



CT DEEP Solid Waste Management Advisory Committee

# Introduction to Turning Earth

ORGANICS RECYCLING & RESOURCE RECOVERY

# Turning Earth Business Model – The Triple Play™



We convert organic waste we are paid to manage into a number of valuable resources

Taking every penny off the organic waste while at the same time creating revenue diversification

The Triple Play™ is truly closing the loop in a cradle to cradle manner

**...the expansion of the biogas industry... hinges on innovative applications and business models rather than breakthrough technologies”**

“Worldwide Power Generation Capacity from Biogas Will Double by 2022.” *Pike Research* 5 November 2012

Organic “waste” in... food and compost out... and renewable energy in between!



# Proven Integrated Organics Recycling Technology

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# Aikan: Unique 3-Step Integrated Process



Turning Earth holds the exclusive license to the Aikan Technology in North America

### U.S. patents:

*Apparatus Patent* secured:  
U.S. Patent No. 8,329,455  
issued December 11, 2012

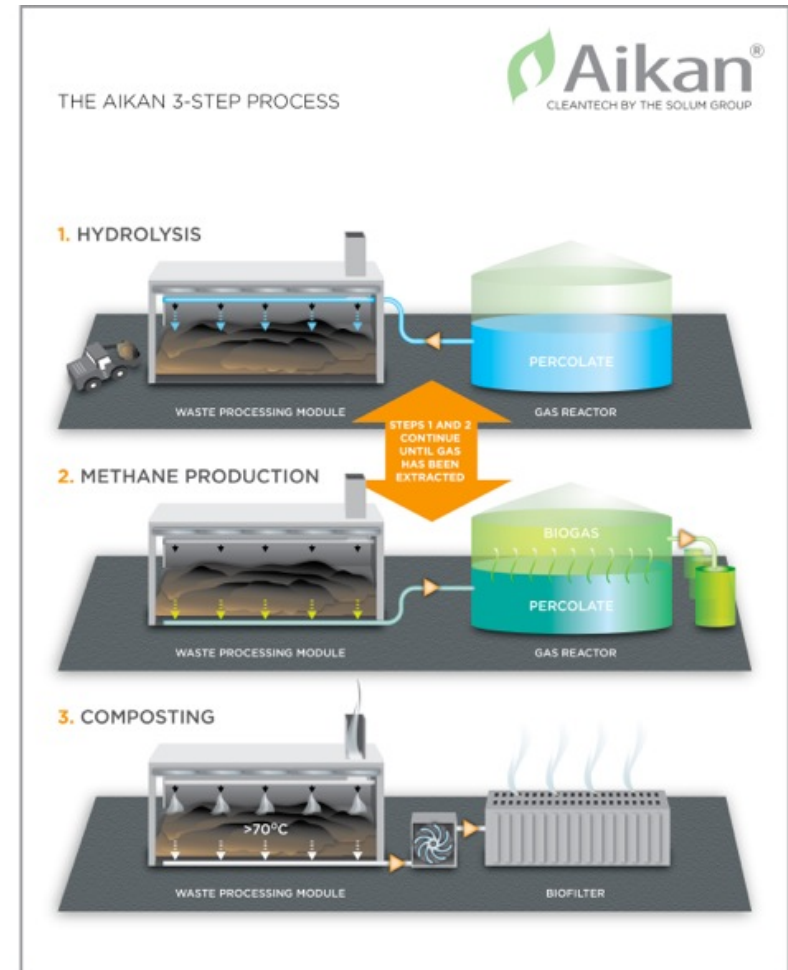
*Method Patent* secured:  
U.S. Patent No. 8,492,134  
issued July 23, 2013

### International patent strategy:

Secure option to pursue international patents

Patent Cooperation Treaty ("PCT") Application filed July 2012

- Unique 3-step integrated high-solid anaerobic digestion ("HSAD" and in-vessel composting process
- Organic waste is introduced into the process modules
- 3 weeks of biogas production during HSAD phase
- 2 weeks of intensive in-vessel composting during composting phase
- Both the HSAD and composting phase take place in the same process module providing significant odor and environmental control



# Aikan – Proven Process With 10 Year Track Record



No technology risk – Aikan is proven having operated very successfully for the past decade in Denmark

Straight-forward Process:  
Organic waste is loaded into a sealed process module

Liquid percolate containing methane-producing microbes is continuously recirculated through the organic waste and into the percolate tank for biogas generation

After the conclusion of the methane production process, the organic waste is composted within the same module

The Aikan advantage:  
Integrated anaerobic digestion and in-vessel composting

Organic waste is never exposed to the environment



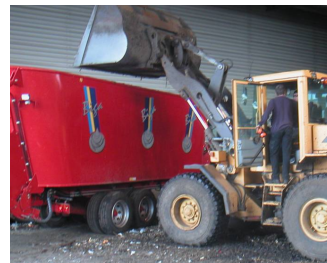
Organic waste received



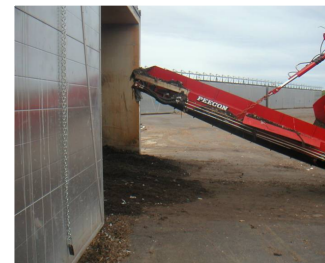
Emptied in receiving building



Sorting and screening



Mixing



Loading process modules



Biogas production optimized in percolate tank



Material is further converted into a rich compost



Sorting and screening final product



Sale of engineered soils

# Covanta Partnership

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The partnership announced between Covanta and TE has two key components:

- 10 year agreement for TE Central CT project
  - Collaboration on other similar projects in CT / MA

CT DEEP highly supportive of TE Central CT Project

**Bristol, CT, October 28, 2013** – Covanta Energy Corporation (NYSE: CVA), a world leader in sustainable waste management and renewable energy, and Turning Earth, LLC an integrated organics recycling company, today announced a new partnership to provide organics recycling to Connecticut municipalities and businesses. The 10-year agreement calls for Turning Earth to build, own and operate an integrated organics recycling facility in central Connecticut to which Covanta will divert organic waste for beneficial reuse in partnership with municipalities and commercial customers. Covanta and Turning Earth will explore future opportunities in the Connecticut and Massachusetts region.

### **DEEP Comment on Announcement from Covanta Energy and Turning Earth on Plans for an Organics Recycling Facility**

*Deputy Commissioner Macky McCleary of Connecticut's Department of Energy and Environmental Protection today issued the following comment on news of plans from Covanta Energy and Turning Earth to build and operate an organics recycling facility:*

“The Connecticut Department of Energy and Environmental Protection has been actively encouraging projects aimed at diverting food wastes and other organic material from the waste stream,” said Deputy Commissioner Macky McCleary. “This is exactly the approach needed to drive down solid waste disposal costs and make more appropriate use of resources. It is also an approach supported by the state’s Solid Waste Management Plan and the Governor’s Modernizing Recycling Working Group.”



# Covanta Bundled Services



Comprehensive set of recycling and waste management services

Organics are a critical component given large % of MSW stream

- Covanta's Bundled Services Offering:

- Organics Recycling
- Single Stream Recycling
- E-waste
- Secure Medication
- Bulky Waste
- MSW

- Provides Customers:

- One-stop shop
- Reduced costs
- Streamlined vendor management
- High quality service offering

# Our Strategic Partner - Covanta Energy Corporation



Strategic partnership with the largest waste-to-energy player

10 year partnership with Covanta and 16 municipalities for TE Central CT Project

Collaboration with TE enables Covanta to deliver a compelling organics recycling solution to its municipal and commercial customers

- Largest waste to energy (“WtE”) infrastructure company in the world
  - \$2.3BN Equity Market Cap
  - \$480-495MM EBITDA
- 46 WtE facilities in North America
- Manages over 20 million tons of MSW
- Produces 8% of renewable energy in the U.S.

Note: (1) Q3 CVA management financial guidance aside from market cap.

# Facility Design & Construction

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**TURNING™**  
**EARTH**

AN ORGANICS RECYCLING COMPANY

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