

# The Need and Possibilities for a Biomass Feedstock Processing Lab in South Carolina

Liz Kress  
Principal Engineer  
Santee Cooper - Renewable Energy

# Biomass Feedstock Processing Lab

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- Would bridge the gap between the two ends of biomass R&D
  - Feedstock development
  - End user processes

**Feedstocks**



**End Users**

# The Vision for a Feedstock Processing Lab

- A facility with a wide range of capabilities for physically modifying biomass, including sizing and densifying
- A facility that could handle as much as truckload quantities of biomass feedstocks
- Equipment might include
  - Fuel chipper
  - Horizontal grinder – hammer type
  - Screen – for dirt
  - Screen – for size
  - Pelletizer
  - Drier
  - Chip blowers
  - Conveyors

# What feedstocks could benefit from a feedstock processing lab?

- Sweetgum
- Switchgrass
- Agricultural residues
- Willow
- Loblolly
- Forest residue
- Barley
- Algae
- Municipal Solid Waste
- Sweet Sorghum
- Eucalyptus
- Wood manufacturing byproducts
- Arundo donax

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- Would support ramp-up trials at end users that eventually will require dedicated equipment choices
  - This is a “trial rich” experimentation time for developing new supply, new markets, new end users
  - The experimentation needs to remain with the crops and the end use – i.e., the processing needs to “just happen” and not introduce new variables.

# What end users and processes could benefit from a feedstock processing lab?

- Electric utilities
  - Trials at coal plants
- Boiler operators
  - That could use alternate fuels or alternate heat supply sources
- Equipment manufacturers
  - That want to develop equipment that uses biomass
- Gasification
- Cofire with coal
- Enzymatic Conversion
- Fermentation
- Anaerobic Digestion

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- Need to develop expertise in handling and processing of these various feedstocks
  - Need for skilled workforce development to handle operation and maintenance of this equipment
  - Could link the biomass feedstock processing lab to job development

# The Vision for a Feedstock Processing Lab

- Under the banner of the SC Biomass Council
  - Neutral and independent
- Operated by Clemson Pee Dee REC
  - Central location
  - Many synergies
- Incorporate job training to operate and maintain equipment in cooperation with technical colleges
- Grants or contributions to cover equipment purchase costs
- Users pay only operating costs

# Contacts

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- Jim Frederick
- Tom French
- Liz Kress
  
- Could you be the right person to develop this?