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

**Minutes for September 20, 2018**

900 South Fremont Avenue
Alhambra, CA 91803

SUBCOMMITTEE MEMBERS PRESENT:
Dennis Montano, Republic Services – Sunshine Canyon Landfill
John Kaddis, Los Angeles County Department of Public Health
Tim Hall, California Department of Resources Recycling and Recovery (CalRecycle) *
Patrick Holland, Los Angeles County Department of Public Works
Wayde Hunter, North Valley Coalition of Concerned Citizens
Kevin Mattson, Waste Management
Mark McDannel, Los Angeles County Sanitation District
Mike Mohajer, Los Angeles County Integrated Waste Management Task Force

SUBCOMMITTEE MEMBERS NOT PRESENT:
Rob Williams, UC Davis Policy Institute for Energy, Environment and the Economy
Alex Helou, City of Los Angeles
Ron Kent, Southern California Gas Company
Kay Martin, Bioenergy Producers Association
Eugene Tseng, UCLA Solid Waste Program
Ben Lucha, City of Palmdale

OTHERS PRESENT:
Tracy Anthony, ARI
Doug Corcoran, Waste Management
Sue Higgins, Alternative Resources, Inc. *
Clark Ajwani, Los Angeles County Department of Public Works
Carol Oyola, Los Angeles County Department of Public Works
Margarita Quiroz, Los Angeles County Department of Public Works
Kawsar Vazifdar, Los Angeles County Department of Public Works

* Designates participants over the telephone

## I. CALL TO ORDER

Mr. Holland called the meeting to order at 10:05 a.m. and welcomed Mr. Kevin Mattson, the newly appointed representative from Waste Management.

## II. APPROVAL OF MINUTES FROM AUGUST 16, 2018, MEETING

A motion to approve the minutes from the August 16, 2018, meeting was made by Mr. Mohajer and was seconded by Mr. Hunter. The motion passed unanimously.

## III. PRESENTATION FROM ALTERNATIVE RESOURCES, INC. (ARI), REGARDING CONVERSION TECHNOLOGY PROJECT ANALYSIS

Ms. Higgins gave a presentation on economic modeling performed by ARI for the potential use of thermal conversion to process post-recycled residual construction and demolition waste, manufactured lumber, carpet, and non-recyclable paper at Interior Removal Specialist, Inc. (IRS). Ms. Higgins stated the modeling scenario analyzed the thermal conversion of 80 tons per day, which is the amount of captive waste on-site, to produce either electricity or diesel which are the commodities being used on-site.

Ms. Higgins stated that a significant project uncertainty is the renewable status of the feedstock. Ms. Higgins also discussed possible incentives, including Sales and Use Tax Exclusion for Alternative Energy and Advanced Transportation, the Renewable Fuel Standard Program, and the Low Carbon Fuel Program, that could make the project more financially feasible.

Ms. Higgins stated that the project with a capital cost estimated to exceed $30 million to $40 million and with a 10-year financing period would show a negative cash flow for the entire 10 years until the debt service was paid off. Ms. Higgins also modeled an alternate 20-year financing scenario, which showed a small positive cash flow to generate electricity. A project producing diesel did not a show positive cash flow in the 10-year, nor 20-year financing periods.

Ms. Higgins stated that ARI would perform additional modeling to improve project economics, considering changes such as developing a larger scale project importing supplemental feedstock, evaluating options of self-generating electricity, and bringing in a partner to finance and develop the project.

Mr. McDannel asked what would be the specific electricity or diesel output of the project. He also asked why a project producing renewable natural gas (RNG) was not modeled. Ms. Higgins responded that it would be a 2.9-megawatt project that would have a gross electricity generation of approximately 870 kilowatt-hours per ton or would produce about 2,300 gallons per day of diesel. Ms. Higgins also added that RNG may be considered in future modeling, but they initially chose to review electricity and diesel, which are the commodities currently in use on site.

Mr. Holland asked if IRS has trucks or equipment currently running on compressed natural (CNG) gas or RNG in addition to diesel- and gasoline-powered equipment. Ms. Higgins answered they have no RNG use on site, but they have a small amount of propane usage on site. Ms. Higgins added their onsite use of any utilities, including electricity, is quite low and there are limited on-site uses of potential products.

Mr. Mohajer asked for additional information on the low carbon fuel standard (LCFS) credits. Ms. Higgins responded the LCFS credit of $138 per metric ton of carbon reduced applies to transportation fuels below the carbon intensity score established by the California Air Resources Board (CARB). Mr. McDannel explained to subcommittee that the carbon intensity score is a fuel's lifecycle emissions intensity that takes into account avoided emissions. Ms. Higgins further explained that the number of credits was calculated by comparing the carbon intensity score of renewable diesel to the diesel compliance standard for the year 2020.

Mr. Holland noted the nearly $3 million difference in the annual operating costs of the electricity and diesel projects. Ms. Higgins stated that the majority of cost difference, an estimated $2.3 million, was due to the electricity usage of the diesel project. Additional labor and equipment maintenance costs accounted for the rest of the cost difference.

Mr. Holland asked if the avoided transportation cost of $18 per ton included the avoided disposal costs or just the transportation of the waste to the disposal facility. Ms. Higgins stated that the cost only included transporting the waste because the thermal conversion project would operate independently and receive a tipping fee of $42 per ton, comparable to landfill tipping fees.

Mr. Holland commented that since IRS does not have a fleet of vehicles or equipment that uses CNG or RNG, there may be an opportunity to partner with a company such as Clean Energy and develop a fueling station onsite. Mr. McDannel commented that the LCFS and the Federal Renewable Fuel Standard credits offer greater value for vehicle fuel production than pipeline injection. Mr. McDannel stated that Phase I of the Sanitation Districts digester gas upgrading project is for vehicle fuel production due to lower costs. Mr. McDannel commented the Sanitation Districts is finalizing the feasibility study for Phase II of their project, which will most likely be a pipeline injection project. Mr. Holland suggested Mr. McDannel and Ms. Higgins continue their discussions on modeling options offline.

## IV. UPDATE ON CONVERSTION TECHNOLOGY POLICY AND LEGISLATION

Mr. Holland mentioned a meeting he attended last week with CalRecycle regarding Senate Bill 1383 regulatory development. He stated that formal rulemaking is

expected to begin in November or December. Staff will continue to monitor the status of the regulations and keep the subcommittee updated.

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

Ms. Vazifdar mentioned the upcoming conferences:

- BioCycle Refor18, October 15 – 18, Raleigh, NC
- Resource Recycling Conference, October 22 – 24, St. Louis, MO
- US Biogas 2018, November 5 – 6, San Diego, CA
- Southern California Waste Management Forum Annual Conference, November 14, Pomona, CA

Mr. McDannel stated that the Sanitation District may give a Food Waste presentation at the US Biogas 2018 conference. Mr. Mattson confirmed that the BioCycle conference would not be impacted by Hurricane Florence.

## VI. UPDATE ON CONVERSION TECHNOLOGY PROJECT DEVELOPMENT

Ms. Anthony stated that ARI's primary focus this month was the economic modeling work for IRS. ARI also continued to provide support to the Sheriff's Department for a potential in-vessel composting project at the Pitchess Detention Center. Ms. Anthony also stated that ARI is working on determining potential project costs and that their sub-consultant, Clements Environmental, is working on providing permitting guidance. Ms. Anthony added that in August, ARI participated in a webinar workshop on air permitting for compost facilities, hosted by CalRecycle, CARB, and the California Pollution Control Officers Association (CAPCOA), and provided input to Public Works staff for comment.

Mr. Holland asked if there were any other project development updates from ATAS members present. Mr. McDannel stated the Sanitation Districts is pursuing full-scale commercialization of their food waste project. He also stated that the biogas conditioning system was approved by the Sanitation Districts Board of Directors and is scheduled to begin construction in 2020. All other projects are moving through the design phase.

Mr. Holland asked Mr. Montano on project updates from Republic Services and Waste Management. Mr. Montano mentioned the he did not have any information about their pilot composting program being developed with Agromin in Orange County but could check on that and report back next month. Mr. Mattson responded that Waste Management would be installing an Anaergia Organic Extrusion Press (OREX) in 2020 at the Sun Valley Recycling Park to process 400 tons per day of source-separated organic waste. He also stated that

Waste Management is partnering with Engineered Composting Systems to design a 500 ton per day composting project expected to open in 2020 at the Antelope Valley Landfill in Palmdale. Mr. Mattson added that Waste Management is partnering with Agromin to potentially develop a composting project at the Lancaster Landfill.

## VII. PUBLIC COMMENTS

Mr. Mohajer stated that the phrase “off-site locations” should be added above the addresses listed on the Agenda so the general public would understand that they could call in to the meeting from these locations. Mr. Holland added that some of the listed addresses may be outdated and would be updated.

## VIII. ADJOURNMENT

The meeting adjourned at 10:59 a.m. The next ATAS meeting is tentatively scheduled for Thursday, October 18, 2018, at 10:00 a.m., in Conference Room B.

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