PMC-ND

U.S. DEPARTMENT OF ENERGY (1.08.09.13) OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY NEPA DETERMINATION



RECIPIENT: Slipstream Group, Inc.

STATE: WI

PROJECT Technology analysis and validation of integrating connected lighting, automated shades, and intelligent TITLE: energy storage to provide grid-interactive flexible building loads

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002099	DE-EE0009083	GFO-0009083-001	GO9083

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

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data Information 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 gathering, analysis, and dissemination (including, but not limited to, document publication and distribution, and classroom training and dissemination informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

energy or

B5.1 Actions (a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote to conserve energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations water (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix. (b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4) have the potential to cause a significant increase in energy consumption in a state or region.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Slipstream Group, Inc. (Slipstream) to analyze and field test the grid-interactive flexible building loads potential for two integrated systems: 1) connected lighting, automated shades, and intelligent energy storage; and 2) connected lighting and automated shades. Project work would be completed over two Budget Periods (BPs). BP1 activities include product investigation and conceptual integration design, field test site identification, customer engagement, and preliminary individual system design (for the retrofit of two field test sites), as well as preliminary technical analysis of the flexible building loads potential. BP2 would include the completion of field testing, building energy model validation and technical analysis,

and the final reporting.

The proposed project activities include the design, development, analysis, and field testing of the capability of integrated connected lighting, automated shades, and intelligent energy storage systems to provide grid-interactive flexible building loads at two commercial building test sites. The integration design, development, and analysis would be conducted in Slipstream's headquarter office in Madison, Wisconsin. Technical analysis and model validation would occur at Michigan State University in East Lansing, MI. At these locations, there would be no modifications to facilities and there are no known or potential health and safety hazards to the public or project workers that may result from or are associated with the proposed project as most of the activities involved are engineering design, building modeling, and project management related work.

At test site locations, the project may use existing connected lighting, automated shades, and intelligent energy storage systems or the test sites may be retrofitted with new systems. Activities would involve connecting and disconnecting high-voltage electric wires during equipment installation and system retrofit, as well as measurement and verification activities. Only qualified and licensed electricians would be used for these activities. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. As new risks are identified, additional policies and procedures would be implemented as necessary to help ensure compliance with applicable health and safety regulations and minimize risks to employees, contractors, and the public. At test site locations, building material waste such as wiring, light fixtures, controls, and ceiling assemblies would be generated by the installation/retrofit of systems. These wastes would be disposed of using standard methods of construction waste disposal, abiding by all federal, state, and local laws.

The exact location of each deployment and evaluation has not yet been determined. Once building locations are finalized, each installation would require owner consent and possibly building permits. Activities at these locations could include modifications on existing HVAC equipment (rooftop unit), lighting fixtures, shades, and building control systems during the field test. Under this DOE award, authorization of federal funds for individual building installations may be subject to additional Section 106 (National Historic Preservation Act) consultation by the DOE if the building modifications described above occur on or near any site, building, structure and/or district that is included in or eligible for inclusion in the National Register of Historic Places.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assisstance agreement:

Field testing activities (Task 4) are prohibited unless and until the following conditions have been met: (1) Once the Recipient selects the locations for field testing, the Recipient provides the information to the DOE at gonepa@ee.doe.gov;

(2) If DOE determines it necessary, DOE completes Section 106 (National Historic Preservation Act) consultations for the applicable project locations; and

(3) The Recipient receives written authorization from the DOE Contracting Officer to move forward with the field testing activities.

Notes:

Building Technologies Office This NEPA determination requires a tailored NEPA provision.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb

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hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

NEPA Compliance Officer

Date: 4/17/2020

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review not required

□ Field Office Manager review required

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

Field Office Manager's Signature:

Field Office Manager

Date: