

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



**RECIPIENT:** Vermont Energy Investment Corporation (VEIC)

**STATE:** VT

**PROJECT TITLE:** Thermal Energy Storage to Support Renewable Energy Deployment

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
Congressionally Directed Projects under the Omnibus Appropriations Act, 2022	DE-EE0010169	GFO-0010169-001	GO10169

**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.)

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to administer congressionally directed spending to the Vermont Energy Investment Corporation (VEIC) to test the effectiveness of water to phase change materials (PCMs; salt hydrates or bio-based wax) as thermal energy storage (TES) materials. The award aims to achieve this by replacing the existing fossil fuel heating systems with electric heating systems at four separate locations in Vermont and monitoring the performance levels of each system.

This NEPA Determination (ND) does not apply to Task 5 through Task 11 activities. DOE will complete the NEPA review for Tasks 5 through 11 when sufficient information is available to conduct a meaningful review. Sufficient information includes completed design of the electric heating system with either water storage or a PCM medium (i.e., TES systems) at each location proposed along with specifics on all other associated award activities. Additionally, only two out of the four potential locations are currently known. DOE requires that all potential locations be defined before conducting another NEPA review. It is anticipated that by completing Task 1 through Task 4 activities, VEIC will have selected all locations and completed design plans for each location.

Award activities associated with Tasks 1 through 4 include outreach, data analysis, technical assistance, site surveying of existing fossil fuel heating systems, and preliminary engineering/design. Task 1 activities would involve the investigation, recruitment, and enrollment of testing locations. Task 2 and Task 3 activities would focus on drafting the TES system designs and completion of construction drawings and documents, respectively. Construction-level bids for TES integration and electric services upgrades would comprise Task 4 activities.

VEIC (Winooski, VT) and Norwich University (Northfield, VT) would perform data analysis activities. Dubois & King, Inc. (South Burlington, VT) would be responsible for engineering and design activities. Both Westminster Armory (Westminster, VT) and Berlin Armory (Berlin, VT) are the two known potential locations where TES systems are proposed. However, per this ND, only site surveying of the existing fossil fuel heating systems would occur at these locations. This type of site surveying activity would also occur at other potential locations proposed for TES system installations. Construction or ground disturbance of any kind are not covered by this ND. All facilities are preexisting and purpose-built for the type of work to be conducted for Tasks 1 through 4. Facility modifications would not be required.

Please note that Section 106 consultation with the Vermont State Historic Preservation Office (SHPO) may be required if the locations associated with the proposed TES system installations are 50 years or older. The finalized locations, completed designs, and details on associated award activities at each location are to be submitted for further NEPA review prior to starting Task 5. Construction cannot begin until DOE has (1) received the required information (2) performed another NEPA review and (3) obtained SHPO concurrence, if applicable.

DOE has considered the scale, duration, and nature of proposed activities associated with this ND to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

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

[Tasks 1, 2, 3, and 4](#)

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

[Tasks 5, 6, 7, 8, 9, 10, and 11](#)

Notes:

[Buildings Technologies Office](#)  
[NEPA review completed by Corrin MacLuckie, 8/3/2023.](#)

## 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:  \_\_\_\_\_ Date: 8/3/2023  
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: \_\_\_\_\_