

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Newport Partners**STATE:** MD

**PROJECT TITLE:** VALIDATION OF A CO-OPTIMIZED, SMART HYBRID HEAT PUMP CONTROL FOR ENERGY AND COST SAVINGS, PEAK LOAD MANAGEMENT, AND GRID RESILIENCY

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002099	DE-EE0009076	GFO-0009076-001	GO9076

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 provide funding to Newport Partners to develop and test a novel residential hybrid heat pump (HHP) system and optimized control (OC) platform. The HHP system and OC platform would be designed to be more energy efficient than comparable fossil-fuel fired furnaces. Both hardware and software would be developed as part of the project. Performance testing of the HHP system and OC platform would then be performed at an existing, occupied residential location.

A residential location has not yet been selected for performance testing of the HHP system and OC platform. Performance testing would be performed as part of Task 3. Tasks 4 and 5 would then consist of modeling and reporting, based on the results of testing and analysis. Newport Partners would select a location after the project has commenced, in coordination with industry partners. Selection of the testing location would only proceed after screening criteria has been developed based on the completion of the three tasks prior to Task 3, which include the formation of an industry advisory group and development of the OC platform. Accordingly, this NEPA Determination will only be applicable to Tasks 0, 1, and 2. Tasks 3 - 5 are restricted until Newport Partners selects a testing location and submits all relevant information to DOE for review.

Proposed project activities for Tasks 0, 1 and 2 include development of an intellectual project management plan, stakeholder engagement, formation of an industry advisory group, computer modeling/energy simulations, and OC platform design and development. OC platform design and development would consist of computer-based development and design activities.

All project activities would be performed by Newport Partners at its office locations in Davidsonville, MD, Loveland, CO, and Schenectady, NY. 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.

Because project work would consist of office-based task work, no significant health and safety hazards are anticipated. Nonetheless, Newport Partners would adhere to established corporate health and safety policies and procedures. Newport Partners would observe all applicable Federal, state, and local health, safety, and environmental regulations.

**NEPA PROVISION**

DOE has made a conditional NEPA determination.

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

[Task 0: Intellectual Property Management Plan](#)

[Task 1: Form Advisory Group](#)

[Task 2: Develop the Co-optimized HHP Control](#)

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

[Task 3: Validate and Analyze the HHP with OHC](#)

[Task 4: Conduct Modeling to Broaden Applicability of In-Situ Testing Results](#)

[Task 5: Manage Project and Disseminate Results](#)

Notes:

[Building Technologies Office](#)

[This NEPA determination requires a tailored NEPA provision.](#)

[Review completed by Jonathan Hartman on 06/26/2020](#)

## 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:

 Electronically Signed By: Casey Strickland

NEPA Compliance Officer

Date: 6/26/2020

## 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: