



Department of Energy Manufacturing USA® Institute Renewal Process Framework

In 2019, the Manufacturing USA® Program statutory authority¹ was amended in part to allow agencies to renew funding for existing Manufacturing USA® Institutes, including those funded by the Department of Energy (DOE). Accordingly, DOE’s Advanced Manufacturing Office (AMO) developed this Renewal Process Framework (Framework), which outlines the steps DOE will take to consider whether to renew an award for a DOE-funded Manufacturing USA® Institute (“Institute”). This Framework lays out the key elements of DOE’s Institute renewal process and covers the first renewal stage of each Institute. The document may be updated in future renewal stages.

Renewal Process Overview

DOE’s Institute renewal process has three major phases. *First*, the Institute’s performance will be evaluated, and DOE will consider its programmatic progress and to what extent the Institute’s technical focus areas and the Institute model continues to align with AMO’s and DOE’s current priorities. *Second*, depending on the outcome of the first phase, an Institute may be invited to submit a renewal application that describes the Institute’s planned scope of work for the renewal period. If an Institute is invited to submit a renewal application, DOE will provide detailed instructions outlining the priorities that should be covered in the proposed scope of work. *Lastly*, DOE will evaluate the renewal application and determine whether to renew the Institute award and at what level. Renewal funding decisions, funding levels, and performance periods will be subject to DOE priorities and availability of funds; it is possible that renewals will be substantially less than the \$70 million over five years that DOE originally awarded each Institute.

To the extent possible, DOE will begin its process to consider renewing an Institute prior to the approval of the final budget period of the initial period of the award (or at least 12 months before the end of the current agreement). As part of the renewal process, DOE may host workshops, requests for information (RFIs), or conduct other stakeholder engagement to gather additional external feedback.

Phase 1 – Evaluate Current Performance and Proposed Renewal Concept

- 1. Institute Prepares Evaluation Documentation:** DOE will use multiple types of information to evaluate the Institute’s performance against the Performance Evaluation Criteria in a thorough merit review. Documentation for the evaluation includes:

¹ See. 15 U.S.C. § 287s.

1.1 Institute Self-assessment: A written report (up to 10 pages), submitted by the Institute detailing their self-assessment against the DOE performance objectives established in the current cooperative agreement.

The report will use both quantitative metrics and a narrative to describe the Institute's activities and impacts on U.S. manufacturing competitiveness, energy efficiency, or emissions reductions. The assessment will focus on technical, educational, and workforce efforts as well as financial performance and sustainability during the current performance period to address each of the performance objectives.

- Additional documentation as part of the self-assessment should include:
 - Identification of major manufacturing innovations and technology transfer successes;
 - a summary of the institute's consortium model, membership base, organizational structure, and leadership, as well as the effectiveness of this structure; and
 - feedback from the Institute membership to demonstrate member satisfaction and value creation, for example, results of a recent member survey or other feedback.

1.2 Concept Paper: The Institute will submit a concept paper (not more than 15 pages) outlining a vision and technical focus areas for the next phase of the Institute. DOE will provide specific guidance to each Institute on the concept paper requirements, but Institutes should address the following:

- How the Institute will:
 - contribute to achieving net-zero U.S. industrial and economy-wide greenhouse gas emissions by 2050 and/or help achieve a net-zero power sector by 2035;
 - improve U.S. manufacturing competitiveness, including small and medium-sized manufacturers, and engage a broad range of stakeholders with both horizontal and vertical reach across and within supply chains;
 - support and incorporate Diversity, Equity, Inclusion, and Accessibility (DEIA) in the operations, technical programming, and workforce development activities; and
 - attract increasing levels of financial support, advice, participation, and other contributions from non-Federal sources, leading to a stable and sustainable business model post-DOE funding.
- Adjustments to the Institute metrics and technical focus areas needed to align to current DOE priorities and evolving industry and market drivers. A summary or examples of the kind of work envisioned and corresponding technical goals should be provided.
- High-level plans for continuing or new educational and workforce activities that meet industrial needs related to the Institute focus areas, while meeting DEIA goals and encouraging education and training of groups underrepresented in STEM, veterans, and individuals with disabilities.
- Any changes in leadership or team members needed to support the success of the next phase of the Institute and new scope of work.
- Management and operations structure and approach, including any changes to current structure, that will ensure efficient and effective Institute operation.
- A high-level budget proposal aligned to the proposed scope of work that leads to self-sustainment by the end of the renewal period, anticipated to be 5 years.

2. **DOE Conducts Thorough Merit Review:** This merit review will be conducted as part of the annual Peer Review already required by DOE for each Institute, if possible. Merit reviewers will evaluate performance against the Performance Evaluation Criteria (Attachment 1), provide comments on the concept paper for DOE consideration against the Concept Paper merit review criteria (Attachment 2), and identify, evaluate, and compare potential modalities beyond an Institute that could effectively address the Institute's mission space.
3. **DOE Completes Internal Assessment:** An assessment will be conducted within DOE that focuses on areas including: the impact of the Institute's technical focus area and value of Institute model to achieve the impact; alignment of the Institute technical focus area with AMO's and DOE's current and emerging RDD&D priorities; and the past performance of the Institute's management team. The assessment may consider past evaluations, quarterly and annual reviews, the current state of the art, stakeholder engagement, discussions with relevant DOE staff, and feedback from other sources.

The Selection Official will consider the recommendations from the merit review and the internal assessment to determine whether to proceed to the next phase of the renewal process and if there are any conditions placed on proceeding to the next phase. If the Selection Official determines the Institute is not sufficiently meeting standards of performance, DOE will notify the Institute and the Institute will have one year from the time of notification to improve performance.

Phase 2 – Prepare Full Renewal Application

1. **DOE Notification:** DOE will notify the Institute of the outcome of Phase 1, including any corrective actions, and request the Institute begin preparing a renewal application, if applicable. At that time, DOE will provide the final evaluation criteria for the new scope of work and other specific instructions such as the submission deadline, funding limits, focus area direction, etc.
2. **Renewal Application Submission by the Institute:** Based on the guidance DOE will provide to each Institute (requirements, submission timeline, etc.), the Institute will prepare a renewal application that is anticipated to address the following topics:

Technical Merit, Impact, and Innovation:

- Describe the innovation for technical work including any new focus areas with quantitative techno-economic targets showing advancements in manufacturing processes, novel materials, enabling technologies, supply chain integration, or other relevant aspects of advanced manufacturing that have not already been commercialized, marketed, distributed, or sold by another entity.
- Describe any changes to the current Institute portfolio and focus areas necessary to align to DOE current priorities, industry trends, and technology opportunities. Description should demonstrate how the Institute will contribute to progress in achieving the U.S. climate and energy goals to attain net-zero U.S. industrial and economy-wide greenhouse gas emissions by 2050 and/or help achieve a net-zero power sector by 2035.
- Describe how the Institute will continue to advance domestic manufacturing and the likelihood of tangible economic impact, including the creation or preservation of jobs, in the predominant focus areas of the institute.

- Describe how the Institute will advance economic competitiveness and generate substantial benefits to the Nation that extend beyond the direct return to participants in the program.
- Describe how the Institute will incorporate Diversity, Equity, Inclusion, and Accessibility (DEIA) and support the [Energy Justice 40](#) initiative in the operations, technical programming, and workforce development activities and goals of the Institute.
- Describe how the Institute will engage with industry, particularly small and medium-sized manufacturing enterprises, to expand the capacity of such enterprises to commercialize new processes and technologies and to improve the domestic supply chain.
- Describe how the Institute will build mutually beneficial relationships across the industrial, research, and entrepreneurship communities in a particular region.
- Describe any proposed continuing or new educational and workforce activities that meet industrial needs related to the predominant focus areas of the institute, including DEIA, and encourage the education and training of groups underrepresented in STEM, veterans, and individuals with disabilities.

Team and Resources

- Describe any changes in the management and leadership technical team necessary to executing the proposed scope of work.
- Demonstrate commitment of continued financial support, advice, participation, and other contributions from non-Federal sources, to provide leverage and resources to promote a stable and sustainable business model.
- Describe how financial support provided to the Institute from non-Federal sources exceeds the requested Federal financial assistance and shows a pathway to achieve DOE sustainability metrics:
 - Ability of Institute to cover management and operation expenses once DOE Institute funding ends, evaluated as a ratio of such expenses to membership fees
 - Value proposition of Institute to the members measured by member retention percentage year over year, percentage of member organizations participating in R&D or EWD activities, and percentage of member attendance at Institute meetings
 - Value provided to U.S. manufacturing measured by the amount of funding from non-DOE sources applied to R&D and EWD activities, number of projects funded by non-federal sources, number of peer reviewed journal articles resulting from research efforts, and number of licensed technologies or patents.
- Describe how the Institute will increase the non-Federal investment in advanced manufacturing research in the United States.

Management and Operations

- Describe how any changes in management will increase the cooperation, coordination, and technological advancement across the Institute for greater cumulative impact to the Institute membership and related industries.
- Describe how the institute will be more efficient and effective in the management and operations, e.g. reduce overhead costs or other proposed changes to the management and operations structure and approach.
- Develop a project management plan and schedule with major objectives or milestones and go/no-go decision points.

- Propose major quantifiable performance metrics to measure Institute performance for the renewal period relevant to enhancing U.S. competitiveness and manufacturing leadership, increasing jobs, reducing lifecycle carbon emissions, technology and cost progress, additional cost share/non-Federal financial leveraging, workforce development, technology transfer, DEIA, etc.

These steps result in the preparation of all relevant material by the Institute for submission to DOE to evaluate the renewal application.

Phase 3 – Renewal Application Evaluation and Decision on New Scope of Work

1. **Merit Review of Renewal Application:** DOE will conduct a merit review of the full Institute renewal application against the Renewal Application Merit Review Criteria (see Attachment 3), which may include the minimum statutory criteria as well as additional criteria relevant to DOE’s mission. The evaluation process may include a “reverse site visit” or meeting at a DOE-determined location with the Institute (including key partners) and the merit reviewers.
2. **Final Decision and Notification:** A final decision is made by the designated Selection Official on the final award scope and funding amount, and DOE will provide formal notice of renewal application decision to the Institute.

The last phase results in either (1) a decision to renew the award for the scope of work and funding amount (pending completion of any corrective actions); or (2) a decision to decline renewing the award. Any funding is contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

Attachment 1: Performance Evaluation Criteria

Performance Evaluation Criteria

Performance evaluation criteria will include at least the following:

- Degree to which there is sufficient evidence to show that Institute performance demonstrates:
 - Progress toward overall Institute and DOE goals – the degree to which progress has been made, measured against performance indicators, and achievement or substantial progress towards established technical and other stated objectives from the Statement of Project Objectives.
 - Institute overall management that increases the cooperation, coordination, and technological advancement across the Institute for greater cumulative impact to the Institute membership and related industries.
 - Contribution to commercialization of technologies developed by large, medium, and small-sized manufacturing members.
 - Effectiveness and efficiency of the management and operations structure and approach.
 - The ability to attract investment outside of the main DOE cooperative agreement.
 - Sustainability approach, likelihood of success of the sustainability plan, and performance against DOE sustainability metrics.
 - The extent of the developed industry-led ecosystem, informed by the number, types, and diversity of members, as well as the level of engagement of the membership.
 - The approach and impact of education and workforce development projects, investments, and programs.

Attachment 2: Concept Paper Merit Review Criteria

Merit review criteria will include at least the following:

Technical Merit, Innovation, and Impact

- Quality of the proposed technical approach and any new proposed technical focus areas with initial technical goals to meet current needs and RD&D opportunities.
- The estimated impact that the new work would have on greenhouse gas emissions reductions, clean energy production, and domestic manufacturing.
- Quality of the plans to support and embed Diversity, Equity, Inclusion and Accessibility and support the Energy Justice 40 initiative as core to the operations, technical programming, and workforce development activities of the Institute.
- Quality of the approach for technical education and workforce development plan including Diversity, Equity, Inclusion and Accessibility.
- Quality of any enhancements to the approach to strengthen U.S. manufacturing competitiveness while engaging a broad range of stakeholders with both horizontal and vertical reach across and within supply chains.

Team and Resources

- Quality of the technical leadership, including changes in leadership and team members, to support the success of the next phase of the Institute and new scope of work.
- Likelihood of continued financial support, advice, participation, and other contributions from non-Federal sources, to provide leverage and resources to promote a stable and sustainable business model.

Operations and Management Approach

- Quality of any proposed changes to the management and operations structure and approach to support continued successful and cost-effective operations for the next period of performance.

Diversity, Equity, and Inclusion

- The quality and manner in which the Institute incorporates diversity, equity and inclusion goals into the Institute.
- Extent to which the integrated Institute operations, technical programming and workforce development activities will benefit all Americans, including those from underserved communities and those impacted by the clean energy transition.

Attachment 3: Renewal Application Merit Review Criteria

Merit review criteria will include at least the following:

Technical Merit, Innovation, and Impact

- Likelihood the Institute will contribute to achieving one or more of the U.S. climate and energy goals to attain net zero greenhouse gas emissions for the U.S industrial sector and economy-wide by 2050 or achieve a net-zero power sector by 2035.
- Quality and technical merit of the new technical scope of work in new and existing focus areas, including quantitative techno-economic targets.
- Ability of the Institute's educational and workforce activities to meet industrial needs related to the predominant focus areas of the institute, including encouraging the education and training of veterans and individuals with disabilities.
- Ability of the Institute to advance economic competitiveness and generate substantial benefits to the Nation that extend beyond the direct return to participants in the Program.
- The potential of the Institute to advance domestic manufacturing and the likelihood of economic impact, including the creation or preservation of jobs, in the focus areas of the institute.
- Extent to which the predominant focus of the Institute is a manufacturing process, novel material, enabling technology, supply chain integration methodology, or other relevant aspect of advanced manufacturing that has not already been commercialized, marketed, distributed, or sold by another entity.

Team and Resources

- Quality of the technical leadership and any which changes in leadership, and any team members will support the success of the next phase of the Institute and new scope of work.
- Realism and effectiveness of the financial budget to achieve the proposed scope of work.
- The commitment of continued financial support, advice, participation, and other contributions from non-Federal sources, to provide leverage and resources to promote a stable and sustainable business model. Likelihood that financial support provided to the Institute from non-Federal sources will exceed the requested Federal financial assistance and shows a pathway to achieve DOE sustainability metrics:
 - Ability of Institute to cover management and operation expenses once DOE Institute funding ends, evaluated as a ratio of such expenses to membership fees
 - Value proposition of Institute to the members measured by member retention percentage year over year, percentage of member organizations participating in R&D or EWD activities, and percentage of member attendance at Institute meetings
 - Value provided to U.S. manufacturing measured by the amount of funding from non-DOE sources applied to R&D and EWD activities, number of projects funded by non-federal sources, number of peer reviewed journal articles resulting from research efforts and numbers of licensed technologies or patents.
- Likelihood of the Institute increasing the non-Federal investment in advanced manufacturing research in the United States.

Operations and Management Approach

- Likelihood of success of any proposed organizational or operational changes such as the membership model or leadership to accomplish the next scope of work.
- Potential for the Institute to strengthen and leverage the industrial, research, entrepreneurship, and other assets of a region.
- Potential for the Institute to engage with small and medium-sized manufacturing enterprises to improve the capacity of such enterprises to commercialize new processes and technologies and to improve the domestic supply chain.

Diversity, Equity, and Inclusion

- The quality and manner in which the Institute incorporates diversity, equity and inclusion goals into the Institute.
- Extent to which the integrated Institute operations, technical programming and workforce development activities will benefit underserved communities.

Attachment 4: Notional Renewal Process Timeline

The timeline renewal process is expected to take less than 12 months from the concept paper request to the approved award. Specific timelines will be communicated to the Institutes individually, but the estimated timeframe for each phase and steps within the phase are:

- Phase 1: Concept Paper and Self-assessment – 2 ½ months
 - Concept paper and self-assessment drafting: 6 weeks
 - Document review (external and internal): 4 weeks
- Phase 2: Full proposal preparation – 2 months
- Phase 3: Full proposal review and decision – 2 months
 - External merit review: 4 weeks
 - Internal review and approvals: 4 weeks
- Award negotiation and contracting – 5 months