



### Unmatched Innovation & Function

# Introducing the REGREEN MACHINES





- Complete System
  - We can manage waste to meet your needs
- Modular System
  - Mix and match to accommodate your goals
- Patented Components deliver unique benefits
  - Shredder blade array creates effective size control
  - Continuous heat cooker processes in minutes
- KISS Design for simple training, maintenance

### **The Regreen Machine**



#### Large Generator Compliance with AB 1826

The only machine in the world that can convert any type of organic waste into useful products in minutes and eliminate all harmful bacteria and odor. The Regreen Machine is our commercial-sized unit that can process up to 2-tons per-hour to meet the needs of cruise ships, amusement parks, hotels, restaurants and food-courts: virtually any commercial enterprise where food waste is generated!



# Regreen designed for LA County Challenges

- LA County faces many challenges

   Full implementation of AB 1826 by 2020
   Puente Hills MRF Utilization
- Partnering to meet WM challenges
  - Scalable system Not "one size fits all"
  - Components will fit inside existing processes
  - Outreach and Education
  - Needs Analysis Assistance



# Fully Scalable and Designed to Last



The 5-ton per-hour Organics Recycling Processor (shown left) can be sized to an under-counter configuration for customers with less material and limited space. Sizeup to process as much as 42 tons per-hour.

Low RPMs, fully adjustable speeds and temperatures, and quality materials & construction create machines that last. Our shredders (shown left) operate at only 1200 to 1500 RPM!



# Proven Efficiencies, Cost Effective Results

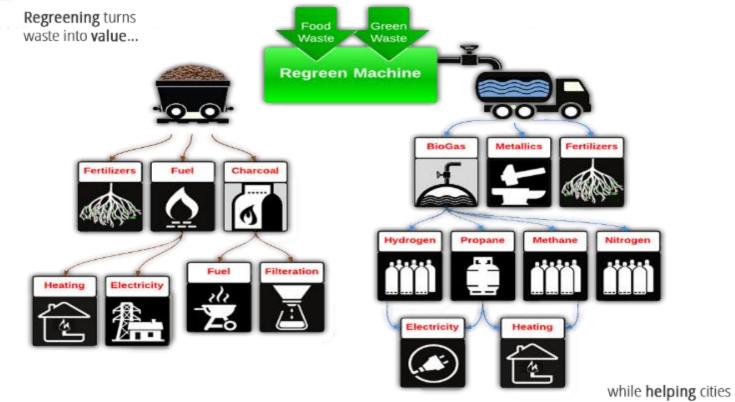
• Tried and proven



- 30-year use with fish waste
- 4 years with organic waste from MSW
- Amazingly fast and easy to see positive impact

   Our technical team gets you installed and trained
   Our finance team finds ways to fit your budget
- Net Cost Partnering for Public Agencies

## What is Your Cost Challenge?



eliminate landfills!

Patent Pending

- Compliance planning AB 1826
  - Can assist with outreach and needs assessment
  - Can address needs of businesses with 8 cyd of weekly organic waste in the short term
- Longer term, large scale projects
  - 100% diversion of organics at Puente Hills MRF with liquid fraction boosting AD system biogas production at Joint Water Pollution Control Plant

# **The Regreen Machine**

#### **Commercial Organic Waste Recycler** Applications up to 2 tons per hour

#### From This



To This ..... In Minutes



## The **Regreen** way to eliminate waste!

#### • Commercial kitchens

- Grocery Stores
- Naval ships
- Vegetable Markets
- Cruise lines
- Distribution Centers
- Food Courts in Malls
- Hospitals

Processes Food Waste and all Organics

Continuously produces odor and bacteria free material at rate of 1-2 Tons Per-Hour.

De-waters and dries material, eliminating 65% of weight and 85% of volume.

> Easily Refine to Pellets or Powder, Fertilizer, Feed or Fuel.











- Professional Needs Assessment
  - Everyone's needs are different and unique
  - Informed assessments save time and resources
- Technical Team Creates Regreen Options
  - PhD and R&D assets
  - Engineering expertise
- Financial Alternatives to fit your constraints
  - Net cost, Zero cost options

# **Our Machines Make Any System Better**

Shown below is the integration of our equipment with the CleanVantage anaerobic digester. **Regreen Machines** shred and homogenize to substantially improve biogas production. Another **Regreen Machine** then quickly converts used digestate material into marketable products.

**Digester Inputs** (Food Waster, C Marce, Other Organic Substrates All of the opportunities presented Regreen will not be appropriate for all digester Machine systems based upon technical See Reduction and financial constraints. Treatment Treatment Digestate **Biogas** to remove Anaerobic Digester to remove CO<sub>2</sub> H2O, H2S & Siloxane Solid Liquids Biomethane Regreen Medium-BTU Biogas (900-1000 ETUs/scf) Machine 600-700 BTUc/scf Vatural gas pipeline quality, Electricity Boller, heater, **Bolids Seauration** vehicle fuel (CNG/LNG), Internal combustion engine Supp leat 1 chiler, etc. Pathagen Dostruction) learly stage: microturbines, fuel relict Pellets Fertilizer for field or greenhouse crops ster Reuse & Recycling addition to nutrient recovery Recaptured Heat Vehicle Fuels Fertilizer (NPK) Fiber-based Animal Feed Electric Power Farm, Factory or District Energy npressed BloG Products Generation ould BioGan) Building heating, greenhouse, food storag adjacent commercial/industrial needs, etc Electric Power Generation Compost 灰 Clean Vantage 🎑 Soil Amendment

**Basic Anaerobic Digester System Flow Diagram** 



#### Models from 5 to 42 Tons Per Hour

Gas Usage – 58 Nm<sup>3</sup> per metric ton

Electricity Usage – minimal – average only \$27 per-day US for 120 TPD operation.

Footprint – 300 square fee (RGT 5) to 1,000 square fee (RGT 42)

Hopper – Built to Suit. Up to 20 tons holding capacity – metered feed.

Shredder – Sized from Model 25 to 80 depending up processing needs

Evaporation Rate – 15% of organic material weight

## Regreen Organic Waste Recycling Processor



Machines with a 30-year track record in the fish processing industry, redesigned to process all types of organic waste in minutes. Four (4) years of trouble free operation in Europe. Producing odor free, harmful bacteria free, and nutrient rich solids and liquids at a continuous rate of 5 to 42 tons per-hour (depending upon model selected).

Organic waste travels through the "cooker" where dry steam never touches the material, yet our proprietary bellows system encapsulates and controls the steam to cook all material at a constant 150 degrees. Next step is the "press" which removes liquids, then our dryer uses encapsulated steam to again maintain temperature to bring solid material to a 0% to 10% moisture level. 10% moisture recommended for pelletizing. Pelletizing not necessary for fertilizers and soil amendments.

We have the solution to your waste problem

Contact us at +1 (949) 837-3618 mike.b@regreentechnologies.com www.regreeentechnologies.com Regreen International Solutions, Inc. 2051 Placentia Avenue Costa Mesa, CA 92627

NY WISHANNANY WINY WINY WINY WASHING AND PROPERTY WASHING AND THE WASHING AND