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(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: FDC Enterprises, Inc. **STATE:** OH

PROJECT TITLE : Advanced Biomass Feedstock Supply Chain for Lower Cost, Higher Quality Feedstock Delivery

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000836	DE-EE0006300	GFO-0006300-001	GO6300

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, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B5.15 Small-scale renewable energy research and development and pilot projects	Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to FDC Enterprises, Inc. (FDC) to design and demonstrate advanced state-of-the-art biomass harvesting and processing systems and equipment (an advanced biomass supply chain) that would get biomass feedstock from the field to the biorefinery. This project would build on a previous project (DE- EE0001033) funded through the 2009 Advanced Biomass Feedstock Logistics Funding Opportunity Announcement - DE-FOA-0000060, which developed and tested a variety of biomass harvesting and collecting equipment. During this project, FDC and project partner Antares Group, Inc., would focus on further advancements to reduce the number of process steps in the feedstock supply chain, thereby reducing the manpower and equipment required to efficiently harvest, collect, transport and process high quality biomass feedstocks into biofuels. FDC's prototype equipment would be focus on herbaceous feedstocks (corn stover and switchgrass) and agricultural residues. FDC would deploy prototype feedstock harvesting equipment at existing cropland operations and deploy prototype feedstock processing equipment at existing biomass processing facilities. Demonstrations (deployments) of the harvesting and processing equipment would be at commercial-scale. Proposed project activities would include prototype feedstock harvesting and processing equipment design, fabrication, testing, and demonstrations; feedstock characterization, computer modeling and data analysis; harvesting logistic modeling; and in field data collection and analysis.

FDC would work with subcontract vendors on the design, fabrication, commissioning and demonstration of various types of prototype harvesting and processing equipment. All fabrication, testing and demonstration activities would occur in dedicated manufacturing or associated processing facilities operated by the subcontract vendors.

Additionally, DOE's Idaho National Laboratory (INL) would support FDC through in-field data collection, planning and execution; feedstock supply system techno-economic analysis using existing INL models and techniques; deployment, operation, and characterization of feedstocks produced with the INL Deployable Process Demonstration Unit (PDU); agronomic modeling for sustainable harvest with the Regional Feedstock Partnership-developed residue removal analysis tool; and project planning support. All activities, including operation of INL's Deployable PDU would take place at INL's facility in Idaho Falls, Idaho. All work completed at DOE National Laboratories (INL) may be subject to additional NEPA review by the appropriate DOE NEPA Compliance Officer.

Feedstock harvesting equipment demonstration/deployment activities would include operating windrowing, baling, roadsiding, and transport trucking equipment in existing rural harvest areas. FDC has proposed to harvest approximately 9,000 acres of existing and previously disturbed agricultural cropland, over the course of this project. Approximately 37,000 tons of biomass would be harvested. The proposed croplands are currently used for grain production, habitat conservation or energy feedstocks. Agricultural residues would be harvested from the grain production fields and warm season grasses would be harvested from conservation lands after serving their ground

and wildlife protection purposes. FDC would continue to work with USDA-NRCS to implement the USDA-NRCS General Guidelines for Sustainable Residue Harvest. While harvesting activities would cause the release of small amounts of air pollutants, such as particulate matter and CO2, quantities are not significant and activities would not occur within EPA designated "non-attainment" areas for criteria air pollutants. All proposed harvesting activities would occur in previously disturbed, actively used agricultural areas near the following locations:

- Emmetsburg, Iowa - ~4,000 acres (grain production)
- Oskaloosa, Iowa - ~1,400 acres (grain production and conservation habitat)
- Wichita, Kansas - ~1,000 acres (grain production)
- Vonore, Tennessee - ~ 1,645 acres (conservation habitat and energy feedstocks)
- Burkeville, Virginia – 333 acres (conservation habitat and energy feedstocks)
- Madison, Wisconsin – 251 acres (conservation habitat)
- Huntsville, Ohio – 158 acres (conservation habitat)

This NEPA determination only applies to harvesting demonstration activities at the locations listed above. Any additional locations proposed by FDC will require additional DOE NEPA review and approval.

The design, development and demonstration of prototype processing equipment, such as conveyor designs, advanced process automation and controls, and improved milling equipment would be carried out at existing biomass processing facilities in Gretna, Nebraska; Ottumwa, Iowa and Burkeville, Virginia. Minor modifications to process lines and controls would be needed to accommodate the prototype equipment, however all modifications would be within existing facilities and would not change the use, mission, or operation of these facilities. Proposed activities would be consistent with current activities at each facility.

All harvesting equipment demonstration activities would occur using accepted farming practices for that crop and follow established safety protocols. If needed, all pertinent equipment and biomass transportation related permits would be obtained when transporting equipment and/or biomass to project locations. Traffic increases associated with harvesting activities would not be significant, as crop removal at each proposed harvest location would normally occur. Prime farmland, wetlands, floodplains, and historical or cultural resources are not known to occur at the proposed project locations. Therefore, no impacts to these resources are anticipated.

Based on review of the project information and the above analysis, DOE has determined the proposed activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "information gathering, analysis and dissemination," and B5.15 "small-scale renewable energy research and development and pilot projects" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

This NEPA Determination requires a tailored NEPA provision.

This NEPA Determination only approves harvesting demonstration activities at the locations listed in the NEPA Determination above. Any additional locations proposed by FDC will require additional DOE NEPA review and approval.

Obadiah Broughton 8/21/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 8/26/2013

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required