PMC-ND

(1.08.09.13)

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

RECIPIENT: GAF Energy **STATE:** CA

PROJECT TITLE : Advanced Thermal and Energy Modeling of Roof-integrated Photovoltaic Shingle

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0003057	DE-EE0011413	GFO-0011413-001	GO11413

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.)
B1.15 Support buildings	Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.
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 federal funding to GAF Energy (GAF) for design, construction, and operation of testing facilities for the study of building-integrated photovoltaic systems, i.e. solar photovoltaic shingles. Project activities would consist of design and construction of six separate structures.

Design, development, and data analysis would occur both at GAF's manufacturing facility in San Jose, California (37.252700, -121.783400), and the Sandia National Laboratories (SNL) in Albuquerque, New Mexico (35.054400, -106.539400). Proposed buildings to be constructed would consist of one primary, advanced testing facility, and five simplified structures that would simulate attics. The advanced testing facility would have a footprint of 120 feet by 30 feet, while the simplified testing facilities would all have footprints of 30 feet by 15 feet. The site for the advanced facility has not yet been selected, but would be at a GAF facility, either at the San Jose location or in Georgetown, Texas (30.604400, -97.683300).

The first simplified structure would be installed at GAF's facility in San Jose. Existing testing structures, located on the roof, would be retrofitted to accommodate the new design. If the advanced facility were to be constructed here, it would be built immediately adjacent to the parking lot, on the south-east side. The facility would require a foundation equal to the proposed footprint and five to ten feet deep. The proposed construction area has been previously disturbed.

The second simplified structure would be installed at GAF's facility in Georgetown, Texas, adjacent to an existing

parking lot. If the advanced facility were to be constructed here, it would be built adjacent to the same parking lot. Both structures would require foundations equal to their respective footprints and five to ten feet deep. The area is adjacent to a major highway and has been previously disturbed.

The third simplified structure would be installed at the Photovoltaic Systems Evaluation Laboratory at SNL; the fourth at the Florida Solar Energy Center at the University of Central Florida in Cocoa, Florida (28.387300, -80.757800); and the fifth at the Advanced Power Systems Research Center at Michigan Technical University in Calumet, Michigan (47.170000, -88.507100). Each structure would be constructed on previously disturbed land and require a foundation with an area of 30 feet by 15 feet and depths of two to five feet.

All necessary permits would be obtained prior to commencing construction activities. Potential hazards include construction, use of heavy machinery and power tools, working at heights, and heat exposure. Award recipients would adhere to established health and safety policies and procedures when performing project work, and would observe all applicable federal, state, and local health, safety, and environmental regulations.

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.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Should archaeological materials be observed during project activities, all work in the immediate vicinity shall stop, and the area shall be secured. The appropriate State Historic Preservation Office and the DOE Project Officer shall be contacted immediately in order to help assess the situation and determine how to preserve the resource(s). Compliance with all applicable laws pertaining to archaeological resources is required.

Notes:

Solar Energy Technologies Office
This NEPA Determination requires legal review of the tailored NEPA provision.
NEPA review completed by Andrew McClellan, 26 September 2024

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: Electronically Signed By: Andrew Montano Date: 10/1/2024

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

- [x] 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: _____

Field Office Manager