

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Simple Homes LLC**STATE:** CO

PROJECT TITLE: Overcoming technical barriers to the utilization of flexible industrial automation in the production of Zero Energy Ready (ZER) single family homes using panelized off-site construction

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002099	DE-EE0009068	GFO-0009068-001	GO9068

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 Simple Homes to develop a novel system for the design, off-site manufacture, and delivery of energy efficient single family homes. A central component of the project would be the development of an automated robotic production platform for use in the manufacturing of wall panels. A pilot version of the production platform would be developed, assembled, and tested.

The project would be completed over two Budget Periods, with a Go/No-Go Decision Point in between each BP. This NEPA review is applicable to both BPs. BP1 would focus on planning and design work. Proposed project activities would include stakeholder engagement, design specifications development, computer modeling, techno-economic analysis, home design development, and development of a technologies roadmap. BP2 would focus on fabrication/assembly of the automated robotic production platform, fabrication of a test model home unit, and consultation/engineering work for post-project development of a full-scale cottage home unit.

The production platform would be assembled using off-the-shelf industrial robots and custom made parts. Component assembly would be performed at the facilities of a qualified commercial vendor that regularly performs the required work activities as part of its ordinary course of business. Final assembly/installation of the platform would be performed at Simple Homes' existing manufacturing facility. The unit would be installed onto existing concrete floors with leveling pads/feet. The fully assembled platform would measure approximately 80 ft. x 20 ft.

Once assembled, the production platform would be used to assemble a test model home unit. The test model home unit would have an area of approximately 200 sq. ft., once built. The unit would be fully assembled indoors, within Simple Homes' manufacturing facility. The unit would be used for performance testing (e.g. tolerances) and would be disassembled upon completion of the project.

All project activities would be coordinated by Simple Homes and performed at existing, purpose built facilities. No facility modifications would be required for the installation of either the production platform or test model home unit. Likewise, project work would not require any 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. Because project work would not involve any facility modifications and equipment would only be installed indoors temporarily, DOE has determined that the project would have no potential to cause effects to historic properties, assuming they were present, therefore DOE has no further obligations under

section 106 of the National Historic Preservation Act.

At the close of the project, Simple Homes would provide consulting, design, and engineering support to a third-party architectural consulting firm so that the firm can utilize the production platform for the construction of a full-scale home. This construction would occur separately from the DOE-funded project and would not be performed utilizing any DOE funding. Construction would occur at a new housing development where the third-party firm would already be performing construction activities. The production platform would not increase the inputs or workforce used to construct the home. Some of the inputs that would have been assembled/produced on site, would instead be pre-fabricated using the production platform. Because home construction would occur regardless of DOE funding and the use of the production platform would not result in any increase in inputs used, DOE has determined that its funding would not have an appreciable impact on the environment or sensitive resources, beyond what would already occur in the project area.

Project activities performed by Simple Homes would involve the use and handling of metals, industrial solvents, and high powered machinery and equipment. In order to mitigate against potential risks associated with the performance of project activities, established corporate health and safety policies and procedures would be adhered to. Protocols would include personnel training, the use of personal protective equipment, monitoring, internal assessments, and the performance of third-party safety inspections. Hazardous materials would be disposed of properly and in accordance with all applicable regulations. Simple Homes and its project partners would observe all applicable Federal, state, and local health, safety, and environmental regulations. All applicable permits would be obtained prior to commencing construction activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Building Technologies Office

This NEPA determination does not require a tailored NEPA provision.

Review completed by Jonathan Hartman on 06/30/2020

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.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



Casey Strickland

NEPA Compliance Officer

Date: 6/30/2020

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: _____