

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

Minutes for September 19, 2019

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

SUBCOMMITTEE MEMBERS PRESENT:

Chris Coyle, rep by Dennis Montano, Republic Services – Sunshine Canyon Landfill
Tim Hall, rep by Michelle Dewey, California Department of Resources Recycling
and Recovery (CalRecycle) *
Patrick Holland, rep by Clark Ajwani, Los Angeles County Public Works
Wayde Hunter, North Valley Coalition of Concerned Citizens, Inc.
John Kaddis, rep by Daniel De La Cruz, Los Angeles County Department of
Public Health
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
Kay Martin, rep by Jim Stewart, Bioenergy Producers Association +

SUBCOMMITTEE MEMBERS NOT PRESENT:

Alex Helou, City of Los Angeles
Eugene Tseng, UCLA Solid Waste Program
Rob Williams, UC Davis Policy Institute for Energy, Environment and the Economy

OTHERS PRESENT:

Tracy Anthony, Alternative Resources, Inc. (ARI) +
Margarita Quiroz, Los Angeles County Public Works
Kawsar Vazifdar, Los Angeles County Public Works
Nam Doan, Los Angeles County Public Works
Louis Verrengia, Nextec
Elizabeth Zaragoza, Los Angeles County Public Works

* Designates participants over the telephone

+ Designates subcommittee members/alternates over the telephone that are not part of quorum

I. CALL TO ORDER

Mr. Ajwani called the meeting to order at 10:05 a.m.

II. APPROVAL OF MINUTES FROM AUGUST 15, 2019 MEETING

A motion to approve the minutes from the August 15, 2019 meeting was made by Mr. McDannel, as amended, and seconded by Mr. Tseng. The motion passed unanimously.

III. PRESENTATION ON THERMAL DYNAMICS AND ANAEROBIC THERMO CHEMICAL CONVERSION TECHNOLOGY – LOUIS VERRENGIA

Mr. Verrengia presented on Nextec International LLC (Nextec), a consulting company that specializes in pyrolysis of recycled tires into syngas, which can be used to produce transportation fuels and electric power. The presentation discussed the potential to utilize this technology to process non-recyclable.

The company has a demonstration plant in Georgia, which produces gas, oil, and high-quality carbon from recycled tires. Mr. Verrengia stated the demonstration plant has been attempting to gain Environmental Protection Agency (EPA) approval to sell their byproducts. Currently, the demonstration plant has approval to sell gas and carbon and is waiting for the approval for oil.

Mr. Verrengia discussed the process flow diagram for a plastics recycling facility in Italy using the pyrolysis technology to process unrecyclable plastic waste. Mr. Verrengia mentioned that this project allowed the facility to generate a €19M profit by recycling plastic waste that previously cost €17M a year to haul for disposal.

Mr. Verrengia stated that for Nextec to operate in California, laws would need to be addressed to provide diversion credit for pyrolysis of plastic. Mr. Verrengia discussed the importance of support in funding and investment. He reiterated there is no single source to manage trash and combining different technologies that currently exist can hopefully reduce prices for consumers.

Mr. Ajwani asked what Nextec's business model would be; if they intend to sell the technology equipment, own and operate facilities, or to partner with a local entity. He also asked what the cost structure would be. Mr. Verrengia responded Nextec is a consulting and design company, not a manufacturer, and would work with a technology provider to develop a system to assist an entity in serving the public by diverting plastic waste from landfills.

Mr. Ghougassian commented that Sierra Energy's FastOx gasification technology injects a small amount of oxygen into the process and wanted to clarify that Nextec's process is oxygen-free. Mr. Verrengia confirmed Nextec's process is oxygen-free. Mr. Ghougassian shared his concern about using tires as feedstock

since the fuel ultimately emits carbon dioxide back into the air. Mr. Verrengia responded that the tire fuel meets all emission standards in their system. Mr. Ghougassian commented that Nextec would not receive Low Carbon Fuel Standard credit or any other credit for using tires as feedstock. Mr. Verrengia agreed that they would not. Mr. Ghougassian said it is not a financially viable model because natural gas is inexpensive.

Mr. Hunter commented tires being recycled for roadways would use up the supply of tires. Mr. Verrengia responded that, based on estimates from the EPA, only about 10 percent of tires are being reused in California.

Mr. Ghougassian recommended Mr. Verrengia to reach out to KORE Infrastructure LLC, a company that plans to start a pilot biomass pyrolysis project by the end of this year or the beginning of next year.

Mr. Verrengia had discussions with the Orange County Landfill Commission about processing waste cake from the wastewater treatment plant. Mr. Verrengia mentioned that solids at the wastewater treatment plant are anaerobically digested and that the waste cake has little remaining energy value.

Mr. Mohajer asked if they have done any laboratory tests to quantify the various emissions since emission requirements in California are very strict. Mr. Verrengia responded they have not built a demonstration plant yet to test emissions of plastics conversion, only for tires. Mr. Mohajer also asked how President Trump's rollback on emissions would impact Nextec's process. Mr. Verrengia responded that the products may emit emissions when used, but the pyrolysis process itself does not.

Mr. Ajwani recommended that Nextec determine additional details, such as potential partnerships with technology vendors, a proposal of what type of feedstock and tonnage would be processed, cost effectiveness, and the necessary acreage, to see if this process is viable in the County. Mr. Verrengia commented that perhaps he can visit a materials recovery facility to see what type of feedstock is available and send the Subcommittee an evaluation.

IV. UPDATE ON CONVERSION TECHNOLOGY POLICY AND LEGISLATION

Mr. Doan commented that there is no update on conversion technology policy and legislation. Mr. Ajwani stated staff is waiting on CalRecycle's third formal draft of the Senate Bill 1383 organic waste disposal reduction regulations.

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

Mr. Doan mentioned the upcoming conferences:

- US BioGas Conference, October 1 - 2, 2019, San Diego, CA

- WasteCon 2019, October 21 - 24, 2019, Phoenix, AZ
- BioCycle REFOR19, October 28 - 31, 2019, Madison, WI
- Southern California Waste Management Annual Conference, November 7, 2019, Pomona, CA (Public Works staff will likely attend)
- The Renewable Natural Gas Conference, December 2 - 5, 2019, Dana Point, CA

VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

An update was provided by Ms. Anthony of Alternative Resources, Inc. (ARI) on conversion technology project development. ARI has prepared an informal, draft Best Management Practice guideline for non-organic waste. ARI and its subconsultant Clements Environmental prepared a permitting process flow diagram for gasification of biomass.

VII. PUBLIC COMMENTS

The Subcommittee took a vote to cancel the October 17, 2019 ATAS meeting due to the Air and Waste Management Association West Coast Section Annual Conference being held on the same day. There will be a session led and moderated by Environmental Programs Division Head, Coby Skye, and presentations by Bob Asgian of the Los Angeles County Sanitation Districts and Meredith Roberts of Sierra Energy. The session is scheduled to start at 10:40 a.m. and end at noon.

VIII. ADJOURNMENT

The meeting adjourned at 10:48 a.m. The next ATAS meeting is tentatively scheduled for Thursday, November 21, 2019, at 10:00 a.m., in Conference Room B of Public Works Headquarters.