



Overview of U.S. Government Manufacturing Workforce Programs

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Investment Research
SelectUSA

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INTRODUCTION

A skilled workforce is vital to attract and grow foreign direct investment. The United States can enhance its manufacturing workforce alongside foreign companies in the manufacturing space. In the United States, 40 percent of manufacturing is associated with Foreign Direct Investments (FDI). FDI occurs when an entity or group of related entities acting in a concerted manner in one economy makes an investment in another economy that gives control, or a significant degree of influence, over the management of an entity resident in another economy¹. Generally, direct investment indicates a long-term relationship with the management of a foreign enterprise, and the enterprise is usually linked with the real output of the country in which it operates. In the United States Foreign-owned companies employ a little more than 20 percent of the manufacturing workforce². This report provides a brief outline of several federal government workforce development programs that are open to participation from foreign investors and U.S. Economic Development Organizations (EDOs). SelectUSA, in collaboration with its federal interagency partners, seeks to de-mystify federal workforce programs that have the largest potential to maintain and enhance a competitive U.S. workforce.

FEDERAL WORKFORCE PROGRAMS

Department of Commerce (DOC)

During the COVID-19 pandemic, the American Rescue Plan provided \$500 million in funding for the Economic Development Administration (EDA) to develop new technical job training initiatives in underserved communities across the United States through the Good Jobs Challenge within the DOC. This funding will help to provide broader technical knowledge to work in areas requiring a science, technology, engineering, and mathematics (STEM) background, with the manufacturing space leading the way with the greatest number of applications accepted.

The National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership³ (MEP) is a national network of 51 public-private partnership centers in all 50 states and Puerto Rico dedicated to serving small and medium-sized manufacturers with resources needed to grow and thrive. NIST MEP Centers help with all parts of the talent management process including planning, recruitment, training and development, and long-term retention⁴. NIST's Office of Advanced Manufacturing serves as the headquarters for Manufacturing USA⁵ and strengthens advanced manufacturing education and workforce development across the Manufacturing USA network by providing grants to institutes to collaborate and invest in advanced manufacturing education and workforce development programs, as well as through shared services and outreach activities. For example, NIST funding enabled the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL), a biopharmaceutical manufacturing institute in the Manufacturing USA network, to develop training for biomanufacturing technicians⁶ and American Lightweight Materials Manufacturing Innovation Institute (ALMMII) in the Manufacturing USA network, scale their most in-demand advanced manufacturing skills training for civilians to earn national recognized certifications in welding, robots, and computer numerical control (CNC) machining⁷.

The demand for cybersecurity talent is speeding up as more public and private sector organizations look to strengthen defenses against a multitude of threats. The National Initiative for Cybersecurity Education (NICE), led by NIST, is a partnership between government, academia, and the private sector focused on cybersecurity education, training, and workforce development. The Minority Business Development Agency (MBDA) also offers support through Business Centers geared towards developing a strong workforce to scale quickly for businesses that are minority owned⁸.

¹ <https://crsreports.congress.gov/product/pdf/IF/IF10636>

² <https://blog.trade.gov/2019/10/04/the-intersection-of-manufacturing-fdi-job-creation/>

³ <https://www.nist.gov/mep>

⁴ <https://www.nist.gov/mep/workforce-development-manufacturers>

⁵ <https://www.manufacturingusa.com/>

⁶ <https://niimbl.force.com/s/current-projects> (search for workforce)

⁷ <https://lift.technology/certification-courses/>

⁸ <https://www.mbda.gov/mbda-programs/business-centers>

Department of Energy (DOE)

The DOE spearheads many sustainability initiatives focused on allowing young workers and college-age adults to learn about energy management practices, newly developed energy technologies, and other key areas like battery designs and robotics⁹. To engage and inspire the future clean energy workforce, DOE has programs focused on wind energy¹⁰, and general clean energy resources such as Clean Energy Education Resources for Educators to provide material for K-12 students. The Clean Energy Innovator Fellowship for recent graduates and energy professionals work with critical energy organizations to advance clean energy solutions and internships with Clean Cities coalitions, just to name a few.¹¹ These initiatives have, historically, involved investing in research-related programs to inspire and train students to work in energy-related research and careers.

As the United States transitions to a clean energy economy, implementation-related professions such as energy infrastructure construction, manufacturing and production, operations, and maintenance will require a significant number of skilled technical and trades workers, and DOE's workforce programming has begun to reflect this need. One program that spans both research and implementation is the [Industrial Assessment Centers \(IACs\)](#), which have matched students to small and medium manufacturers to provide free energy assessments since 2016. The DOE IACs trains the next-generation of energy savvy engineers, more than 60 percent of which pursue energy-related careers upon graduation. The program also provides additional benefits to manufacturers by providing access to the IAC database, which is a collection of data from over 19,000 publicly available IAC assessments along with recommended energy-saving projects. The IAC program has teams located at 37 universities around the country that conduct energy assessments to identify opportunities to improve productivity and competitiveness, reduce waste, and save energy. IACs received [\\$3.2 million](#) in 2022 to reach more areas. Foreign employers can hire students from the IAC program. They will get experienced students that graduate with the skills and abilities to conduct energy, waste, and productivity assessment. The students also have experience in the use of instrumentation and diagnostic equipment in an industrial environment and can communicate successfully through written reports and presentations to clients. Foreign companies can utilize IAC graduates to improve their workforce.

Foreign investors in the battery industry can also participate in and partner with the DOE on the Battery Workforce Initiative (BWI)¹². The program supports up to five pilot training programs in energy and automotive communities and advance workforce partnerships between industry and labor for the domestic lithium battery supply chain. The purpose of this industry-driven, government-facilitated initiative is to speed up the development of high-quality training, starting with existing examples to develop consensus on core training needs, and then develop training for use by companies and local training providers. Furthermore, the initiative will bring together battery industry organizations; engage training experts from manufacturers, labor, education, government, and other organizations; and create training materials and guides, plus educational and on-the-job training requirements. The initiative provides an opportunity for foreign companies to develop a workforce that will be suitable for their needs. Other ongoing workforce [programs](#) include training on [residential heat pump installation](#) through community colleges; supporting the professional development of instructors [training the solar photovoltaic](#) and solar heating and cooling installation workforce; and creating training on the [next generation of energy codes](#) for the construction industry. DOE and its manufacturing innovation institutes are part of the Manufacturing USA network (see below).

⁹ <https://www.energy.gov/eere/articles/celebrating-manufacturing-workforce-tomorrow>

¹⁰ <https://www.energy.gov/eere/wind/workforce-development-and-education>

¹¹ <https://www.energy.gov/eere/education/eere-stem-and-education>

¹² <https://netl.doe.gov/bwi>

Department of Defense (DOD)

In partnership with DOD, The Manufacturing Institute (a nonprofit workforce development and education partner of the National Association of Manufacturers) runs the Heroes Make America Training Program that allows military veterans and their spouses to access the valuable manufacturing skills that can help them obtain high paying jobs across the industry¹³. DOD works in partnership with the manufacturing innovation institutes and their ecosystems to develop regional strategies to solve manufacturers' workforce challenges. DOD and its manufacturing innovation institutes are part of the Manufacturing USA network (see below).

Manufacturing USA®

[Manufacturing USA](#) is a national network organized by NIST and funded by DOC, DOD, and DOE to secure U.S. global leadership in advanced manufacturing. Manufacturing USA is a whole-of-government effort to drive innovation in manufacturing through large scale public-private collaboration on manufacturing technology, supply chain resiliency, and education and workforce development. Each institute has a distinct technology focus and connects people, ideas, and technology to solve industry-relevant advanced manufacturing challenges. Tens of thousands of workers, students, and educators in 2022 participated in institute workforce programs, including mid-career programs, apprenticeships, internships, and summer camps. Reaching across industries, Manufacturing USA brings members of the manufacturing community together to overcome technical hurdles and to enable innovative new products and manufacturing processes through the institutes. It seeks to restore U.S. preeminence in manufacturing by addressing shared manufacturing technology and workforce challenges. Workforce development plays a key role in ensuring that advanced manufacturing supports U.S. technological competitiveness and drives product and process improvements that advance the U.S. economy.

Department of Labor (DOL)

DOL works to align federal workforce, education, and economic development investments with Registered Apprenticeships and other workforce programs, to train, hire, and retain diverse workers across industries. One of the primary ways it does so is through the review and approval of State Plans under the [Workforce Innovation and Opportunity Act](#) (WIOA) that was passed in 2014 that was designed to promote a greater level of transparency regarding employment, training, and services for employees. Additionally, DOL has launched over 2,400 American Jobs Centers (AJCs) across the country that provide local employment services including support to find and build a diverse workforce. Through the [AJCs](#), DOL identifies local hiring needs and helps with the various steps in the hiring process, foreign companies can utilize the AJCs.

Department of Education (ED)

The Office of Career, Technical, and Adult Education within ED spearheads various initiatives related to workforce development. Adult Education and Literacy Initiatives help to guide grants and national training towards enhanced adult programs with greater accountability. Additionally, ED works with community colleges and state education boards to establish strategies to encourage student participation and public support in technical sectors that currently have a strong need for talent such as manufacturing¹⁴. The department also aims to enforce legislation relating to vocational training and workforce investment. While ED does not directly offer foreign employer's certain programs, companies can work alongside the department to stress the importance of community colleges as centers of innovation to increase enrollment and the availability of a future workforce.

¹³ <https://www.themanufacturinginstitute.org/veterans/heroes-make-america/training-program/>

¹⁴ <https://sites.ed.gov/octae/>

Department of Transportation (DOT)

The DOT has worked to spearhead the use of funding within the recently passed Bipartisan Infrastructure Bill. The legislation allocates over \$300 million for registered apprenticeship programs to support the workforce behind the zero-emission infrastructure of the future. Additionally, the department manages various other grants designed to enhance workforce development initiatives in the transit industry. These grants are guided towards state partners to distribute towards programs including tuition assistance, internships, outreach campaigns, and apprenticeship opportunities¹⁵. Foreign companies can work with the DOL and DOT to build or partner on registered [apprenticeship programs](#).

Department of Veterans Affairs (VA)

The [VA works](#) to uplift veterans across the country who are looking to reskill for careers within the manufacturing space. The department provides salary subsidies so employers can hire veterans at an apprenticeship-level wage and train them to perform the job effectively. Additionally, the VA can provide assistive technology and equipment for veterans to perform their job more efficiently, without any charge to employers¹⁶. The VA also works alongside other federal departments to encourage easy access to apprenticeships and additional educational resources for veterans through various programs such as the Operations Boots to Business Initiative and the Vocational Rehabilitation Program¹⁷. Foreign companies can qualify for salary subsidies and other VA benefits by hiring and supporting America's veterans. There is always additional room for private corporations to devote FDI towards uplifting veterans into various careers in manufacturing.

CONCLUSION

Improving the country's workforce will be a fundamental priority for both the government and foreign corporations over the next few decades. It may be beneficial for foreign companies to make strategic investments in workforce policies that can better prepare employees for a changing environment that features automation and new skill requirements.

Foreign companies that invest in the United States will have an opportunity to help develop and source employees from the U.S. manufacturing workforce. The U.S. government is eager to help support FDI, and it encourages foreign companies to explore U.S. Government workforce programs. Foreign companies can sign hiring pledges, invest in workforce training programs, and collaborate with universities to help ensure that they will have a strong labor force for the future.

It is important to recognize that investment decisions may benefit from collaboration with the U.S. federal government, international investors, and local communities across the United States. All these efforts may be helpful over the long-term for foreign companies and government partners as companies access a more knowledgeable and diverse workforce that can increase company productivity and boost the U.S. economy.

¹⁵ <https://www.transportation.gov/bipartisan-infrastructure-law/resources-workforce-labor-partners-and-federal-job-seekers>

¹⁶ <https://www.benefits.va.gov/vocrehab/employers.asp>

¹⁷ <https://www.va.gov/osdbu/entrepreneur/training.asp>

ABOUT SELECTUSA

Housed within the U.S. Department of Commerce, SelectUSA promotes and facilitates business investment into the United States by coordinating related federal government agencies to serve as a single point of contact for investors. SelectUSA assists U.S. economic development organizations to compete globally for investment by providing information, a platform for international marketing, and high-level advocacy. SelectUSA also helps investors find the information they need to make decisions; connect to the right people at the local level; navigate the federal regulatory system; and find solutions to issues related to the federal government. For more information, visit www.trade.gov/selectusa.



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