

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



RECIPIENT: Systems Building Research Alliance

STATE: NY

PROJECT TITLE : Getting to Net Zero: A Plan for Transforming the Manufactured Housing Market

| | | | |
|--|--------------------------------------|----------------------------|-------------------|
| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
| DE-FOA-0002196 | DE-EE0009737 | GFO-0009737-001 | NT9737 |

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 Systems Building Research Alliance (SBRA) to design, develop, and demonstrate the technical viability and market potential of net zero design of manufactured homes (NZMHs). The project would create, prototype, and test NZMHs in four different climates, including cold (Wisconsin), mixed-humid (Tennessee), hot-humid (Florida or Louisiana), and hot-dry (California).

All design, planning, development, analysis, reporting, and coordination for the project would take place at the Systems Building Research Alliance and The Levy Partnership, both located in New York City, NY. The construction of the test homes would take place at a yet to be selected manufactured home plant. The project would incorporate advanced energy saving features and renewables into homes that are already being manufactured at an existing facility.

This project would take place over three budget periods (BPs) consisting of nine to 15 months, with a Go/No-Go Decision Point in between each BP. BP1 would include the design and development of zero energy manufactured homes. BP2 would include the bidding, production, and installation of prototypes. BP3 would be comprised of testing, evaluation, and commercial introduction of the designs. This NEPA Determination would be applicable to all of BP1, as well as BP2 Task 5 and Subtask 6.1. Subtask 6.2 in BP2 and Tasks 7-9 in BP3 are restricted because at this time there is not enough information to complete a review of the proposed installation activities. Once the installation locations are selected, another NEPA review will be required to assess potential impacts associated with the installation of the manufactured homes.

Proposed project activities in BP1 would consist of the design and development of zero energy manufactured homes (ZEMHs) for the four aforementioned climatic zones. This would include the design and development of the house envelope (walls and roof), mechanical systems, and renewable generation systems, and their compatibility with current manufacturing infrastructure. Stakeholders would be involved as Subject Matter Experts (SMEs), representing home manufacturers, retailers, developers, and other relevant community members. An SME panel would convene quarterly to provide feedback and analyze interim results. Two home design packages, single- and double-section, would be designed using the Building Energy Optimization Tool, downloadable from NREL.

BP2 activities in Task 5 and Subtask 6.1 would entail the soliciting of bids and prototype production. Bidding would be open to all US Department of Housing and Urban Development (HUD) code home manufacturers. While the exact

location is not yet known, the selected manufacturing plant would be one where manufactured homes are already being built as part of regular operations.

There are no additional health or safety hazards due to the work that would be performed as part of the DOE funded project. No physical modifications to existing facilities, ground disturbing activities, or changes in the use, mission, or operation of existing facilities would be required for the completion of the project activities reviewed.

NEPA PROVISION

DOE has made a conditional NEPA determination.

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

Task 1.0: Overall Project Management and Planning
Task 2.0: Project Coordination and Stakeholder Participation
Task 3.0: Home Conceptual Designs
Task 4.0: Design–Development
Task 5.0: Prepare for Prototype Production
Subtask 6.1: Production

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

Subtask 6.2: Installation
Task 7.0: Test Unoccupied Homes
Task 8.0: Evaluate Occupied Homes
Task 9.0: Transforming Industry Practice—Documentation, Training and Outreach

Notes:

Building Technologies Program (BTO)
This NEPA determination requires a tailored NEPA provision.
Review completed by Alex Colling, 02/04/2022.

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:

 Electronically
Signed By: Casey Strickland

NEPA Compliance Officer

Date: 2/4/2022

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: _____