



For Immediate Release- November 8, 2005
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STAC Selects Eleven Proposals for Federal Funding

Proposals Selected under the STAC Energy Efficiency, Research, Development, Demonstration, Deployment, and Rebuild America Projects Solicitation

-Solicitation Funded by U.S. Dept. of Energy Supports Shared Federal-State Objectives-

WASHINGTON, DC (October 24, 2005)—The State Technologies Advancement Collaborative (STAC) today announced the results of its Energy Efficiency, Research, Demonstration, Deployment, and Rebuild America Projects Solicitation. The STAC Executive Committee approved funding for eleven projects valued at \$11.5 million, covering each of the five technical areas in the solicitation. More than \$6.6 million of the selected project's value represents costs to be shared by non-federal government entities, and approximately \$4.9 million is funding from the STAC program. The proposals selected for award are summarized in the Attachment.

The solicitation, which closed in July 2005, supports joint energy research, development, demonstration and deployment of technologies where common federal and state objectives exist. The program and the solicitation emphasize the wide dissemination of results from projects and the transfer of technologies for broad application and impact.

Organizations from 23 states are participants in the eleven selected proposals. Final project awards are contingent on achieving the mandatory requirements of the solicitation in the contract negotiation process, which STAC expects to complete within the next eight weeks.

In total, sixty-one proposals from forty-one States and the District of Columbia, collectively valued at approximately \$78 million, were submitted in response to the STAC solicitation for energy efficiency, research, development, demonstration, deployment, and Rebuild America projects.

STAC is a five-year pilot program funded by the U.S Department of Energy and directed by an Executive Committee which includes representatives of the National Association of State Energy Officials, the Association of State Energy Research and Technology Transfer Institutions, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and Office of Fossil Energy, and an independent member. Two previous solicitations resulted in a diverse portfolio of twenty-four projects valued at over \$23.8 million. To learn more about STAC, please visit www.stacenergy.org

The STAC program is being administered by the National Association of State Energy Officials (NASEO—Diane S. Shea, Executive Director; dshea@naseo.org) on behalf of the STAC Executive Committee.



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ATTACHMENT: Summary of STAC Proposals Selected for Federal Funding by Program Area

Building Technologies

1. Reducing the waste: Improved fossil fuel water heating systems

This three-year project will develop and evaluate three alternative storage-type gas water heater technical concepts; map performance of and develop performance curves for Integrated and Domestic Hot Water (DHW)-only Systems; document infiltration impacts of gas-fired water heaters with draft hoods; review test procedures, economics, and routes to market transformation; and disseminate information to aid market transformation and market incentives.

Participants: New York State Energy Research and Development Authority (NYSERDA) (lead), California Energy Commission (CEC), Energy Center of Wisconsin, American Council for an Energy-Efficient Economy (ACEEE), Lawrence Berkeley National Laboratory, Brookhaven National Laboratory.

Total Proposed Project Cost: \$1,347,028; \$952,478 in cost share; \$394,550 in STAC funds.

2. Residential heat pump and air conditioner research, demonstration, and deployment; Improving Pacific Northwest utility and State HVAC programs

This two-year project will lab test heat pumps designed to the 2006 Federal standards in both heating and cooling modes to establish benchmark performance targets. A low cost monitoring method will be developed and used to monitor up to 30 systems. The information collected will be used to develop a new field analysis and commissioning method. A training curriculum, DVD video and field guide will be developed and tested in actual training conditions. Results will also be published in ASHRAE and ACEEE publications.

Participants: Idaho Department of Water Resources, Energy Division (lead), Oregon Department of Energy, Washington State University, Northwest Power and Conservation Council, Bonneville Power Administration, Energy Trust of Oregon.

Total Proposed Project Cost: \$1,420,000; \$790,000 in cost share; \$630,000 in STAC funds.

3. Reliability development and field demonstration of CO2 heat pump water heaters

This three-year effort is aimed at improving the reliability of CO₂ heat pump water heaters and demonstrating the results at field test sites in Maryland and Tennessee. The development work will concentrate on the bearing/lubrication system, CO₂ solubility in the lubrication system, compressor testing at the limits of the operational envelope, field endurance testing, and the development of a load sharing algorithm for multiple unit installations.

Participants: University of Maryland, College Park (lead), Tennessee Tech University, Maryland Energy Administration, United Technologies Research Center. Total Proposed Project Cost: \$772,623; \$424,943 in cost share; \$347,680 in STAC funds.

Industrial Technologies

4. Development and field trial of an advanced indirect heating system for metal heat treating applications

This eighteen-month project will optimize the design of an advanced indirect heating system for the steel industry with respect to efficiency improvement, lower emissions, radiant tube temperature uniformity and lower internal tube temperatures. The work will progress through concept evaluations, modeling and engineering of the selected concept, fabrication of a prototype unit and laboratory test of that unit, and finally fabrication and field-testing of an alpha prototype unit in an Ohio heat treating facility.

Participants: Ohio Department of Development (lead), University of Texas at Austin, Gas Technology Institute, Akron Steel Treating Company, North American Manufacturing Company, Energy Solutions Center.

Total Proposed Project Cost: \$764,780; \$422,700 in cost share; \$342,080 in STAC funds.

Transportation Technologies

5. Hybrid electric school buses; the road to reduced fuel consumption, healthier children and cleaner air

This three-year project will partially fund the purchase of approximately 20 hybrid electric school buses from one of three major school bus manufacturers, demonstrate these vehicles in school districts around the country gathering operational data, and disseminate this data through an updated economic feasibility study with real-world data.

Participants: Advanced Energy (lead), NYSERDA, North Carolina Department of Public Education, North Carolina Department of Environment and Natural Resources, Florida Department of Education, South Carolina Department of Education, New York Power Authority, School districts in Arkansas, California, Iowa, Texas, and Washington.

Total Proposed Project Cost: \$1,890,191; \$1,050,191 in cost share; \$840,000 in STAC funds.

6. Multi-fleet demonstration of hydraulic regenerative braking technology in refuse truck applications

This twenty-two month project will demonstrate the use of hydraulic regenerative braking through an in-use demonstration in two refuse trucks- one in New York City and one in Baltimore, Maryland. The project will include development of the specifications and design for the two platforms, installation and instrumentation of the systems, pre-trial testing of the trucks, and field-testing and data collection for a minimum of twelve months.

Participants: NYSERDA (lead), Maryland Energy Administration, Maryland Department of the Environment, New Jersey Board of Public Utilities, City of Baltimore Department of Public Works, City of New York Department of Sanitation, Shurepower, New West Technologies, Parker Hannifin Corporation, Autocar.

Total Proposed Project Cost: \$1,435,626; \$941,915 in cost share; \$493,711 in STAC funds.

Distributed Energy Resources

7. Creating and demonstrating incentives for electricity providers to integrate distributed energy resources

This two-year project will create new business models and regulatory approaches that reward electricity providers for integrating DER into their systems where there are demonstrable benefits, by developing state-or utility-specific business and regulatory strategies, demonstrating the most promising approaches through actual pilot projects in Massachusetts and California, and conducting outreach in public and industry forums.

Participants: Massachusetts Division of Energy Resources (lead), California Energy Commission, NYSERDA, New Jersey Board of Public Utilities, Massachusetts Technology Collaborative, Electric Power Research Institute, San Diego Gas & Electric Company, Southern California Edison, National Grid, RealEnergy, Solar Turbines, John Nimmons and Associates, Madison Energy Consultants, Energy and Environmental Economics, The Regulatory Assistance Project, UTC Power.

Total Proposed Project Cost: \$1,831,666; \$1,482,000 in cost share; \$349,666 in STAC funds.

8. Expanding small-scale CHP opportunities through more efficient use of trading programs: an analysis of market opportunities and regulatory issues

This eighteen month project is a multi-faceted study examining procedures and protocols for facilitating participation by clean, efficient CHP projects in the Northeast region emissions reduction credits (ERC) markets as well as in markets for NOX emissions allowances (EA). The team will determine the magnitude of the opportunity for replacement of aging and inefficient oil-and-coal-fired boilers with high efficiency CHP and recommend a regulatory and administrative framework for ERC/EA creation through small-scale CHP.

Participants: NYSERDA (lead), Connecticut Department of Environmental Protection, Pace Law School Energy Project, Energy and Environmental Analysis, Inc. Spectra Engineering.

Total Proposed Project Cost: \$324,711; 187,606 in cost share; \$137,105 in STAC funds.

Rebuild America

9. National database of energy efficiency policies and incentives

This three-year project will expand on the existing Database of State Incentives for Renewable Energy (DSIRE) to include building energy efficiency financial incentives and regulatory policies from State, local, federal and utility sources. The team will develop and maintain an accurate expanded database through literature searches, communication with its extensive network of State, local and utility contacts, reviewing utility and agency websites and attending relevant conferences.

Participants: North Carolina State University (lead), Texas State Energy Conservation Office, Washington State University, Pennsylvania Department of Environmental Protection, North American Insulation Manufacturers Association.

Total Proposed Project Cost: \$538,500; \$108,500 in cost share; \$430,000 in STAC funds.

10. Midwest Regional Rebuild America Application Center

This eighteen-month project will provide Midwestern States with information, education, and technical assistance. The Center will establish an advisory committee of eight Midwestern State Energy Offices, establish targeted market sectors, evaluate current and past efforts, identify barriers to project implementation, and work with stakeholder groups from the targeted market sectors. An information clearinghouse will be formed, targeted workshops conducted, site report and project profile protocols developed, technical assistance provided, and quantifiable measurements and project reporting procedures established.

Participants: University of Illinois at Chicago (lead), Energy Center of Wisconsin.

Total Proposed Project Cost: \$738,000; \$197,000 in cost share; 541,000 in STAC funds.

11. Southeast Rebuild Collaborative (SRC) public sector energy efficiency project

This 30 month collaborative project is aimed at influencing at least 1,300 institutions to promote a culture of energy efficiency and best management practices and have at least one building upgrade project underway in at least 10% of those institutions in this time frame. The aim is for the collaborative to be self-sustaining after the 30-month period. The collaborative has established a team of contractors who will provide quick response to institutions needing guidance to move projects from concept to completion, selection of institutions to assist in defining projects, on-site technical support for projects, and verification and documentation of results.

Participants: Florida Department of Environmental Protection (lead), Mississippi Development Authority, Alabama Department of Economic and Community Affairs, Georgia Environmental Facilities Authority, South Carolina Energy Office, Jackson Electric Membership Corporation, Southface Institute & Sustainable Atlanta Roundtable, Sarasota County Rebuild Partnership,

Georgia PTA, Cadmus Group, Catalyst Financial Group, Public technology Institute (PTI), Institute of Building Technology and Safety, Florida Solar Energy Center, Council of Educational Facility Planners International.

Total Proposed Project Cost: \$481,936; \$102,936 in cost share; \$379,000 in STAC funds.