



# **Bioenergy Industry Outlook: Do Power Opportunities Exist?**

Southern Bioenergy Networks Meeting

December 5, 2012

# Company Overview

- Recast Energy is an operator & developer of biomass-to-steam/power plants
  - Founded in 2004
  - 45 employees (staff and operations)
- United States
  - New construction
  - Convert from coal
  - Typically residual woody biomass
- Caribe / Central America
  - Several countries actively seeking alternative energy
  - Wood and energy crops



# Recast Energy's Current Portfolio



## Kentucky

- ✓ Coal-fired boiler being converted to biomass
- ✓ Natural gas backup unit for 100% reliability
- ✓ 240,000 lb/hr steam capacity (biomass & nat gas)
- ✓ Acquired in 2010

## Mississippi

- ✓ 52,000 lb/hr biomass steam capacity
- ✓ Natural gas backup unit for 100% reliability
- ✓ Built in 2007

## Dominican Republic

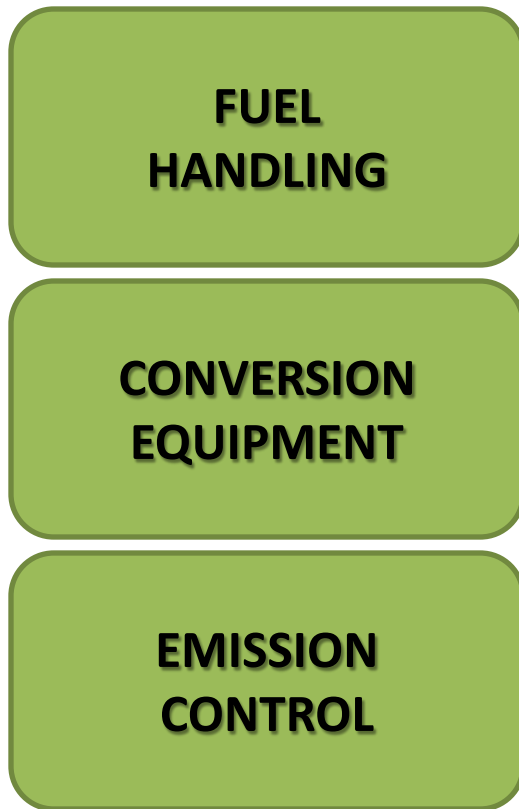
- ✓ 80,000 lb/hr biomass steam capacity
- ✓ Built in 2008, O&M operator since startup

## Maine

- ✓ 17 MW Wood-fired stand-alone power plant
- ✓ Acquired in 2011

# Key Variables Drive Project Success

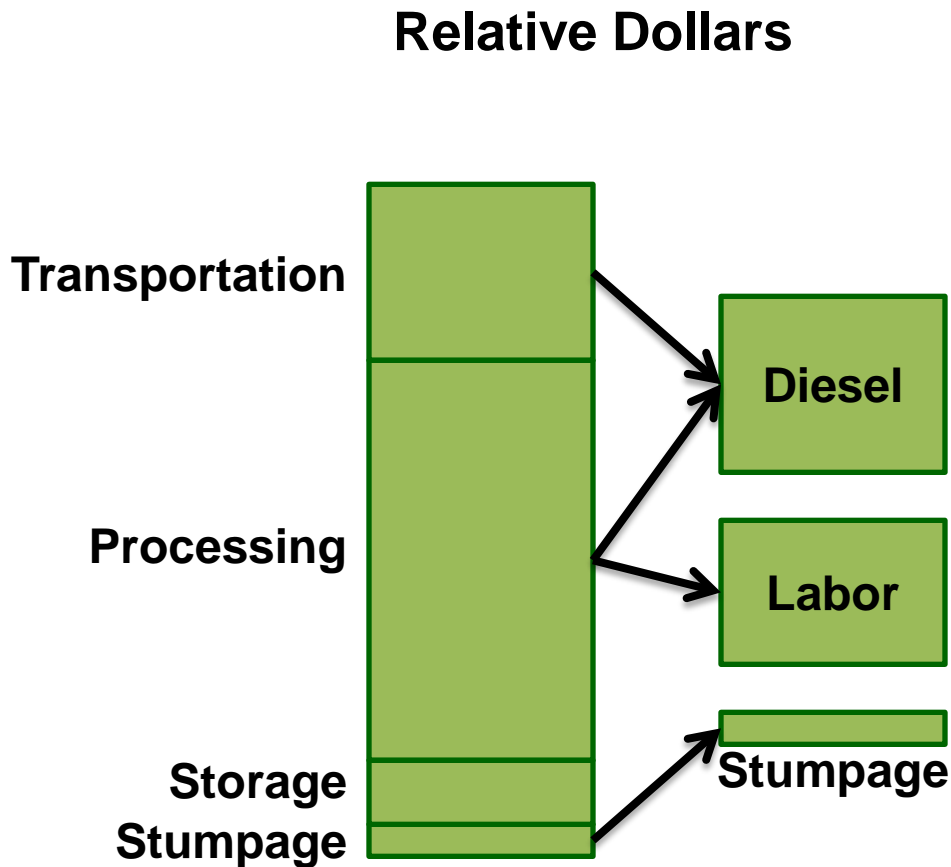
## FOCUS ON THE SYSTEM



## KEY FACTORS

- Biomass Supply
- Fuel Management
- Permitting Approach
- Flexible Deal Structures

# Fuel Cost Risk is Not as Large as Perceived



## Risk Management Strategies

- Focus on most at-risk variables
- KISS
- Customers can tolerate some variability
- Inflator options:
  - CPI / PPI
  - Diesel

# Sample Plant Economics: Greenfield 10-15 MWe, 15 year PPA

Fuel **\$35 – 40 / MWh**

Non-fuel  
O&M **\$20 – 25 / MWh**

Capital  
Recovery **\$40 – 50 / MWh**

**\$95 – 115 / MWh**

Simply not viable  
in today's market

## Opportunities to Improve

- Capture REC & PTC Value
- Brownfields / Used Equipment
- Combined Heat & Power
- Where is Power more Expensive
- Grant / Loan Opportunities
- Cluster Projects

# Plenty of Challenges in Current Market, but Areas of Opportunity Remain

## CHALLENGES

- NatGas & PPA Prices
- Tax Incentive Uncertainty vs. Development Lead Times
- REC Uncertainty
- Investment Size

## OPPORTUNITIES

- CHP
- Biomass Export and International Development
- Coal-to-Biomass Conversions
- Municipalities & Co-op's





**Thank You**

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