

NEWS



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FOR IMMEDIATE RELEASE

DATE: August 23, 2006

Updated: October 9, 2006

Sunflower to Develop Integrated Bioenergy Center

Today Sunflower Electric Power Corporation announced the formation of an alliance with the National Institute for Strategic Technology Acquisition and Commercialization (NISTAC), and the Kansas Bioscience Authority to develop an Integrated Bioenergy Center which will be located at Sunflower's 10,000 acre Holcomb Station.

The primary goal for this project is to develop bioenergy facilities that will integrate several commercial or near commercial renewable energy technologies with the coal-based power plant located at Holcomb Station.

This announcement was made in conjunction with a visit by U.S. Department of Agriculture Under Secretary Tom Dorr, Congressman Jerry Moran, the State Director for Rural Development Chuck Banks, the Chairman of the Kansas Bioscience Authority Clay Blair, and NISTAC's President and CEO Kent Glasscock.

"A mission of the U.S. Department of Agriculture is to promote economic development in rural communities," Moran said. "I am pleased to bring Under Secretary Dorr to southwest Kansas to see first hand the jobs that will be created through Sunflower's power plant expansion and their work to develop a bioenergy center that will be unique to Kansas and possibly the world. This is an example of how innovative Kansans are, not only expanding local economies, but also answering the national call for more renewable energy."

"The Kansas Bioscience Authority (KBA) is pleased to be involved in this pioneering effort by Sunflower in southwest Kansas," said Blair. "The KBA is chartered with the goal of promoting bioscience activities statewide and bioenergy is clearly a good fit for western Kansas."

When completed, the center will involve several subsystems which may include: livestock facilities, an anaerobic digester, an algae reactor, an ethanol and a biodiesel plant which are integrated to utilize corresponding waste steams.

Sunflower's President and CEO, Earl Watkins recently reported to Sunflower's Board of Directors that this opportunity to work with NISTAC to create the Center is an opportunity that is unprecedented in his experience. "Even though we are vigorously working to complete our Holcomb Expansion Project, this Integrated Bioenergy

Center could dramatically improve our ability to help serve agricultural producers and add another level of value to the products they raise in central and western Kansas.”

NISTAC’s President and CEO, Kent Glasscock, told Sunflower’s Board that he sees this project will be the first of its kind. “Our goal at NISTAC is to create a value proposition—we strive to find ways where technology can be utilized to make a profit.” He added, “This project is based on the cutting edge of integration; I know of no other place in the world where renewable energy technologies will be efficiently utilized like our goal is for this project.”

INTEGRATED BIOENERGY CENTER SUBSYSTEMS

How The Subsystems All Work Together

Waste from the livestock facilities will be processed through an anaerobic digester to extract methane which will be utilized to power the ethanol plant. An algae system will recover carbon dioxide from the power plant and nutrients from the livestock waste to create an oil source for the biodiesel facility. There are a number of other waste streams which are utilized and the net result should be subsystems which are more efficient compared to stand alone facilities. A significant additional benefit is a reduction of water and air emissions through an integrated system.

Trevor McKeeman, NISTAC’s, Business Development Manager, said, “The primary benefit that is expected from the Center is the efficiency of integration.” He added, “The improved economics over stand-alone systems, the re-use of water, utilization of waste streams and removal of the carbon dioxide from power plant flue gas will benefit all the partners involved in this project.”

“It is important to understand that the Center’s subsystems may be adjusted as we learn more about the economics, engineering, and our ability to integrate each subsystem,” said Clare Gustin, Sunflower’s Executive Manager, External Affairs. “We know,” Gustin said, “that regardless of the final configuration, this project will create new jobs and create additional economic activity in the region.”

Those involved with the project indicated the integration of technology and economic models will likely affect the final design of the system. However, Sunflower and NISTAC intend to organize a formal business structure, identify local participants, technology, and financial partners, and complete individual subsystem feasibility studies.

About Sunflower—

Sunflower Electric Power Corporation is a regional wholesale power supplier that owns and operates a 595 MW system of gas and coal-based generating plants and a 1,200-mile transmission system for the needs of its six Member cooperatives that serve 118,000 people spread throughout a 21,000 square mile area in western Kansas. Sunflower also provides power to regional utilities in western Kansas and in ten states.

Sunflower’s Member cooperatives include Lane-Scott Electric Cooperative, Dighton, Pioneer Electric Cooperative, Ulysses, Prairie Land Electric Cooperative, Norton, Victory Electric Cooperative Association, Dodge City, Western Cooperative Electric Association, WaKeeney, and Wheatland Electric Cooperative, Scott City, Kansas.

Visit Sunflower's website at www.sunflower.net

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About NISTAC—

Founded in 1994, the National Institute for Strategic Technology Acquisition and Commercialization (NISTAC) is a not-for-profit, 501(c)3 corporation, organized under the auspices of Kansas State University (K-State) and the State of Kansas via the Kansas Technology Enterprise Corporation (KTEC). K-State is the state's Land Grant Research University located in Manhattan, which is a city of 50,000 people in a regional community, which includes approximately 100,000 people in a 35-mile radius. KTEC is a statutory, economic development corporation reporting to the Governor.

Visit NISTAC's website at: www.k-state.edu/tech.transfer/NISTAC/index.htm

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About the Kansas Bioscience Authority—

The Kansas Bioscience Authority was created to make Kansas the most desirable state in which to conduct, facilitate, support, fund and perform bioscience research, development and commercialization, to make Kansas a national leader in bioscience, to create new jobs, foster economic growth, advance scientific knowledge and improve the quality of life for the citizens of the state of Kansas.

Visit the Kansas Bioscience Authority's website at:

http://www.ktec.com/sec_bioscience/section/BioAuthority.htm

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