



# Biomass Program

## Feedstock Interface R&D

### Iowa Switchgrass Project

Chariton Valley Resource Conservation and Development (RC&D) is working to develop markets for switchgrass as an alternative energy crop in southern Iowa. Native to North America, switchgrass is resistant to many pests and plant diseases and can be grown on marginal lands. It is also capable of producing high yields of biomass with very low applications of fertilizer. The agronomic characteristics combined with the excellent burn qualities of switchgrass have generated interest in growing it for use as a supplementary fuel in electricity generation.

The three objectives of this project are: (1) to demonstrate the technical aspects and overall viability of establishing a large-scale biomass supply; (2) to develop implementation strategies that will create sustainable, economically-viable alternatives for the local agricultural economy, secondary industry opportunities, and support rural development efforts; and (3) to establish the credibility of biomass power within the energy community and increase interest in renewable energy technology.



Switchgrass.

### R&D Pathway

Research activities include:

- a wildlife impact study of switchgrass production and harvesting;
- an economic study to evaluate the potential of switchgrass as a profitable alternative to row crops;
- development of equipment and processes required for harvesting, handling, and co-firing switchgrass;
- co-fire testing of switchgrass, including evaluation of fuel and ash samples, boiler performance, and emissions generated; and
- deployment of technology at Alliant Power's Ottumwa Generating Station.

### Benefits

- Productive use of marginal lands
- Establish management practices for production of switchgrass as a potential alternative new crop
- Encourage rural economic growth and development

### Applications

The results of this project will lead to the development of a biomass fuel industry in the Northern Plains.

### Project Participants

Chariton Valley Resource Conservation & Development  
Alliant Energy  
Antares Group Inc.  
Bradford Conrad Crow Engineering  
Elsam Engineering  
Iowa Dept of Natural Resources  
Iowa Division of Soil Conservation  
Iowa Farm Bureau  
Iowa State University  
Prairie Lands Bioproducts, Inc.  
T.R. Miles

### Project Period

FY 1996 – FY 2005

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

September 2004