

PRESS RELEASE

Zero Waste Energy, LLC and Monterey Regional Waste Management District Announce the Completion of the SmartFerm® Anaerobic Digestion Facility Pilot Test Program

From inception in 2013, the SmartFerm® Anaerobic Digestion (AD) pilot project was a model public/private partnership between Zero Waste Energy, LLC and the Monterey Regional Waste Management District (a California Special District) that resulted in the operation of the first “dry fermentation” anaerobic digester in the State of California and only the second such facility in the United States at that time (<https://zerowasteenergy.com/our-solutions/dry-anaerobic-digestion-ad/>). With the arrival of ZWE AD facility, the MRWMD transitioned from a windrow composting test program to the AD Facility test program. The past six years has seen the growth of the MRWMD’s pilot commercial food waste collection program, originally started in 2008, and the ZWE AD Facility accommodating about a 50% growth in processing quantities; from about 4,000 tons per year to about 7,000 tons per year.

“This project was a great example of public/private collaboration” stated Tim Flanagan, General Manager of the Monterey Regional Waste Management District, “In a sense it had perfect timing as the District had been composting food waste in compost windrows for several years prior to ZWE bringing this project concept to us. This dry fermentation process allowed us to really ‘up our game’ for our local businesses and institutions who had led the way in requesting food waste composting as an outlet for their food scraps”.

The ZWE AD facility has served to introduce thousands of visitors from California, the US, and around the world to the concept of anaerobic digestion. ZWE and MRWMD collaborated on tours for a wide range of stakeholders including: regulatory officials, local culinary and hospitality staff, recycling coordinators, business groups, elected officials, student groups ranging from elementary to postgraduate college level, and a wide range of community groups. An average 1250 visitors per year toured the facility, and more than 7,000 people saw it in operation over the past six years. Unlike other dry digestion plants, the ZWE AD is compact, quickly constructed, and efficient. Utilizing SMARTFERM technology developed in Germany, the machinery is semi-mobile, space efficient, and is self-heating using natural biological processes and recirculation of liquid moving throughout the food waste material. The ZWE AD facility generates approximately 100 kW of electricity or 3,200 BTU/ton of biogas with a methane content on the order of 58-60 percent.

Eric Herbert, Chief Executive Officer for ZWE remarked, “This has been a highly successful project from a technological and operational point of view for ZWE. We were able to demonstrate here, in the United States, in a local community, with typical food waste and other organic feedstocks, the viability of our patented dry fermentation anaerobic digester”. MRWMD branded the anaerobic digestion program in its greater service area as “Organics to Energy” (www.organicstoenergy.org) and produced a logo, video (<https://vimeo.com/220992032>), and a variety of social media to promote the state-of-the-industry project. Promotion included a range of advertising with the goal of promoting the environmental benefits of the project as well as the wide range of participating businesses. Many participating businesses proudly display the Organics to Energy logo in their windows, menus and websites.

One of the unexpected outcomes of the project is the high level of pride and sense of ownership the local hospitality industry identified with the Organics to Energy project. As local businesses promote their efforts to green their operations, their participation in the food scrap compost program and Organics to Energy is often one of the first initiatives they highlight. During the 6-year term of the AD project, business participation in the food scrap compost program grew from two dozen participants to more than 200 today. The "Organics to Energy" project has supported numerous large-scale community events on the Monterey Peninsula since its inception in 2013. Food waste and organics from events as large and as varied as the AT&T Pro-Am, the Big Sur Marathon, and the Pebble Beach Concours d'Elegance, to local festivals such as the annual Jewish Food Festival and the West End Celebration.

With the successful completion of ZWE's SmartFerm® Anaerobic Digestion (AD) pilot project, the MRWMD has initiated an Aerated Static Pile (ASP) Composting pilot project for processing the commercial food waste. The MRWMD anticipates operating the ASP Composting pilot project over the next 3 to 5 years as it conducts the planning, design, and construction of regional scale organic waste processing facilities which are anticipated to be mandated thru regulatory measures such as the pending SB1383 legislation.

With the completion of the successful pilot project, the District will be developing plans for its next stage, "AD 2.0", a regional scale project, capable of handling between 50-80,000 tons of food waste and organic material to serve Monterey County. This large project will begin with preliminary planning and project scoping this winter and spring of 2020 and the potential development of a Request for Qualification (RFQ) and a subsequent Request for Proposals (RFP) by the fall of 2020. The timeline will be to develop a project ahead of the state of California mandated organics diversion from landfill requirements in SB 1383 by mid-2022.

ZWE CEO Eric Herbert commented on the next steps for the SmartFerm® Anaerobic Digestion Pilot Plant at the MRWMD, "this facility was designed to be modular, in anticipation of its eventual relocation. We will be identifying other locations where this facility size between 5000 and 7000 tons per year is applicable. We are confident that we have successfully demonstrated the viability of this process for organic waste processing and are excited for the next opportunity for the application of this technology."

Zero Waste Energy, LLC was founded in 2009 and incorporated in 2010 in San Jose, California, by an experienced group of innovative solid waste industry leaders. They recognized the value in the best use of waste feedstock and the systems needed to sort out high value commodities and to generate renewable energy. ZWE's principal goal has been to design, construct, and operate solid waste handling and advanced composting facilities that optimize waste diversion and the generation of renewable energy in an efficient and environmentally sound manner. Zero Waste Energy has developed a very deep base of industry and technology experts who work on ZWE projects based upon the specific needs of its customers, making us the ideal project partner with experience, resources and technologies to execute. Our exclusive and/or project-based relationships include "Best-in-Class" Facility Design and Engineering, Waste Sorting and Separation Systems, Anaerobic Digestions and In-Vessel Composting, Renewable CNG, Plastics to Renewable Oil, Compost Marketing and Sales, and Residual Waste Gasification. The relationships with these technology teams have been developed over many years and projects.

The **Monterey Regional Waste Management District** provides comprehensive, state-of-the-art waste management services to Monterey County and adjacent counties. The facility is located northwest of Salinas in the Monterey Regional Environmental Park next to the Monterey One Water regional water treatment facility. In addition to a MSW landfill with regional capacity, the MRWMD site features several important waste-reduction and waste-diversion facilities that implement the District's stated mission of "Turning Waste into Resources." These include an indoor materials recovery facility to divert recyclable and reusable materials from the waste stream; systems that use landfill gas to generate electricity, an innovative anaerobic digestion food scrap pilot project, and both green waste windrow and ASP composting. The District also provides household hazardous waste collection, reusable materials resale, concrete/asphalt recycling, and public outreach programs in support of its mission.