



U.S. Department of Energy Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Biomass Program

Evaluation of Sulfur in Syngas

One of the key technical barriers to commercialization of biomass gasification is syngas clean-up and conditioning. Sulfur is one of the contaminants which must be removed for efficient downstream processing of syngas into value-added products. There is a great deal of information on technologies for removing sulfur from syngas, but the costs of technology at biomass gasification scales are not well-defined. This project will define the options and costs at different scales of technology that can be used to remove sulfur from syngas.

R&D Pathway

Commercial sulfur removal technologies have been reviewed and researchers performed an analysis of the source and fate of sulfur compounds for biomass systems. These results will be integrated in a state-of-the-art evaluation of the sulfur removal opportunities for large-scale biomass gasification systems. The evaluation will consider parameters, such as biomass feedstock, process size, and syngas utilization technology, that can impact the options and costs of sulfur removal technology.

Thermochemical R&D

Benefits

- Enable further development of the best sulfur removal technology for a biomass gasification system.

Applications

The research results will play a key role in accelerating the development and commercialization of biomass gasification systems and biorefineries.

Project Participants

Pacific Northwest National Laboratory

Project Period

FY 2005 – FY 2006

For more information contact:

Don Stevens
Pacific Northwest National
Laboratory
Don.Stevens@pnl.gov

EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov

Visit the Web site for the Office of the
Biomass Program (OBP) at
www.eere.energy.gov/biomass

April 2006

A Strong Energy Portfolio for a Strong America. Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.