

**Advanced Manufacturing Jobs and Innovation Accelerator Challenge
Project Summaries**

DOE Recipient	In Collaboration With	Location	Project Name	DOE Funding Request
Technology 2020/ORNL	<ul style="list-style-type: none"> • Oak Ridge National Laboratory • Technology 2020 (Lead DOC Applicant) 	Oak Ridge, Tennessee	AMP! - Advanced Manufacturing and Prototyping Center of East Tennessee	\$ 450,000
<p>AMP! will create an Advanced Manufacturing Consortium, transfer advanced manufacturing technologies and processes to companies in the region, and allow companies to co-locate and collaborate closely with ORNL's Manufacturing Demonstration Facility. AMP! will focus on several core technologies, including: Additive Manufacturing, Lightweight Metal Processing, Roll-to-Roll Processing, Low-Temperature Material Synthesis and Complimentary External Field Processing.</p>				
Oklahoma State University	<ul style="list-style-type: none"> • New Product Development Center at Oklahoma State University • Oklahoma Manufacturing Alliance (OMA) • Oklahoma State University (Lead DOC Applicant) 	Stillwater, Oklahoma	Manufacturing Improvement Program for the Oil and Gas Industry Supply Chain and Marketing Cluster	\$ 450,000
<p>Automation innovation assistance, energy audits, assistance with energy upgrades, and a focus on green product line innovation through the adoption of environmentally focused materials and processes will be provided. Process efficiency will come from a comprehensive energy audit and an analysis of plant and process layout.</p>				
National Center for Manufacturing Sciences (NCMS)	<ul style="list-style-type: none"> • General Electric • Southeastern Michigan Community Alliance (Lead DOC Applicant) 	Ann Arbor, Michigan	Innovation Realization: Building and Supporting an Advanced Contract Manufacturing Cluster in Southeast Michigan	\$ 450,000
<p>Building on NCMS's successful Lightweight Automotive Materials Program, R&D collaborations will be organized with identified Small-Medium Manufacturers (SMMs) wishing to engage General electric and their suppliers. SMMs will have access to AM&S methods that will address: (1) Improved functionality to meet safety and performance requirements; (2) Enhanced manufacturability using new lightweight materials; (3) Lowered cost of development of products using new materials through AM&S; (4) Built-in sustainability in the design of products made of new materials, including their end of life usage; and (5) Reduced energy use in materials manufacturing.</p>				

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Syracuse University	<ul style="list-style-type: none"> Syracuse Center of Excellence in environmental and Energy Systems (Syracuse CoE) Syracuse University (Lead DOC Applicant) 	Syracuse, New York	A Proposal to Accelerate Innovations in Advanced Manufacturing of Thermal and Environmental Control Systems	\$ 450,000
<p>Accelerating the adoption of innovations in materials, product design, and manufacturing processes will enable Central New York Thermal and Environmental Control Systems (TECS) firms to develop next generation products. Projects proposed for the first year include: (1) Nanomaterials for improved heat exchange, and (2) Subzero data center chip cooling. In year 2, program leadership will award two additional projects based on how the proposal enables cost-effective manufacturing of a TECS system, subsystems or component that improves, enables, or creates a product in the market.</p>				
University of Rochester	<ul style="list-style-type: none"> Center for Advanced Optics Manufacturing (CAOM) University of Rochester (Lead DOC Applicant) 	Rochester, New York	Rochester Regional Optics, Photonics & Imaging Accelerator	\$ 447,936
<p>Advanced manufacturing innovations at the region's optics, photonics, and imaging companies will be developed and implemented and work on freeform optics currently being carried out at the Institute of Optics will be accelerated. Additionally, a pilot program will develop and test technologies for the reclamation and disposal of slurries containing rare earth elements used for the grinding and polishing of optical lenses. The scope of work will: (1) Identify candidate waste slurries and evaluate their chemistries for reclamation; (2) Evaluate the economic and environmental impact that recycling would have for the company; and (3) demonstrate the ability for reclamation.</p>				
National Center for Defense Manufacturing and Machining	<ul style="list-style-type: none"> National Center for Defense Manufacturing and Machining/Alliance Partner Network Innovation Works (Lead DOC Applicant) 	Blairsville, Pennsylvania	Agile Electro-Mechanical Product Accelerator	\$ 420,150
<p>Using state of the art simulation and modeling techniques, the project will: (1) Identify, analyze, and document methods and tools used by industry; (2) Mature and adapt quantitative and qualitative tools for manufacturing decisions; (3) Perform site and facility assessments using identified tools; and (4) Execute projects that introduce and implement advanced technologies to reduce life cycle cost and environmental impact. The initial focus will include: wrought and finished metals components processing; additive manufacturing processes; and energy consumption during material manufacturing processes.</p>				

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Delaware Valley Industrial Resource Center	<ul style="list-style-type: none"> • Direct Digital Deposition (CIMP-3D) – Penn State University • Delaware Valley Industrial Resource Center (Lead DOC Applicant) 	Philadelphia, Pennsylvania	Greater Philadelphia Advanced Manufacturing Innovation and Skills Accelerator	\$ 450,000
<p>Scientific and technical R&D will be supported to identify, transfer, and commercialize new advanced manufacturing methods and technologies that are essential to the competitiveness of the transportation equipment sector. The initial focus will be in the areas of additive manufacturing and composites technology.</p>				
Commerce Authority, Arizona	<ul style="list-style-type: none"> • Science Foundation Arizona (SFAz) • Commerce Authority, Arizona (Lead DOC Applicant) 	Phoenix, Arizona	The combined scope of work proposed here will solidify the existing and emerging networks in the Southern Arizona Aerospace and Defense Region	\$ 450,000
<p>Funding for researchers to show proof of concept for technologies relevant to the region's aerospace and defense cluster will be supported through a challenge grant competition. Candidate technologies to be reviewed and approved by the cluster network include but may not be limited to algae-based jet fuels, nano-fabricated composite materials, and fuel cell batteries and related energy storage.</p>				
University of California Berkeley	<ul style="list-style-type: none"> • Lawrence Berkeley National Laboratories (LBNL) • Contra Costa County (Lead DOC Applicant) 	Berkeley, California	Advanced Manufacturing Medical/Biosciences Pipeline for Economic Development (AM2PED) is a regional medical and biosciences manufacturing initiative targeting the I80/880 corridor in the SF East Bay	\$ 450,000
<p>Commercially viable technologies at the validation and demonstration stage ready for technology transfer will be promoted. This includes work with UCB and LBNL's stable of spin-off companies in UCB/LBNL linked incubators and related companies in manufacturing, pharmaceuticals, bio-fuels, water/wastewater treatment, and bio-inspired manufacturing.</p>				

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Columbia River Economic Development Council	<ul style="list-style-type: none"> • Northwest Energy Efficiency Alliance (NEEA) • Bonneville Power Administration (BPA) • Energy Trust of Oregon (ETO) • Columbia River Economic Development Council (Lead DOC Applicant) 	Vancouver, Washington	Innovations in advanced materials and metals (IAM2)	\$ 450,000
<p>An energy project manager partnering with local utilities will assist target users in the metals and advanced materials industry cluster with reducing their risk of adopting strategic energy management (SEM) and energy efficiency best practices, as well as game-changing energy efficiency technologies that will significantly reduce their electricity, water, and natural gas consumption and costs. The energy project manager will be responsible for coordinating energy site assessments at the user facilities, providing recommendations to users, working with users to complete custom projects, and facilitating synergy projects.</p>				