Waste to Wisdom: Biomass Conversion Technology

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Waste to Wisdom Project Overview

Forest residuals and slash are an immense, underutilized resource.

But transportation costs are prohibitively expensive due to their low bulk density and low market value.

These economic barriers can be overcome by

- increasing the transportation efficiency, and/or
- increasing the value of the residuals

Waste to Wisdom Project Overview

Utilizing forest residuals for the production of bioenergy and bio-based products.

Waste to Wisdom Project Goals

Research is divided into three major task areas:

- **Feedstock Development**
  - Production of high quality feedstocks
  - Development of innovative biomass operations logistics
- **Biofuels and Bio-based Products Development**
  - Evaluate technical performance of biomass conversion technologies
  - Operate the machines at or near forest operations sites
- **Biofuels and Bio-based Products Analysis**
  - Evaluate financial feasibility and social impacts
  - Analyze the ecological sustainability of each process

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Biomass Conversion Devices Team and Partners

SCHATZ ENERGY RESEARCH CENTER

BIOCHAR SOLUTIONS

Pellet Fuels Institute

NORRIS THERMAL TECHNOLOGIES
global equipment solutions

RFFI
environment, economy, equity

RUF. BRIQUETTING SYSTEMS

Bear Mountain Forest Products
SINCE 1988

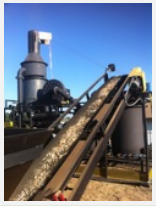
Big Lagoon and Samoa field site host:

GREEN DIAMOND RESOURCE COMPANY

Funding support:

U.S. DEPARTMENT OF ENERGY

Machine Testing Schedule

Technology	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4
 Torrefier						Field testing of Pilot Unit (Big Lagoon, CA)				Field Testing of 60x Scaled Unit (Samoa, CA)	
 Briquetter					Initial Testing (Cascade Locks, OR)	Field Testing (Big Lagoon, CA)				Field Use (Samoa, CA)	
 Biochar		Initial Testing (Colorado)							Field Testing (Bransco mb, CA)	Testing of 2x Scaled Unit (Colorado)	
 Gasifier								Lab Testing (SERC)	Field Testing (Branscomb, CA)		
 Dryer						Field Testing w/ Torre-fier (Big Lagoon, CA)			Field Testing w/ Bio-char (Branscomb, CA)		

Thank You!

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