



# U.S. Department of Energy

## Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: Solicitation on Topics Informing New Program Areas Targeted Topic V: Life Cycle Assessment for Carbon Negative Buildings (FOA No. DE-FOA-0001953)

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): Seattle, WA; Davis, CA; Berkeley, CA

Proposed Action Description:

The Topic V Program seeks to develop new tools for the evaluation of life cycle impacts of technologies that will be developed under a separate ARPA-E program, "Harnessing Emissions into Structures Taking Inputs from the Atmosphere" (HESTIA) (FOA Nos. DE-FOA-0002625 and DE-FOA-0002626), with the aim of achieving carbon negative greenhouse gas emissions. Specifically, the Topic V Program teams will (1) develop new life cycle assessment (LCA) frameworks and tools to quickly and effectively analyze the life cycle impacts of building materials and whole-building designs and (2) inform HESTIA program teams on how to further improve environmental performance metrics of their technologies and of the HESTIA program as a whole. The frameworks/tools include cradle-to-grave LCA modeling, dynamic LCA frameworks, and spatial-temporal modeling. If successful, Topic V team tools will validate energy efficiency claims of HESTIA projects, and following dissemination and uptake, allow the construction industry as a whole to have reliable and validated methods for LCA of buildings and materials.

The Topic V Program is composed of 2 small-scale research and development projects that will be conducted by universities and federal laboratories. This Determination covers both projects (listed in Attachment A). The proposed project activities under the two awards are limited exclusively to intellectual, academic, or analytical activities. The project teams will not conduct physical experiments, prototype fabrication, demonstration projects, or similar activities under these awards.

Categorical Exclusion(s) Applied:

A9 - Information gathering, analysis, and dissemination

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal 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 proposal that may affect the significance of the environmental effects of the proposal.

The proposal 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.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: **GEOFFREY GOODE** Digitally signed by GEOFFREY GOODE  
Date: 2022.06.02 08:49:58 -04'00'

Date Determined: