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Southern Bioenergy Initiative Executive Summary

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Bioenergy holds the potential to transform the way in which we live by providing abundant, inexpensive, and clean energy sources to power our homes, businesses, and transportation systems. To realize the full potential of bioenergy, it will be necessary to mobilize the research and education infrastructure of the university systems in the United States in collaboration with the government and the private sector. The Southern Bioenergy Initiative is envisioned to be a collaboration of universities from across the south as well as laboratories, non-profit organizations, and companies, working together to apply America's best science and technology to harness bioenergy for the future of our nation.

The U.S. Department of Energy (DOE) strategic energy goal is to "protect our national and economic security by promoting a diverse supply and the delivery of reliable, affordable, and environmentally sound energy" (U.S.DOE 2003). In his January 2006 State of the Union address, President Bush stressed the importance of developing bioenergy as part of our nation's energy future. Subsequently the President announced his Advanced Energy Initiative (AEI) that provides, among other things, for a 22% increase in funding for clean-energy technology research at DOE to . . . "change how we power our homes and offices" . . . and . . . "change how we power our automobiles". The President's call to use clean energy technology to drive fundamental change on a national scale, together with DOE's strategic energy goal, has been the basis for a number of competitive Funding Opportunity Announcements from the DOE, both in the Office of Science and the Renewable Energy Biomass Program in the Office of Energy Efficiency and Renewable Energy. As another example, the two (possibly three) new Bioenergy Research Centers (BRCs) sponsored by the DOE Office of Science will conduct basic, directed, genomics-based research on the structural and functional design of microbial and/or plant systems important in biofuels production.

However, these programs alone will not be able to cover the breadth of scientific and commercial activities that will be needed to accelerate the application of research and lead to breakthroughs in emerging technologies to make biofuels a cost effective and environmentally beneficial alternative at the pace desired by the federal government and needed by our country. A holistic program of complementary basic and applied bioenergy research, engineering, process development, and commercialization will need to be established in the near-term if the aggressive AEI transportation and power generation fuel goals are going to be achieved. Therefore, a diverse group of entities anchored in the South has organized to form a virtual Southern Bioenergy Center (SBC). The SBC aims to connect researchers from across the region, to enhance the quality and robustness of research, stimulate ideas and add cross-disciplinary structure

to the isolated efforts of those individuals and institutions and more effectively utilize the synergistic strengths of the participating research universities, national laboratories, and private industry partners. The SBC mandate anticipates delivering advanced technology for economically and environmentally sound biofuels production within five years; providing momentum towards commercialization of biofuels production within ten years; and accelerating the contribution of biofuels to our nation's energy security.

This organization will function as the research, development, pilot production, and project support arm of its participants to further the effectiveness of bioenergy for our nation. It is envisioned that a strong, far-reaching collaboration among multiple institutions in the Southern states will lead to the creation of unsolicited and responsive proposals for funding by the DOE and other state and federal agencies, allowing for the establishment of a long-term Bioenergy Initiative across the region. Given its strengths in such particular areas of bioenergy as feedstock growth and production, genomics, cellulosic biomass and conversion technologies, the South is uniquely positioned to facilitate the development of a renewable fuels industry across the region and the nation.

Bringing this vision to reality begins with the formation of a core team representative of the expertise located in the Southern United States that can further develop the SBI goals and objectives and attract the necessary membership to make the SBC a reality. The goals of the February 27-28, 2007 SURA Bioenergy Summit in Washington, DC, are to develop these characteristics further, form a plan for creating a proposal to various government agencies to meet these goals, and create a working group structure to press this agenda forward.

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