

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



RECIPIENT: The R&D Lab Co.

STATE: CA

PROJECT TITLE: Roofing for Solar, Starling RFS

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-SOL-0003057	DE-EE0011414	GFO-0011414-001	GO11414

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.)

B5.15 Small-scale renewable energy research and development and pilot projects

Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the R&D Lab Co. (R&D Lab) for the design, testing, and development of a pilot manufacturing line for solar photovoltaic (PV) roof shingles and the redesign of mounting hardware. Project activities primarily involve the development and testing of prototype devices. The proposed scope of work does not include the purchase or commissioning of residential PV systems.

The proposed project activities would occur over two budget periods (BPs), with a Go/No Go decision point between the BPs. Project activities in BP1 would consist of submission of manufacturing equipment purchase orders, the development of the wire management protocols and cost-competitive hardware redesign concepts. Project activities in BP2 would consist of publicizing data on thermal performance and wire management, updating cost and business models based on collected data, and certifying mounting hardware. Demonstrations of faster installations through the redesign of processes, tools, and parts for various components like valley flashing, skylights, chimneys, and vent flashings would also be completed during this period.

Design, fabrication of small prototypes, assembly, operation, and data analysis would all occur at the R&D Lab research facility. Product testing would be conducted by subrecipients Kiwa PVEL (Napa, CA), RETC (Fremont, CA), QAI Laboratories (Cucamonga, CA), and Interek (Lake Forest, CA). Additional testing would be conducted outdoors at two off grid solar test sites that are currently utilized by R&D Lab (Kelseyville, CA and Inyokern, CA) to obtain building envelope thermal performance data for surfaces with and without solar, using asphalt and PV roof substrates. A total of four small outdoor small test structures (≤ 120 square feet [ft] and ≤ 12 ft. in height with 24 inches of roof protection) would be built at these sites for the purposes of the proposed project. No ground disturbance would result from the proposed work.

All development and testing activities would be completed at purpose-built facilities. No permanent physical modifications or changes to the use, mission, or operation of existing facilities would arise out of this effort. No permits would be required for the proposed project activities at any location.

During BP1, R&D Lab would also measure installation labor data for solar and roofing installation on approximately ten residential homes as a baseline for the beginning and end of the project. The locations of the ten private residences for collecting installation data have yet to be determined but project work at these sites would be limited to non-invasive site characterization only; the selected private residences would receive new roofing and solar regardless of the proposed project. The monitoring equipment to be installed would include cameras on 20 residential properties to record solar installation. The monitoring equipment would be temporary and would not require any ground disturbance or tree trimming/vegetation removal.

Individuals working on this project could be exposed to physical hazards associated with electrical work and rooftop construction sites. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified. The project would not use or generate hazardous materials.

DOE has considered the scale, duration, and nature of proposed activities 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 final NEPA determination.

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: _____



Andrew Montano

NEPA Compliance Officer

Date: 8/9/2024

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: _____