

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



RECIPIENT: IACMI

STATE: TN

PROJECT TITLE : Clean Energy Manufacturing Innovation Institute for Composite Materials and Structures

Notice of Funding Opportunity Number
DE-FOA-0000977

Procurement Instrument Number
DE-EE0010659

NEPA Control Number
GFO-0010659-003

CID Number
GO10659

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:

B1.31 Installation or relocation of machinery and equipment

Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

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 funding to the Institute for Advanced Composites Manufacturing Innovation (IACMI, or the Institute), a Manufacturing USA® Institute under the 2019 Manufacturing USA® Program, to help revitalize American manufacturing and support domestic manufacturing competitiveness. The Institute is planned as a consortium to be reestablished under a Cooperative Agreement with DOE with participation of subrecipients comprised of private companies, universities, and other educational institutions, as well as other state and federal government agencies and research organizations with complementary business and economic development interests, extensive existing infrastructure, and broad technical capabilities. The Institute and its subrecipients are committed to a partnership that would work in concert through Cooperative Agreements to leverage the federal funding with state government and private sector investments to deliver outcomes to advance manufacturing within the United States. DOE's overarching role would be to facilitate the reestablishment of the Institute and provide oversight and stewardship of federal funds. DOE would have substantial involvement in the Institute during its term of the DOE Cooperative Agreement.

This project (award number DE-EE0010659) received a Conditional NEPA determination (GFO-0010659-001; CX A9, A11, B1.31 and B3.6) on August 21st, 2023. This NEPA Determination applied to all BP 1 activities within the statement of project objectives (SOPO). This ND also applies to additional tasks and work locations identified for BP 1. These include moving the scale-up research facility from Michigan State University's facility in the Corktown District of Detroit to the former Chrysler Mount Elliot Took and Die facility in Detroit, Michigan. Project tasks under this review included research into automating wind blade finishing operations and the advancement of composites for cryogenic hydrogen storage. Award efforts pertaining to proposed hydrogen storage activities involved the use of nanoscale materials, which necessitated the application of an additional CX B3.15 to the award. All nanoscale materials were evaluated for all applicable environmental, health and safety requirements and all appropriate safety protocols were required prior to nanoscale material award efforts.

The project received a second conditional NEPA determination under the same award number on January 17th, 2025 (GFO-0010659-002; CX A9, A11, B1.31, B3.6, and B3.15). Under this NEPA determination, institute management and operations (Task 1), core partner infrastructure and innovation (Task 2), and supplemental workforce development (Task 8) were approved. Efforts to develop emerging material and manufacturing technologies for vehicles

(Task 3), wind turbine blade manufacturing (Task 4), hydrogen storage tank manufacturing (Task 5), Life Cycle and Technoeconomic analysis of sustainable materials (Task 6), and the expansion and augmentation of digital workflows (Task 7) were excluded from this review and did not apply to NEPA determination signed on January 17th, 2025.

Project efforts under the current conditional NEPA review would include open access to shared research, development, and demonstration (RD&D) facilities that leverage extensive existing capabilities to develop high-throughput technologies and lower-cost materials to enhance U.S. competitiveness. The Institute's overall technical objectives would also target increased production speed, decreased manufacturing cost, reduced embodied energy of products and enhanced recyclability. The Institute's technology development and demonstration programs would be driven by major industry participation with focus on reducing technical risk and addressing technical challenges for advanced composites in various manufacturing sectors. Participating states would engage their economic development and education programs to encourage new business formation and develop a capable workforce to serve the growing composites industry. Lastly, encouragement and development of Small and Medium Enterprise (SME) industry participants and long-term sustainability would be key objectives of the Institute.

This project has five budget periods, but only project activities up to and including Budget Period 2 (BP2) are defined at this time. This NEPA Determination is therefore exclusively specific to BP2 activities.

Several changes/additions to project tasks under BP2 have occurred since the last project NEPA determination signed on January 17th, 2025, which include:

- Project changes:

- o Wind turbine blade manufacturing has been updated to energy component manufacturing under Task 4.

- o Subtask 5.2.1 related to the development of advanced composites for cryogenic hydrogen storage has been removed from the project scope.

- Project additions:

- o Task 9 would include research, development, modeling, sensing, and validation of high temperature composites.

- o Task 10 would cover composite material development and manufacturing methods to make advancements in geothermal energy systems.

- o Task 11 would cover composite material development and manufacturing methods to make advancements in oil and gas energy infrastructure.

- o Task 12 activities would advance composite materials and manufacturing technologies that support the domestic supply chain for critical minerals and rare earth element-enabled technologies.

- o Task 13 efforts would advance composite materials, manufacturing technologies, and construction methods for next-generation nuclear energy systems.

The scope of work for proposed activities in BP2 are generally laboratory scale operations, data analysis and modeling, workforce development, or educational, managerial, and reporting activities. The location of the facilities and description of proposed activities for the prime recipient and each sub-recipient is detailed within question 2b of the completed EQ1 for the project. Further NEPA review would be required for the remaining budget periods once those activities have been defined and negotiated.

Project location/scope changes that have occurred since the most recent NEPA determination signed on January 17th, 2025 was finalized (GFO-0010659-002). These include project administration and management activities at two offices in Knoxville, TN being replaced with one IACMI office in another part of Knoxville. Initial staffing, specification of full-scale equipment and initiation of procurement and support of project work under the Cooperative Agreement, which was slated to occur at Michigan State University in Lansing, MI has been removed. The development of nondestructive evaluation techniques and construction of a mobile NDE laboratory for use in the field was slated to occur at Vanderbilt University in Nashville, TN has been removed. Vehicle project staffing and support, construction of mezzanine for supplementary office space, and workforce growth initiatives would now take place at IACMI's Scale-up Research Facility in Detroit, MI instead of Michigan State University's Scale-up Research Facility in Detroit.

Once identified, new projects would be added to the list of participants in the award as additional entries in question 2b of the EQ-1 and would be incorporated as new partners into the Institute. As these specific sites are identified with these new participants and as long as these additional entries conform to the rationale and CX categories applied in this NEPA Determination then no additional NEPA would be required. Any new partners that do not fit the above would be required to submit separate EQ1s for further review.

None of the activities occurring at any of the listed facilities or activities anticipated to occur as part of projects would require any new permits, licenses or authorizations for BP1 activities. No new waste streams or effluents would be produced as a result of the proposed activities in BP1. All facilities would conduct activities consistent with current operations and would not be expanded or modified in BP1. Equipment acquisition, maintenance, upgrades, and calibration are planned in BP1, but no facilities or operational modifications are anticipated as a result.

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 conditional NEPA determination.

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

BP2 activities. You are restricted from taking any action using federal funds, which would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE providing either a NEPA clearance or a final NEPA decision regarding the project.

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

Budget Period 3 through Budget Period 5.

Include the following condition in the financial assistance agreement:

The Recipient is required to consult with the DOE Project Officer and NEPA Specialist regarding any project, beyond what is proposed in this NEPA determination, that would result in:

- changes in function, use, or operation of existing facilities, and/or
- modifications to existing facilities, and/or
- ground disturbing or new construction activities

prior to initiating any of these activities in order to determine whether additional NEPA review is required.

Notes:

Industrial Efficiency and Decarbonization Office
NEPA review completed by Chris Akios, 7/2/2026

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025). To fit within the classes of actions listed in Appendix B to 10CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.

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.

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: Kristin Kerwin
NEPA Compliance Officer

Date: 7/7/2026

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: _____