

U.S. Department of Energy Program Profiles to Support Inclusive Innovation and Entrepreneurship

Below are profiles of five U.S. Department of Energy (DOE) programs: American-Made Challenges, Energy I-Corps, the Lab Partnering Service, Small Business Vouchers, and the Technology Commercialization Fund. These programs are examples of existing or past DOE programs that provide support to individuals and organizations in innovation and entrepreneurship. These programs aim to accelerate innovation to high-impact commercialization through partnerships connecting entrepreneurs to the private sector and the network of DOE's National Laboratories. As DOE takes proactive steps to diagnose and eliminate barriers to its funding opportunities and seeks to enable a more inclusive and just entrepreneurial innovation ecosystem in climate and energy technologies, these programs highlight potential venues that can be modified or expanded.

American-Made Challenges (AMC) ¹ are prize accelerators based at the National Renewable Energy Laboratory, originally aimed at incentivizing the nation's entrepreneurs to reenergize innovation and reassert American leadership in the energy marketplace. Prize competitions on the AMC platform are aimed at lowering the barriers to innovators while helping to create partnerships that connect entrepreneurs to the private sector and the network of DOE's National Laboratories. These prize competitions and challenges provide a rapid funding mechanism to support entrepreneurs from an initial idea to a commercial demonstration across energy domains, from solar energy to ocean observation to geothermal energy. Future work may identify connections between DOE programs to reduce barriers for entrepreneurs. For example, American-Made Challenge awardees could participate in Energy I-Corps, increasing the likelihood of commercializing their technologies.

Energy I-Corps ² is a program that pairs teams of national laboratory researchers with industry mentors for an intensive two-month training. With a focus on value commercialization and entrepreneurial activities, the program aims to increase the number of national laboratory-developed technologies that are transferred into commercial development or industry agreements. Energy I-Corps currently provides training to ensure investments in national labs are maintaining and strengthening U.S. competitiveness long-term. This entrepreneurial training program could be expanded to other DOE awardees, further developing the energy innovation ecosystem.

¹ <https://americanmadechallenges.org/>

² <https://energyicorps.energy.gov/>

The **Lab Partnering Service (LPS)** ³ provides a single location to connect with DOE national laboratory technical experts to quickly answer innovation questions, as well as discover opportunities for building partnerships. LPS provides a crucial first step in reducing barriers by providing access to extensive information across numerous technology areas and labs. However, additional mechanisms are needed to translate information into effective partnering mechanisms, for national labs, investors, and other parties looking to advance energy innovation. Stakeholders may benefit from a more advanced startup-lab matchmaking process with mechanisms for both free technical assistance and affordable durable lab-entrepreneur partnerships. These advancements should consider methods to reach and support underserved communities.

Small Business Vouchers (SBV) ⁴ were part of a pilot program aimed at opening the DOE National Laboratories to qualified clean energy small businesses by making the contracting process simple, lab practices transparent, and access to the labs' unique facilities affordable. Vouchers provided funding (between \$50,000 and up to \$300,000) to national laboratory staff to support small businesses in overcoming critical technology and commercialization challenges with no cost to the partnering business. It was implemented under the DOE Office of Energy Efficiency & Renewable Energy (EERE).

The **Technology Commercialization Fund (TCF)** ⁵ is a funding opportunity that leverages the R&D funding in the applied energy programs to mature promising energy technologies with the potential for high impact. The goals are 1) to increase the number of energy technologies developed at DOE's national labs that graduate to commercial development and achieve commercial impact and 2) enhance the Department's technology transitions system with a forward-looking and competitive approach to lab-industry partnerships. This program often requires cost share from industry partners, and in the future may be modified to provide more flexibility and address existing challenges.

³ <https://www.labpartnering.org/>

⁴ <https://www.energy.gov/eere/technology-to-market/small-business-vouchers>

⁵ <https://www.energy.gov/technologytransitions/technology-commercialization-fund>