



DoE SMART-PA Technical Assistance Program

TECHNICAL ASSISTANCE AWARD GUIDELINES

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SECTION I – GENERAL INFORMATION

A. Introduction

The SMART-PA Technical Assistance Program provides matching funds from the United States Department of Energy (DoE), Office of Manufacturing and Energy Supply Chain, (MESC) through the Pennsylvania Department of Community and Economic Development. (DCED) This funding is designed to assist Small and Medium Manufacturers (SMMs) in integrating and expanding the adoption of Smart manufacturing technologies (see **Section 1-D. Eligible Uses**) through proof of concepting, prototyping, vendor research and evaluation, selection services, training and other assistance. The DoE SMART-PA funds provide a reimbursement of up to 50% of eligible project costs, not to exceed \$5,000.

B. Program Eligibility

Applicants requesting assistance through this program must meet all the criteria listed below to be eligible for funding consideration:

1. **Small and Medium Manufacturer** – Manufacturing companies registered in D&B with a NAICS code beginning with 31-33 are preferred. Businesses from supporting industries as defined by NIST MEP, including Metal Service Centers (423510), Packing and Crating (488991), Engineering Services (541330), Testing Laboratories (541380), Packaging and Labeling Services (561910), and Commercial and Industrial Machinery/Equipment Repair and Maintenance (811310) will also be considered.
2. **Location** – facility is located within Pennsylvania.
3. **Funding** – applicants must be able to pay at least 50% towards the total project cost and be able to cover the total project costs until reimbursement is issued.
4. **Timing** - the project will be initiated no earlier than November 1, 2024, and complete implementation and payment of total project costs completed within 12 months of approval and no later than February 28, 2026 (whichever is soonest).
5. **Surveys** - participate in post-award surveying to collect information on project status, economic impacts, and other information as requested.

C. Funding Availability and Matching Requirements

Awards will be made on a first come, first served basis to eligible. Once all SMART-PA funds have been depleted, applications will be placed on a waiting list for consideration should additional funds become available.

Applicants may request funding support up to 50% of the total project cost up to \$5,000 their smart manufacturing related projects. The amount and source of matching funds shall be detailed within the application and be an allowable expense. Any change to the project scope post-award must have prior written approval of Catalyst Connection. In addition, a



post award decrease in the project budget may result in a proportional decrease in funding award to maintain the minimum 50% match requirement.

D. Eligible Uses

Technical Assistance funds may be used to support direct, project-related consulting costs, contracted services, supplies, and one-time costs related to integrate and expand the adoption of smart manufacturing technologies. Below is a list of technologies that may be eligible for funding support:

1. **Industrial Internet of Things (IIoT)** - The [Internet of Things \(IoT\)](#) – more specifically, the Industrial Internet of Things – is so central to Industry 4.0 that the two terms are often used interchangeably. Most physical things in Industry 4.0, devices, robots, machinery, equipment, products, use sensors and RFID tags to provide real-time data about their condition, performance, or location. This technology lets companies run smoother supply chains, rapidly design and modify products, prevent equipment downtime, stay on top of consumer preferences, track products and inventory, and much more.
2. **System Integration** - The backbone of Industry 4.0 is horizontal and vertical integration. With horizontal integration, processes are tightly integrated at the “field level” – on the production floor, across multiple production facilities, and across the entire supply chain. With vertical integration, all the layers of an organization are tied together and data flows freely from the shop floor to the top floor and back down again. In other words, production is tightly integrated with business processes like R&D, quality assurance, sales and marketing, and other departments, while data and knowledge silos are a thing of the past.
3. **Big Data and AI Analytics** - In Industry 4.0, [Big Data](#) is collected from a wide range of sources, from factory equipment and Internet of Things (IoT) devices to ERP and [CRM](#) systems. Usage starts with data visualization and dashboarding and progresses on to further data manipulation. Analytics powered by [artificial intelligence](#) (AI) and [machine learning](#) are applied to the data in real time, and insights are leveraged to improve decision-making and automation in every area of supply chain management, including [supply chain planning](#), logistics management, manufacturing, R&D and engineering, [enterprise asset management](#) (EAM), and procurement.
4. **Augmented Reality (AR)** - [Augmented reality](#), which overlays digital content on a real environment, is a core concept of Industry 4.0. With an AR system, employees use smart glasses or mobile devices to visualize real-time IoT data, digitized parts, repair or assembly instructions, training content, and more when looking at a physical thing, like a piece of equipment or a product. AR has major implications for maintenance, service, and quality assurance as well as technician training and safety.
5. **Simulation/Digital Twins** - A [digital twin](#) is a virtual simulation of a real-world machine, product, process, or system based on IoT sensor data. This core component of Industry 4.0 allows businesses to better understand, analyze, and improve the performance and maintenance of industrial systems and products. An asset operator, for example, can



use a digital twin to identify a specific malfunctioning part, predict potential issues, and improve uptime.

6. **Cybersecurity** - With the increased connectivity and use of Big Data in Industry 4.0, effective [cybersecurity](#) is paramount. It is essential that every manufacturer build a strong cybersecurity foundation, whether their needs are focused on basic cyber hygiene or if their sector requires certifications, such as CMMC for the defense industry.
7. **Robotics and Automation** - Programmed to perform tasks with minimal human intervention, robots vary greatly in size and function, from machine tending robots to autonomous mobile robots for material handling operations. Equipped with cutting-edge software, AI, sensors, and machine vision, these robots can perform difficult and delicate tasks, and can recognize, analyze, and act on information they receive from their surroundings. These systems are a critical tool for manufacturers who need to do more with an ever-shrinking workforce.
8. **Other Smart manufacturing related technology projects**

Technical Assistance dollars **cannot** be used for the following expenses:

1. Purchase of equipment
2. Support recurring costs related to connectivity
3. Support internal salary costs of the applicant
4. Replace existing grant funds received by the applicant or support costs already paid for by another government grant (duplicate funding)
5. Pay for travel
6. Support indirect costs
7. Investment of equity or working capital
8. In-kind costs
9. Support other costs prohibited by DoE, Commonwealth of Pennsylvania or federal law (for example: Lobbying, Advertising, Relocation costs, or Services provided by Huawei Technologies Companies/ZTE Corporation)



SECTION II – THE APPLICATION PROCESS

A. Application Submission

Catalyst Connection and its partners have staff available to assist SME manufacturers through the technical assistance process from assessment, project selection, scoping and application. The Catalyst Connection Point of Contact is either your assigned SBA or Matt Minner (mminner@catalystconnection.org) concerning questions regarding potential projects, eligibility, or application completion.

Applications will be accepted on an ongoing basis starting November 1, 2024, through January 31, 2026, or until all funds are obligated (whichever is soonest). Applications received by the close of business on the first Monday of the month will be considered during the next round of application reviews. Application reviews will be held monthly starting December 15, 2024, at which time all applications received by the close of business one-week prior will be reviewed. Review rounds will continue until all funding is awarded. After which, applications will be placed on a waiting list for consideration on a first-come, first-served basis.

B. Contents of the Application

All applications must include the following components:

1. **Completed Application Form** - signed by the applicant
2. **Detailed Project Proposal/ Scope of Work**
3. **Detailed Budget/Cost Proposal** – budget detail must match what is reflected in the application budget summary
4. **Vendor Selection Process** – two or more vendor rates/prices are needed for purchases over \$10,000. A full RFP process in accordance with [2CFR200](#) is required for purchases of \$150,000 or more.
5. **Completed W9 form** – for subsequent processing of reimbursement funds

C. Application Review and Approval Process

Upon receipt, applications will be reviewed to ensure that the parameters for eligibility are met and that all required application components are included. Applicants submitting incomplete applications will be asked to resubmit and consideration of their project request may be delayed depending on the timing of application resubmission.

Applications will be reviewed by the DoE SMART-PA Technical Assistance Program Review Committee. Committee members include representatives from Catalyst Connection who ensure applications meet award criteria, Commonwealth of Pennsylvania, and federal requirements. In some cases, the applicant may be asked to provide clarification and/or to



submit additional documentation in support of its application. The extent of the information required, and the timeliness of response will determine whether the project can be considered within the current round or if they will need to reapply in a future round.

D. Award Criteria

Applications will be reviewed and recommendation for award to those that meet the following criteria:

1. All program eligibility criteria are met (see **Section 1, B. Program Eligibility**).
2. A clearly defined project and scope of work is included that integrates and expands the adoption of Smart technologies with allowable project expenses (see **Section 1, D. Eligible Uses**).
3. Budget within cost parameters that include required match of 50%. (see **Section 1, C. Funding Availability and Matching Requirements**)
4. Documentation of a Vendor Selection Process for purchases.

E. Post-Approval Process

Applicants will receive written notification of application status within 30 days of the application deadline. Award notifications will include additional instructions and details on next steps and contractual requirements.

Catalyst Connection will provide project management support to awardees to assist with reporting and invoicing requirements. Any changes in project specs, timeline, budget and/or match will require written approval of the project sponsor and Catalyst Connection. **A post award decrease in the project budget may result in a proportional decrease in award in order to maintain the minimum 50% match requirement.**

F. Disbursement of Funds

Technical Assistance awards are paid on a reimbursement basis following completion of:

- The Project
- Applicants' W-9
- Signed Grant Close Out Checklist
- An Invoice to Catalyst Connection for match amount

Reporting and Record Keeping Requirements

Awardees are responsible for the following reporting and record keeping requirements:

1. Comply with all state and federal rules regarding the maintenance of appropriate contractual and accounting documentation. These files must be available for review by the



MESC

OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS



pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

Commonwealth, auditors, the project sponsor, and/or fiscal agent upon request.

2. Report updates to the project status to Catalyst Connection when they occur.
3. Participate in post project impact surveys to collect quantitative and qualitative data on the results of the implemented projects, which may include, jobs created/retained, new/retained sales, cost savings, new/retained customers, and success stories.



SECTION III – Contacts for Manufacturers

Contact Catalyst Connection for more information:

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