

PMC-ND
(1.08.09.13)

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

**RECIPIENT:** Home Innovation Research Labs, Inc.**STATE:** MD**PROJECT TITLE:** Next Generation Wall Retrofit Panels with Integrated VIPs

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-2099	DE-EE0009063	GFO-0009063-001	GO9063

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to the Home Innovation Research Labs (HIRL) to develop, fabricate, and test a novel retrofit wall panel. HIRL would develop novel configurations integrating vacuum insulated panels to optimize panel performance (e.g. cost, thermal performance, moisture resistance, durability). The best performing configurations would then be subjected to laboratory performance testing.

The project would be completed over two Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP. HIRL would only move into BP2 after this project has completed an application process at the end of BP1 and if DOE selects HIRL's project through a down-selection process. BP2 activities would then be developed and structured. Because BP2 activities are not currently known, this NEPA review will only be applicable to BP1 activities. BP2 activities would be reviewed at a later date if and when HIRL's project is selected to move into the subsequent BP.

BP1 task work would consist of the development of prototype facades, performance testing, and planning for future field testing. Proposed activities would include conceptual design development, stakeholder engagement, retrofit wall panel configuration analysis/configuration down-selection, fabrication of wall panel configurations (approximately 3 prototype wall specimens would be produced), in-lab performance testing, computer modeling/simulations of performance (e.g. energy performance/moisture resistance), and cost modeling.

HIRL would coordinate all project activities. Project work would be performed indoors, at existing purpose-built laboratory facilities operated by HIRL, at its research campus in Upper Marlboro, MD, and by its project partner, Oak Ridge National Laboratory (ORNL), at its campus in Oak Ridge, TN. Qualified third-party manufacturers would be contracted for the fabrication of specialized project materials. The proposed project would not result in any physical modifications to existing facilities, ground disturbing activities, outdoor installations/deployments, or changes to the use, mission, or operation of existing facilities. No additional permits or authorizations would be required to complete project activities.

Project work would involve the use and handling of construction materials and high-powered equipment with moving parts. Any risks associated with the performance of project activities would be mitigated through adherence to established corporate health and safety policies and procedures. Protocols would include personnel training and the use of personal protective equipment. All project materials would be handled and disposed of properly. HIRL and ORNL would observe all applicable Federal, state, and local health, safety, and environmental regulations.

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.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

[All BP1 Tasks and Subtasks.](#)

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

[All BP2 Tasks and Subtasks.](#)

Notes:

[Building Technologies Office](#)
[This NEPA determination requires a tailored NEPA provision.](#)
[Review completed by Jonathan Hartman on 05/18/2020](#)

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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



[Casey Strickland](#)

NEPA Compliance Officer

Date: [5/19/2020](#)

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: _____