PMC-EF2a
(2.04.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Missouri Department of Natural Resources **STATE:** MO

PROJECT TITLE : Energize Missouri Renewable Energy Studies

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA000052	EE0000131	GFO-10-271-003	EE131

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

B3.6 Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

B3.11 Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components), under controlled conditions that would not involve source, special nuclear, or byproduct materials. Covered activities may include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests

Rational for determination:

The State of Missouri will provide $ 737,498 to 17subgrantees to conduct feasibility studies or renewable energy resource assessments. The resource assessments will focus on the identification, investigation and evaluation of local or regional renewable energy resources or commercial/industrial waste streams which could potentially be utilized in renewable energy production. The feasibility studies will use local or regional renewable energy resources or various site-specific waste streams, and will focus on the application and evaluation of existing or near-term opportunities and energy needs of businesses or organizations.

1. Assessing Renewable Energy Implementation Potential at a University Campus - The Washington University in St. Louis will conduct a feasibility study to determine the characteristics and constraints in the use of several renewable energy options at the Washington University Danforth campus.

2. Renewable Energy/Sustainable Food Feasibility Study - The City of Springfield, Solid Waste Management Division will conduct a study to determine the technical, economic and environmental feasibility of using a portion of waste heat and electric power from the existing Noble Hill Landfill Renewable Energy Center to heat, cool and power a large commercial greenhouse to be located on city property adjacent to the landfill.

3. Investigating Pump Applications for Pressure Reduction and Electrical Energy Recovery - The Missouri American Water Company will conduct a feasibility study to determine the characteristics and constraints in the potential use of centrifugal pumps with induction motors to recover lost energy from pressure reduction at the interconnect from the St. Louis County water main to the St. Charles county branch.

4. Clayton Green Power Community Renewable Energy Feasibility Study - Microgrid Energy LLC will conduct a study to determine the technical and economic feasibility of using solar photovoltaic systems at 20 sites in Clayton, Missouri.

5. Economics of Waste to Energy Anaerobic Digestion in Missouri - The Missouri University of Science and Technology on behalf of the Curators of the University of Missouri will conduct a resource assessment to determine the characteristics, opportunities and constraints of converting waste to energy through anaerobic digestion in Missouri.

6. St. Louis County Renewable Energy Feasibility Study - Microgrid Energy LLC will conduct a study to determine the technical and economic feasibility of installing solar electric photovoltaic systems, solar hot water, and ground source heat pumps for 15 facilities owned by St. Louis County.

7. MU Solar Thermal Feasibility Study - The University of Missouri Columbia on behalf of the Curators of the University of Missouri will conduct a feasibility study to determine the characteristics, opportunities and constraints in the use of solar thermal systems for heating makeup water for the combined heat and power plant at the University of Missouri in Columbia, Missouri.

8. Solar Feasibility Study - GlaxoSmithKline will conduct a study to determine the technical and economic feasibility of installing solar electric photovoltaic systems at the Tums manufacturing plant in St. Louis, Missouri.

9. Evaluating the Application of Proven Renewable Energy Technologies to Utilize Possible Missouri Resources - Global Fuels LLC will conduct a feasibility study to evaluate several proven next-generation biodiesel and green diesel technologies which are used, or may potentially be used, at the Global Fuels' existing biofuel plant in Dexter, Missouri.

10. Feasibility Study to Assess Viability of Adding Heat Recovery Electrical Generation to Existing Biofuel Activated Carbon Manufacturing Operation - Garnett Wood Products will conduct a full study to determine the economic and environmental feasibility of adding a heat recovery or combined heat and power (CHP) process to a new multi-hearth rotary furnace used for the production of activated carbon from woody biomass at the Garnett Wood Products' manufacturing plant in Brandsville, Missouri.

11. Assessing Utilization of Grass as Compliment to Woody Biomass Fuel - Tatanka Resources, LLC will conduct a resource assessment to determine the characteristics, opportunities and constraints of using grasses as a compliment to woody biomass fuels for electricity generation.

12. FOG to Fuel: Keeping Missouri's Resources from going Down the Drain- H2O'C Engineering will conduct a feasibility study to determine the quantity and final destination of fats, oils, and greases (FOG) in Missouri's two major metropolitan areas, St. Louis and Kansas City, for the purpose of building sewer FOG-to-biodiesel production facilities.

13. Available Feedstock for Agricultural Based Fuel Pellet Production in South Central/Southwest Missouri - Sunesis will conduct a resource assessment to determine the characteristics, opportunities and constraints of using agricultural-based feedstock for fuel pellet production in southwest Missouri.

14. Assessment Methods for Sustainability of Renewable Energy Resources - The University of Missouri Columbia on behalf of the Curators of the University of Missouri
will compile and analyze multiple factors that characterize the advantages and disadvantages of renewable energy projects.

15. Missouri Renewable Energy Study: Waste to Energy - Burns & McDonnell Engineering Company Inc. will conduct a renewable energy study for a facility to convert Municipal Solid Waste (MSW) to electricity.

16. Feasibility Study for Ozark Power Generation Alternatives - Viburnum Economic Development (Area) Corporation (VEDAC) will conduct a feasibility study to determine the characteristics, opportunities and constraints of a biomass-fueled electrical generation plant in the VEDAC region.

17. Missouri Renewable Energy (MORE) Resources Balancing Protocol Feasibility Study - The Metropolitan Energy Center will produce renewable energy resources site-assessment protocol geared towards serving homeowners, small property owners, and small businesses. The Protocol known as "Missouri Renewable Resources Energy Balancing Protocol" (MORE) will be the renewable energy equivalent of Home Performance with ENERGY STAR.

DOE has determined that these projects comprise feasibility studies, information gathering, data analysis, document preparation, preliminary designs, computer modeling and dissemination of information and therefore qualify as Categorical Exclusion A9. One project involving the small scale testing of fuel produced from feedstock and sampling and analysis of biomass feedstock also qualifies as Categorical Exclusion B3.6 and B3.11.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
notify the DOE project officer and NEPA compliance officer should the State decide to use Recovery Act funds to support work beyond the feasibility studies identified.

Note to Specialist :

According to the project officer, funding for this project is $737,498. Absent a significant change in the scope of this effort a change in funding will not affect my determination. A significant change in scope would entail a decision by the State of Missouri to use Recovery Act funds beyond the feasibility studies identified.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 8/26/10
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager