

STAC Solicitation 03-STAC-01: Projects Selected for Award

Organizations from twenty-five states (AZ, CA, CO, FL, GA, IA, ID, IL, IN, MA, MI, MN, NC, NE, NJ, NM, NY, OH, OR, PA, SC, TN, TX, WA, and WI) are direct participants in the selected proposals, and at least six states (AL, CT, DE, MD, MO, MT) are considered for participation based on follow-on activity in training and outreach. Final project awards will be contingent on achieving the mandatory requirements of the solicitation in the contract negotiation process, which STAC expects to complete during the next eight weeks. Following is a detailed list of the selected proposals and participants by program area.

Building Technologies

Building Commissioning-Innovation to Practice

This two-year project targeting commercial buildings includes research, development, demonstration and deployment, and is directed at overcoming owner and industry barriers to the adoption of building commissioning.

Total project cost: \$2,227,304

Funding request: \$999,229

Project Lead: California Energy Commission

Project Participants: New York State Research and Development Authority; Texas Engineering Experiment Station; University of Nebraska – Lincoln; Oregon Department of Energy; Portland Energy Conservation, Inc.; Iowa Energy Center; Northwest Energy Efficiency Alliance; Lawrence Berkeley National Laboratory; Omaha Public Power District

Strategies to Increase HVAC Efficiency in the Northeast

This one-year project focuses on cooling technologies. It combines a characterization of the market and analysis of trends with an assessment of HVAC efficiency potential, followed by a field assessment of the effectiveness of training for heating and cooling system installations.

Total project cost: \$588,104

Funding request: \$261,955

Project Lead: New York State Energy Research and Development Authority

Project Participants: New Jersey Board of Public Utilities, Office of Clean Energy; Northeast Energy Efficiency Partnerships, Inc.; Conservation Services Group, Inc.; Proctor Engineering Group, Ltd.; Nexus Market Research

Development, Implementation and Deployment of Automated Fault Detection and Diagnostics for Vapor Compression Equipment

This two-year project aims to improve the technology and reduce the cost of automated fault detection and diagnostics in HVAC equipment. Field-testing will be undertaken in residential and commercial buildings, and training programs will be developed for technicians.

Total project cost: \$1,146,600

Funding request: \$426,250

Project Lead: Purdue University

Project Participants: Ben Franklin Technology Partners of Southeastern Pennsylvania; Field Diagnostics Services, Inc.; Honeywell, Inc.; Aire Rite Air Conditioning and Refrigeration, Inc.; FieldCentrix, Inc.

Closing the Gap: Getting Full Performance from Residential Central Air Conditioners

This two-year project includes the development of next-generation central air-conditioning performance ratings, development and demonstration of a central air conditioner for hot/humid climates, and HVAC contractor training.

Total project cost: \$1,534,716

Funding request: \$683,179

Project Lead: New York State Energy Research and Development Authority

Project Participants: Florida Solar Energy Center; Advanced Energy; Energy Center of Wisconsin, American Council for an Energy-Efficient Economy; CDH Energy; Wisconsin Energy Conservation Corporation, Lawrence Berkeley National Laboratory

Real-Time Predictive Optimal Control of Active and Passive Thermal Storage Systems

This project will develop a real-time optimal controller for thermal storage systems from design through prototype development and testing in laboratory conditions, followed by field implementation in two commercial buildings.

Total project cost: \$335,426

Funding request: \$150,489

Project Lead: University of Colorado - Boulder

Project Participants: University of Nebraska – Lincoln; Johnson Controls

Industrial Technologies

Field Trial of a High Capacity Gas-Fired Paper Dryer

This project builds on a pilot scale dryer project funded by the U.S. Department of Energy. From the results of that project, a preliminary and final design will be completed, a gas-fired system constructed and a field trial conducted.

Total project cost: \$1,424,850

Funding request: \$634,850

Project Lead: Minnesota Department of Commerce, State Energy Office

Project Participants: Western Michigan University; Gas Technology Institute; Boise Paper Solutions; Groupe Laperriere & Verreault; Flynn Burner, Corp.

Western U. S. Food Processing Efficiency Initiative

This two-year effort will develop a body of knowledge about the food processing industry's energy and water efficiency opportunities. At least six demonstration projects will be completed and an analysis and best practices portfolio will be assembled. Results will be disseminated via training and workshops.

Total project cost: \$1,627,777

Funding request: \$730,652

Project Lead: Oregon Department of Energy

Project Participants: Washington State University Energy Program; California Energy Commission; Idaho Department of Water Resources Energy Division; Northwest Food Processors Association; California League of Food Processors; Northwest Energy Efficiency Alliance; Lawrence Berkeley National Laboratory; Del Monte Foods

Achieving More with Less: Efficiency and Economics of Motor Decision Tools

A total of 100 NEMA Premium motors will be installed while the displaced motors are tested to develop a strong industry case study. An analysis of the economics of motor reliability will be conducted, and a previously published document on horsepower breakpoint curves will be updated. Seminars will be held in five areas of the country.

Total project cost: \$888,156

Funding request: \$320,156

Project Lead: Advanced Energy

Project Participants: Washington State University Energy Program; California Energy Commission; New York State Energy Research and Development Authority; Baldor; Brithinee Electric; Emerson Motor Technologies; General Electric; Regal Beloit; TECO Westinghouse; WEG

Use of Pressurized Ozone and Compressed Air Flotation with Membrane Filtration for Industrial Process Water Treatment at a Forest Products Facility

In 18 months this project will demonstrate a membrane filtration system at a molded fiber paper mill. The process will reduce the amount of fresh water needed for mill operations. This project expands upon a complementary project, which focuses only on the ozone system in the plant stream. Integrating the ozone process with efficient membrane filtration will provide an overall efficiency not available with separate independent systems.

Total project cost: \$848,132

Funding request: \$380,750

Project Lead: New York State Energy Research and Development Authority

Project Participants: Michigan Department of Consumer and Industrial Services – State Energy Office; Pactiv Corporation

Development of a Total Assessment Audit Protocol for the Chemical Industry

This 18-month effort in the chemical industry includes selection of candidate firms, as well as on-site multi-day audits covering energy management, process safety, supply chain management, information systems, waste minimization and quality improvement, technology and innovation, and green chemistry. A protocol will be completed and disseminated.

Total project cost: \$650,000

Funding request: \$289,250

Project Lead: University of Illinois at Chicago, Energy Resources Center

Project Participants: Illinois Department of Commerce and Economic Opportunity, Bureau of Energy and Recycling; City of Chicago, Department of Environment; Ohio Department of Development, Office of Energy Efficiency; Indiana Department of Commerce, Energy and Recycling Office; Indiana Clean Manufacturing Technology and Safe Materials Institute, Purdue University

Transportation Technologies

Advanced Travel Center (Truckstop) Electrification for Reducing Idling from Heavy-Duty Vehicles

In less than one year, 150 electrified truckstop parking spaces, Advanced Travel Center (Truckstop) Electrification (ATE), will be installed in three states. These spaces will demonstrate fuel conservation, improved air quality, and short-term payback to truckstop operators. The demonstration will provide impetus to widespread application of such technologies to the heavy-duty vehicle market.

Total project cost: \$3,487,697

Funding request: \$1,500,000

Project Lead: South Carolina Energy Office

Project Participants: Georgia Environmental Facilities Authority; South Carolina Department of Health and Environmental Control; North Carolina Division of Air Quality; IdleAire Technologies Corporation

Distributed Energy Resources

Distributed Energy Infrastructure Analysis and Pilot Project for New Jersey and Pennsylvania Targeted in the Small and Medium Sized Commercial and Industrial Sectors

This one-year project will evaluate a baseline of distributed energy resources (DER) for all markets, as well as the financial, regulatory and technical barriers to expanding DER in the two states. Based on the analysis, a policy manual will be produced, and pilot projects will be conducted with about 30 to 50 MW of DER installed in each state.

Total project cost: \$1,300,000

Funding request: \$300,000

Project Lead: New Jersey Board of Public Utilities, Office of Clean Energy

Project Participants: Pennsylvania Department of Environmental Protection, Office of Energy; Madison Energy Consultants, LLC; The Center for Energy, Economic, and Environmental Policy at the Bloustein School of Planning and Public Policy at Rutgers, The State University of New Jersey; PJM; JCPL; Conectiv; National Council on Electricity Policy; National Association of Regulatory Utility Commissioners

Distributed Energy Resources – Expanding DER Applications in Target Markets

This two-year project will develop and demonstrate a two-phase biofermentation system to produce methane from dairy manure and reuse resulting solids as a beneficial amendment to the soil while producing heat for internal use and electricity for sale. The process also involves a low water usage technology. Results will be documented and disseminated nationally.

Total project cost: \$748,820

Funding request: \$336,949

Project Lead: New Mexico Energy, Minerals, and Natural Resources Department

Project Participants: Texas State Energy Conservation Office; New Mexico State University; Terra Verde; North American Development Bank; Burcham & Associates; New Mexico Economic Development Department, Office of Science and Technology; Public Citizen; West Texas A&M; Gonzalez Dairy, Inc.