

# SUMMARY OF WORK LOS ANGELES COUNTY ADVANCED SOLID WASTE TECHNOLOGY

Presentation to Los Angeles County  
Alternative Technology Advisory Subcommittee

January 16, 2020



**ARI**

Alternative Resources, Inc.

# Overview of Project Team and Scope of Work

- LA County Contract PW 13938 (2/12/15 - 2/11/20)

- Project Team: Alternative Resources, Inc . (ARI), Clements Environmental, and UltraSystems Environmental

- Scope of Work (Tasks):

- TASK 1: Conferences
- TASK 2: Write Position Papers, Op-Eds, and Fact Sheets
- TASK 3: Outreach to Decision Makers
- TASK 4: Maintain Technology Vendor and Financial Firm Databases
- TASK 5: End-Product Market Research
- TASK 6: Project Planning E-Guide
- TASK 7: Feasibility Studies
- TASK 8: Contract Assessment

# TASK 1 - CONFERENCES

- Southern California Conversion Technology Conference held July 2016 at DPW Headquarters
  - Purpose was to educate attendees on how to overcome challenges of waste conversion technologies
  - ARI assisted with all aspects of the conference and Innovate Marketing Group added to the ARI Project Team for logistics and planning support
  - 10 sponsors, 20 speakers, 200 attendees and follow-up survey with positive feedback
- Assisted with proposed legislative workshop addressing conversion technology legislation and regulatory updates

# TASK 2 - POSITION PAPERS, OP-EDS AND FACTS SHEETS

- Review of County's White Paper titled, "Comparative Greenhouse Gas Emissions Analysis"
- Reviewed and commented on proposed legislation as requested
- Prepared fact sheets highlighting projects and providing information to demonstrate benefits of converting organic waste to RNG
- Prepared fact sheets with facility sizing and emissions information

# TASK 3 - OUTREACH TO DECISION MAKERS

- Permitting flow charts for AD, MSW, gasification, biomass gasification and biomass were prepared
- Prepared technical memo regarding the understanding and spurring of development of biomass conversion facilities
- Series of tables prepared summarizing emissions data for SERRF
- Research provided about the availability of CT emissions data for comparison to conventional waste to energy emissions data
- CT facility sizing sheet prepared for an economic analysis of MSW gasification for facilities ranging from 20 to 1,000 tpd generating electricity
- Prepared e-newsletter stakeholder survey
- Assisted with development of Best Management practices guidelines for non-organic waste

# TASK 4 - TECHNOLOGY/FINANCIAL FIRM DATABASE

- Completed review of small-scale (less than 10 tpd thermal conversion technology systems and submitted findings.
- Updated list of CT providers and industry contacts, as needed.
  - Reached out to technology companies and industry contacts to secure speakers for meetings, as requested.

# TASK 5 - END PRODUCT MARKET RESEARCH

- Materials gap analysis for difficult to recycle materials
- Calculated renewable natural gas generation potential from food waste leaves and grass, and compostable paper from anaerobic digestion and prunings and trimmings, branches and stumps, and lumber from gasification (methanation), at organic waste recovery rates ranging from 50% to 100%, in comparison to current levels of natural gas consumption in the County
- Preliminary research work on marketing practices for compost and digestate. This included a look at the status of nutrient recovery technologies and a review of green purchasing policies in LA County and elsewhere

# TASK 6 - PROJECT PLANNING E-GUIDE

- No work requested under this task



# TASK 7 – FEASIBILITY STUDIES

Potential Project	Overview
IRS DEMOLITION	<ul style="list-style-type: none"> <li>• Potential Project Subject of Presentations by IRS Demo and ARI at ATAS Meetings</li> <li>• CT Technology - Gasification (80 tons per day)</li> <li>• Feedstock - On-Site Residuals (Manufactured Lumber, Carpet, C&amp;D Residuals, Non-recycled Paper)</li> <li>• End-Products Considered - Diesel Oil and Electricity</li> </ul>
CALABASSAS LANDFILL	<ul style="list-style-type: none"> <li>• Performed Wasteshed Analysis</li> <li>• Updated 2011 Economic Model in 2016</li> <li>• CT Technology - Anaerobic Digestion (200 -400 tons per day)</li> <li>• Feedstock - Source-Separated Organic Waste and Mixed Municipal Solid Waste</li> <li>• End-Products Considered - Compressed Natural Gas</li> </ul>
PITCHESS DETENTION CENTER	<ul style="list-style-type: none"> <li>• Site Visit</li> <li>• CT Technology - Anaerobic Digestion, In-Vessel Composting (2 tons per day)</li> <li>• Feedstock - Source-Separated Organic Waste</li> <li>• End - Products Considered - Biogas to Power Plant, CNG</li> </ul>

# FEASIBILITY STUDIES CONTINUED

Potential Project	Overview
DPW HEADQUARTERS	Performed cost analysis for a small-scale anaerobic digester.
SITE INFORMATION FOR CT DEVELOPMENT IN THE COUNTY	Updated site information (landfills, material recovery facilities, transfer stations, and other sites) for CT development in the County including identification of stakeholders site name, location, owner, zoning, acreage, and potential capacity.
CITY OF AVALON	Prepared historical development summary including timeline, review of ARI's conversion technology analysis prepared in 2012, and listing of solid waste information from the previous study in response to new interest by the City of Avalon in conversion technology development.

# ATAS PRESENTATIONS

DATE	ARI TEAM PRESENTER	TITLE
March 2018	ARI	Summary of Small-Scale On-Site Food Waste Processing Technologies
July 2018	UltraSystems	Air Permitting Requirements for Thermal Conversion Technologies
September 2018	ARI	Conversion Technology Project Analysis
April 2019	Clements	Biomass Conversion Facilities in California

## TASK 8 – CONTRACT ASSESSMENT

- Summary table of grants, loans and other financial incentives was updated as needed

## TASK 9 – TASK SUMMARY TABLE AND CONTRACT ASSESSMENT

- Reported to County every six months with status of activities

# Contact Information

Traecey Anthony

Alternative Resources, Inc.

Tel: 909-800-1420 | Email: [TAnthony@alt-res.com](mailto:TAnthony@alt-res.com)

Jim Osborn

Alternative Resources, Inc.

Tel: 978-371-2054 | Email: [JOsborn@alt-res.com](mailto:JOsborn@alt-res.com)