prices could decrease to one dollar per kilogram by the year 2030 if SGH2 scales large enough. Mr. Milo asked what kind of water is used in the plants. Dr. Do stated that only processed water is used and recycled.

Ms. Michelle Dewey asked how the Lancaster plant will obtain feedstock. Dr. Do replied that SGH2 has a contract with the Allan Company to take their rejected mixed wastepaper, which is shredded and will be delivered directly to the plant.

VII. PUBLIC COMMENTS

No public comments.

VIII. ADJOURNMENT

The meeting adjourned at 10:53 a.m. The next ATAS meeting is tentatively scheduled for July 20, 2023.