PMC-ND
(1.08.09.13)

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

RECIPIENT: Slipstream Group Inc. **STATE:** WI

PROJECT TITLE: Reimagining HVAC for New Manufactured Housing

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002099	DE-EE0009073	GFO-0009073-001	GO9073

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, 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.)
B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.
B5.1 Actions to conserve energy or water	(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote 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 (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 evaluate, refine, and implement proof-of-concept testing and field trials on new approaches for delivering space heating and cooling in manufactured homes. Project work would be completed over three Budget Periods (BPs) with Go/No-Go decision points between each BP.

The project would first conduct an innovation feasibility assessment to determine which innovations would move forward into proof-of-concept testing or field trials. Stakeholders would be engaged to review the potential innovations (duct and heat pump related) included in Slipstream's original proposal and consider additional innovations. Slipstream would review feedback and cost effectiveness analysis to determine the innovations that would move forward into proof-of-concept testing or directly into field trials. Research plans would be drafted for each innovation moving forward from the initial assessment and would include test site information. This work would occur at Slipstream offices in Wisconsin, office space within the Florida Solar Energy Center (FSEC) at University of Central Florida, and offices at Washington State University (WSU). 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 be associated with the proposed project, since most of the activities involved are stakeholder engagement, feasibility assessment, cost effectiveness analysis, and project management related work.

Slipstream would conduct proof-of-concept testing through field or lab demonstrations and conduct additional field trials at locations yet to be determined. Pacific Northwest National Laboratory (PNNL) would provide access to the PNNL Lab Homes for up to two weeks during the project. Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility. Proof-of-concept testing at the FSEC Manufactured Housing lab may require reconfiguration of HVAC and thermal distribution equipment as required for relevant innovations proposed by the project. If required, this could entail the installation of new or replacement of existing outdoor HVAC equipment within an eight square foot area adjacent to the lab. Field trial testing locations could require similar modifications. For test site locations, the project would potentially involve working with refrigerants and/or aerosolized sealants. All such work would only occur in-lab or at a field site by qualified and licensed individuals where required. All hazardous materials would be managed in accordance with Federal, state, and local environmental regulations. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. To help ensure compliance with applicable health and safety regulations and minimize health and safety risks to recipient employees, contractors, and the public, additional policies and procedures would be implemented as necessary as new health and safety risks are identified. Typical non-hazardous waste associated with HVAC equipment and/or duct installations generated by the proof-of-concept and field trial work would be disposed of using standard methods of construction waste disposal, abiding by all Federal, state, and local laws.

Exact locations for field testing have not yet been determined. All locations selected would be at manufactured housing factories or at newly constructed manufactured homes. Based on the types of activities proposed and the types of locations where work would occur, DOE does not anticipate any impacts to resources of concern due to the proposed activities of the project.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Building Technologies Office
This NEPA determination does not require 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

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: Electronically Signed By: Casey Strickland Date: 5/5/2020

NEPA Compliance Officer

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: _____ Date: _____

Field Office Manager