



# Biomass Program

## Big Island Demonstration Project – Black Liquor

Black liquor is a papermaking byproduct that also serves as a fuel for pulp and paper mills. This project involves the design, construction, and operation of a black liquor gasifier that will be integrated into Georgia-Pacific's Big Island facility in Virginia, a mill that has been in operation for more than 100 years. When completed, this commercial scale demonstration project will handle all the chemical recovery required by the facility, and illustrate the viability of black liquor gasification technology in the forest products industry.

By enabling the development, scale-up, and commercialization of gasification technologies for the forest products industry, this project will help provide domestic pulp and paper mills with the opportunity to replace recovery boilers that are reaching retirement age with a new, more energy and environmentally efficient technology.

### R&D Pathway

Project participants will design, construct, and operate a black liquor gasifier that is integrated into the existing mill operations. Research will focus on reducing oil consumption, demonstrating the feasibility of biomass gasification, and demonstrating the viability of

the condensing gas clean-up process.

Phase I efforts will include engineering and design to identify and resolve technology gaps, and confirm constructability and conformance to codes. Commissioning and start-up of is scheduled to occur during 2004.



Photo: Georgia-Pacific

## Integrated Biorefineries R&D

### Benefits

- Increase in electrical power production capacity by over 200 percent
- Potential to reduce greenhouse gas emissions by over 30 million metric tons of carbon per year

### Applications

Black liquor gasification has the potential to improve capital effectiveness, energy efficiency, environmental performance, global competitiveness, and provide safer working conditions for the forest, wood, and paper industry.

### Project Participants

Georgia Pacific  
 Fluor Daniel, Inc  
 StoneChem, Inc  
 National Energy Technology Laboratory

### Project Period

FY 2000 – FY 2007

### For more information contact:

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