



U.S. DEPARTMENT OF
ENERGY

Office of Energy Efficiency and Renewable Energy (EERE)

Historically Black Colleges and Universities

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Office of Energy Efficiency and Renewable Energy



Renewable Energy

- Geothermal
- Wind/ Water Power
- Solar
- Biomass/Biofuels
- Fuel Cells

Energy Efficiency

- Building Technologies
- Industrial Technologies
- Weatherization
- Federal Energy Management
- Vehicle Technologies



Mission:

Strengthen America's energy security, environmental quality, and economic vitality through R&D and public-private partnerships that –

- diversify the Nation's sources of energy;
- increase efficiency and productivity of the existing energy infrastructure;
- bring clean, reliable and affordable energy technologies to the marketplace; and,
- make a difference in the everyday lives of Americans by productively enhancing their energy choices and quality of life.

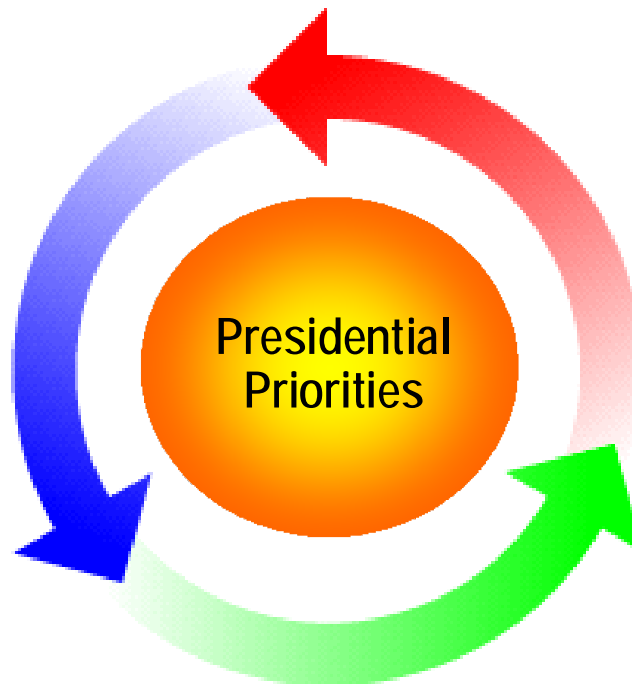
Advancing Presidential Priorities



Energy efficiency and renewable energy research, development, and deployment activities help the Nation meet its **economic**, **energy security**, and **environmental** challenges concurrently.

Energy Security

- Deploy the cheapest, cleanest, fastest energy source – energy efficiency
- One million plug-in hybrid cars on the road by 2015
- Develop the next generation of sustainable biofuels and infrastructure
- Increase fuel economy standards



Economic

- Create green jobs through Recovery Act energy projects
- Double renewable energy generation by 2012
- Weatherize one million homes annually

Environmental

- Implement an economy-wide cap-and-trade program to reduce greenhouse gas emissions 80 percent by 2050
- Make the US a leader on climate change
- Establish a national low carbon fuel standard



Funding Opportunities

Office of Energy Efficiency and Renewable Energy

Minority University Research Associate Program
(Minority Serving Institutions)

**Solar Market Transformation -
Topic 2 – Solar Installer Instructor Training**
(All entities)

High Penetration Solar Deployment
(Unrestricted)

**Deployment of Combined Heat and Power Systems, District
Energy Systems, Waste Energy Recovery Systems, and
Efficient Industrial Equipment**
(All entities*)

Energy Efficient Information and Communication Technology
(All entities*)

Advanced Energy Efficient Building Technologies
(Unrestricted)

Industrial Energy Efficiency Grand Challenge
(Unrestricted)

**Combined Heat and Power Systems Technology Development
Demonstration**
(Unrestricted)

Large Wind Turbine Drivetrain Testing Facility
(Collaboration made up of state and local governments and
Universities)

**Development of Algal Biofuels and Advanced Fungible Biofuels
through Consortiums**

(Consortium – Academia, Government/Non-Government Labs, Non-
Profit Organizations, Private Industry)

Expansion of Infrastructure for Ethanol Blends
(Consortium – Academia, Government/Non-Government Labs, Non-
Profit Organizations, Private Industry)

Ground Source Heat Pumps
(Domestic institutions of higher education, non-profit and for-profit
private entities, State and Local Governments,
Indian Tribes, and Tribal Energy Resource Development Organizations
or Groups)

**Enhanced Geothermal Systems Component Research and
Development/Analysis**
(Domestic institutions of higher education, non-profit and for-profit
private entities, State and Local Governments,
Indian Tribes)

**Validation of Innovative Exploration Technologies; Geothermal
Energy Production; Geothermal Data Development, Collection, and
Maintenance**
(Domestic institutions of higher education, non-profit and for-profit
private entities, State and Local Governments,
Indian Tribes, and Tribal Energy Resource Development Organizations
or Groups)

Enhanced Geothermal Systems Demonstrations
(Domestic institutions of higher education, non-profit and for-profit
private entities, State and Local Governments,
Indian Tribes)

*All types of entities are eligible to apply, except other Federal agencies, Federally
Funded Research and Development Center (FFRDC) Contractors, and nonprofit
organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that
engaged in lobbying activities after December 31, 1995

DOE Support for the Consortium for Plant Biotechnology Research, Inc.



"Through the CPBR-HBCU program, HBCU scientists and their students are able to interact with biotechnology companies. From these interactions, the goal is to increase the possibility of hiring students as interns and recruiting them as future employees. It is critical that minority students get the education and the motivation to enable them to compete for such jobs."

- Program supports collaborative research projects with scientists at minority institutions.
- The projects link these institutions' scientists and their students with CPBR's peer-reviewed research projects.
- Participating HBCUs:

- Alabama A&M University
- Albany State University
- Florida A&M University
- Fort Valley State University
- Hampton University
- Kentucky State University
- North Carolina A&T State University
- Savannah State University
- Tuskegee University
- University of Puerto Rico
- University of the Virgin Islands
- West Virginia State

Since 1994, the CPBR Historically Black Colleges and Universities and Minority Institutions (HBCU/MIs) Program has supported collaborative research projects with scientists at minority institutions

Tuskegee University and the Oak Ridge National Laboratory - DOE Supported Testing



Energy-Efficient Flood-Damage-Resistant Home Reconstruction

- Flood testing was conducted by Tuskegee University and the Oak Ridge National Laboratory in support of DOE Building America Fact Sheets
- Flood testing provided information on suggested materials, systems, and methods which, when used to repair flooded homes, will make homes more resistant to future flood damage



Photo: ORNL Bob Wendt



TUSKEGEE
UNIVERSITY



OAK RIDGE NATIONAL LABORATORY

Managed by UT-Battelle for the Department of Energy

DOE Support of HBCUs



- Alabama A&M University – Summer Bridge Program for High School Seniors and College Freshmen
- Allen University – Science Education and Research Programs at Allen University for Undergraduate and High School Students
- Central State University – Science, Technology, Engineering, and Mathematics Upgrade/Enhancement & Outreach
- Claflin University –
 - Workshop Support
 - Biofuel Production Initiative
- Hampton University
 - Attrition-Resistant Fischer-Tropsch Catalyst Based on FCC Supports
 - Development of Leadership in Engineering
- Howard University – Internship and Diversity Research Program
- Jackson State University – Renovation/Construction of Bioengineering Complex
- Morgan State University – DOE Summer Educational Bridge Program
- Morehouse College – Support Implementation of Peer-Led Team Learning Across the Division of Science and Mathematics
- North Carolina Agricultural & Technical State University – HBCU Grant
- The Benedict College – Infrastructure, Research and Student Development in Science, Technology, Engineering and Mathematics

Employment Opportunities

Office of Energy Efficiency and Renewable Energy



Internships, Fellowships and Student Employment

- Student Diversity Program
- Year-round Co-op Student Employment
- Research Opportunities at DOE Labs & Technology Centers

Recent and Upcoming College Graduates

- DOE Corporate – Federal Career Intern Program
- Presidential Management Fellows Program



<http://www.energy.gov/about/employment.htm>



Looking Ahead

Administration has demonstrated a strong interest in expanding opportunities in research and development

- President Obama announced joint DOE/NSF campaign to encourage students to pursue scientific careers, particularly in clean energy
 - "...create research opportunities for undergraduates and educational opportunities for women and minorities who too often have been underrepresented in scientific and technological fields, but are no less capable of inventing the solutions that will help us grow our economy and save our planet." *
 - "...in no area will innovation be more important than in the development of new technologies to produce, use, and save energy" *



Congress currently reviewing Administration request for this and other clean energy education activities

In FY2010, EERE plans to begin developing this cross-cutting DOE initiative

- Opportunity for expanding DOE efforts with HBCUs



* April 27th speech before National Academy of Sciences

For more information...



Office of Energy Efficiency and Renewable Energy

<http://www.eere.energy.gov/>

<http://www.energy.gov/recovery/funding.htm>

Grants.gov

<http://www.grants.gov>

Employment Opportunities

<http://www.energy.gov/about/employment.htm>