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Energy Department Selects Three Bioenergy Research Centers for \$375 Million in Federal Funding

Basic Genomics Research Furthers President Bush's Plan to Reduce Gasoline Usage 20 Percent in Ten Years

WASHINGTON, DC – U. S. Department of Energy (DOE) Secretary Samuel W. Bodman today announced that DOE will invest up to \$375 million in three new Bioenergy Research Centers that will be located in Oak Ridge, Tennessee; Madison, Wisconsin; and near Berkeley, California. The Centers are intended to accelerate basic research in the development of cellulosic ethanol and other biofuels, advancing President Bush's Twenty in Ten Initiative, which seeks to reduce U.S. gasoline consumption by 20 percent within ten years through increased efficiency and diversification of clean energy sources. The Department plans to fund the Centers for the first five years of operation (Fiscal Years 2008-2013).

"These Centers will provide the transformational science needed for bioenergy breakthroughs to advance President Bush's goal of making cellulosic ethanol cost-competitive with gasoline by 2012, and assist in reducing America's gasoline consumption by 20 percent in ten years," Secretary Bodman said. "The collaborations of academic, corporate, and national laboratory researchers represented by these centers are truly impressive and I am very encouraged by the potential they hold for advancing America's energy security."

To bring the latest tools of the biotechnology revolution to bear to advance clean energy production, the Centers will be supported by multidisciplinary teams of top scientists. A major focus will be on understanding how to reengineer biological processes to develop new, more efficient methods for converting the cellulose in plant material into ethanol or other biofuels that serve as a substitute for gasoline. This research is critical because future biofuels production will require the use of feedstocks more diverse than corn, including cellulosic material like agricultural residues, grasses, poplar trees, inedible plants, and non-edible portions of crops.

The Centers will bring together diverse teams of researchers from 18 of the nation's leading universities, seven DOE national laboratories, at least one nonprofit organization, and a range of private companies. All three Centers are located in geographically distinct areas and will use different plants both for laboratory research and for improving feedstock crops.

The mission of the Bioenergy Research Centers will lie at the frontier between basic and applied science, and will maintain a focus on bioenergy applications. These Centers aim to identify real steps toward practical solutions regarding to the challenge of producing renewable, carbon-neutral energy. At the same time, the Centers will be grounded in basic research, pursuing alternative avenues and a range of high-risk, high-return approaches to finding solutions. To some degree, one key to the Centers' success will be their ability to develop the more basic dimensions of their research to a point that can easily transition to applied research.

The Department's three Bioenergy Research Centers will include:

• The DOE BioEnergy Science Center led by the DOE's Oak Ridge National Laboratory in Oak Ridge, Tennessee. The Center Director will be Martin Keller, and collaborators include: Georgia

Institute of Technology in Atlanta, Georgia; DOE's National Renewable Energy Laboratory in Golden, Colorado; University of Georgia in Athens, Georgia; and the University of Tennessee, in Knoxville, Tennessee.

- The DOE Great Lakes Bioenergy Research Center will be led by the University of Wisconsin in Madison, Wisconsin, in close collaboration with Michigan State University in East Lansing, Michigan. The Center Director will be Timothy Donohue, and other collaborators include: DOE's Pacific Northwest National Laboratory in Richland, Washington; Lucigen Corporation in Middleton, Wisconsin; University of Florida in Gainesville, Florida; DOE's Oak Ridge National Laboratory in Oak Ridge, Tennessee; Illinois State University in Normal, Illinois; and Iowa State University in Ames, Iowa.
- The DOE Joint BioEnergy Institute will be led by DOE's Lawrence Berkeley National Laboratory. The Institute Director will be Jay Keasling, and collaborators include: Sandia National Laboratories; DOE's Lawrence Livermore National Laboratory; University of California Berkeley; University of California Davis; and Stanford University in Stanford, California.

Subject to the finalization of contract terms and congressional appropriations, the Centers are expected to begin work in 2008, consistent with President Bush's Fiscal Year 2008 Budget Request, and would be fully operational by 2009. DOE's Office of Science issued a competitive Funding Opportunity Announcement in August 2006 to solicit applications. The three Centers were chosen following a merit-based, competitive review process that included external scientific peer review of the applications.

The establishment of the bioenergy research centers culminates a six-year effort by DOE's Office of Science to lay the foundation for breakthroughs in systems biology for the cost-effective production of renewable energy. In July 2006, DOE's Office of Science issued a joint biofuels research agenda with the Department's Office of Energy Efficiency and Renewable Energy titled "Breaking the Biological Barriers to Cellulosic Ethanol". The report provides a detailed roadmap for cellulosic ethanol research, identifying key roadblocks and areas where scientific breakthroughs are needed and is available at http://genomicsgtl.energy.gov/biofuels/b2bworkshops.html.

Today's announcement follows other key funding announcements this year to advance President Bush's Twenty in Ten Initiative, and to make cellulosic ethanol cost competitive with gasoline by 2012. On February 28, 2007, DOE announced up to \$385 million for six biorefinery projects that when fully operational are expected to produce more than 130 million gallons of cellulosic ethanol per year. On May 1, 2007, DOE announced a funding opportunity for \$200 million over five years (FY'07-FY'11) to support the development of small scale bio-refineries that produce liquid transportation fuels such as ethanol. For additional information on DOE's biofuels initiatives, access http://www1.eere.energy.gov/biomass.

Additional information on the Department's three Bioenergy Research Centers and the Department's Genomics Research Programs is available at:

http://www.science.doe.gov/News Information/News Room/2007/Bioenergy Research Centers/index.htm.

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