

New Challenges Bring New Opportunities

The new Federal Energy Bill requires America to produce 36 billion gallons of renewable fuels including at least 16 billion gallons of cellulosic biofuels by 2022.

The Oklahoma Bioenergy Center represents collaboration among the University of Oklahoma, Oklahoma State University and the Noble Foundation. These entities are taking an orchestrated approach to advancing the development of cellulosic ethanol from crops like switchgrass, sweet sorghum and milo, as well as research on biodiesel that's derived from natural oils like sunflower seeds and canola.

The Center is also developing new techniques for harvesting and transporting energy crops to the biorefinery and creating alternative technologies for converting the biomass into transportation fuel.



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The Oklahoma Bioenergy Center works to connect the state's agricultural communities, research institutions, and biofuel entrepreneurs with grants and incentives that can help "jump start" this all-new industry.

How to Be Part of Oklahoma's Bioenergy Future

We can all play an important role now in supporting the vision of biofuels in Oklahoma:

- » Visit the Oklahoma Bioenergy Center web site and register to receive periodic updates: www.OKbioenergycenter.org
- » Let community leaders and state legislators know your thoughts about the importance of bioenergy to Oklahoma's future.
- » Encourage local agriculture, business and community associations to host speakers or events that address the topic of Oklahoma's farm-to-fuel initiatives.
- » Attend conferences, seminars and roundtable discussions about the future of biofuel production, and learn how it can positively impact Oklahoma's future.

Biofuels are not just important to Oklahoma's future...they are important to America's future. The Oklahoma Bioenergy Center, through its research organizations, is here to help take Oklahoma toward this promising future.

www.OKbioenergycenter.org



The Oklahoma Bioenergy Center, an initiative of Governor Brad Henry, received \$40 million in state funding through 2010; legislators must renew a \$10 million appropriation annually for the Center to continue the critical research necessary to make farm-to-fuel an economic reality for Oklahoma.



Cultivating the Future of Oklahoma's Renewable Energy Industry

Farm-to-Fuel: A New Vision of the Future

The Oklahoma Bioenergy Center is a research and economic development collaboration that's working to make our state a leader in America's quest to reduce dependence on foreign petroleum, shrink the growth of greenhouse gas emissions and redirect to rural America money sent overseas for imported oil. The Center's vision for a vibrant, sustainable bioeconomy is rooted in a commitment to bring lasting prosperity to all Oklahomans.

The Center's continuous research collaboration is paramount to the success of Oklahoma's biofuel industry. Bioenergy development is the far-sighted course our state and our nation must take to reduce dependence on foreign oil, stimulate economic growth and attain environmental sustainability.



The Oklahoma Bioenergy Center's 1,000 acre research plot near Guymon will be the first of its size in the world. This "living laboratory" will provide the real-world data needed to better understand the production and long-term impacts of bioenergy crops.

Reaping the Long-Term Benefits of Bioenergy Research

The Oklahoma Bioenergy Center and its partners are collaborating on research initiatives that focus on four key areas:

Crop Development

Evaluating, identifying and improving the best plant materials to increase yield, sustainability, conversion efficiency and biofuel output.

Crop Production

Developing establishment and management tools and procedures for dedicated energy crops.

Harvest, Collection and Transport

Designing new solutions to harvest, process, collect and move high-yielding, commercial bioenergy crops.

Conversion

Formulating effective and economical methods to transform new feedstocks—like switchgrass—into biofuels that burn efficiently, reduce greenhouse gasses and are compatible with today's engines and fuel pumps.

Expanding the Reach of Oklahoma Agriculture

Through the coordinated efforts of the Oklahoma Bioenergy Center, research and development will spotlight the state's benefits, identify its potential strengths and ultimately yield investment in commercial-scale biorefineries and other critical infrastructure across the state.

The potential benefits to any state's economy from biofuels production are staggering. Consider, for example, the on-going, estimated economic impact of a single 50-million gallon ethanol plant after initial construction*:

- » At least 33 new full-time jobs, with a total of 120 new jobs throughout the community
- » \$6.7 million annual increase in the aggregate household incomes in the community
- » \$155 million annual increase to the state's gross output
- » \$70 million annually in the expansion of the local economic base

** Source: Nebraska Public Power District, "Employment and other Economic Impacts Associated with the Construction of an Ethanol Production Facility," January 2005.*



By 2018, Oklahoma's annual yield is expected to be a minimum of 200 million gallons of ethanol, which will be distributed and marketed nationally.