Workforce Development for Teachers and Scientists

Overview

The Genesis Mission led by the Department of Energy (DOE) will usher in a new age of science and technology as well as reinvigorate U.S. workforce and future-ready U.S. talent development to address the Nation's most challenging scientific problems. The Genesis Mission will greatly raise awareness and excitement of the unique hands-on learning, research, and development opportunities for students, educators, and professionals at DOE national laboratories, especially in areas of artificial intelligence, quantum information science, fusion energy, and critical minerals and materials. Workforce Development for Teachers and Scientists (WDTS) long-standing partnerships and programs with all 17 DOE national laboratories will grow the U.S. science and technology talent needed to advance scientific discovery, drive technological innovation, and secure American energy dominance.

The WDTS program's mission is to ensure that DOE has a sustained pipeline for the science, technology, engineering, and mathematics (STEM) workforce. Accomplishing this mission involves continued support for undergraduate internships, graduate thesis research opportunities, and visiting faculty research appointments; administration of the Albert Einstein Distinguished Educator Fellowship for K–12 STEM teachers for the federal government; annual, nationwide middle and high school science competitions culminating in the National Science Bowl® finals in Washington, D.C; and pathway programs to connect more students to training opportunities at DOE national laboratories. Through these activities, WDTS plays a critical role in strengthening the U.S. STEM pipeline to meet Administration priorities and further America's global leadership in science and technology.

Highlights of the FY 2027 Request

The WDTS FY 2027 Request of $30.0 million is a decrease of $2.0 million from the FY 2026 Enacted level. The FY 2027 Request prioritizes funding for workforce training programs that attract and train students and educators for STEM learning and authentic hands-on research experiences at DOE national laboratories. The Request continues support for undergraduate internships, graduate thesis research, and visiting faculty program to help sustain a skilled scientific and technical workforce pipeline. The Request continues support for the technology infrastructure modernization and program evaluation activity, which is critically important for sustaining the workforce training programs. It prioritizes support for the DOE National Science Bowl®, a signature STEM competition testing middle and high school students' knowledge in science and mathematics, including activities to advance Artificial Intelligence (AI) education. In FY 2025, about a quarter of the WDTS training opportunities for students and educators were in artificial intelligence areas and this is expected to increase in future years. By encouraging and preparing U.S. students to pursue STEM careers, WDTS addresses DOE's mission critical talent needs to advance Administration priorities and support U.S. global leadership in science and technology.

Workforce Development for Teachers and Scientists
Funding

(dollars in thousands)

	FY 2025 Enacted	FY 2026 Enacted	FY 2027 Request	FY 2027 Request vs FY 2026 Enacted
Workforce Development for Teachers and Scientists				
Science Undergraduate Laboratory Internship (SULI)	15,300	15,300	11,200	-4,100
Community College Internship Program (CCI)	2,000	2,300	3,000	+700
Visiting Faculty Program (VFP)	2,100	2,100	2,000	-100
Office of Science Graduate Student Research (SCGSR) Program	5,000	5,200	5,000	-200
Internships and Visiting Faculty Activities at DOE Labs	**24,400**	**24,900**	**21,200**	**-3,700**
Albert Einstein Distinguished Educator Fellowship	**1,200**	**1,200**	**1,100**	**-100**
National Science Bowl	**3,100**	**3,400**	**6,100**	**+2,700**
Technology Development and On-Line Application	**700**	**900**	**500**	**-400**
Evaluation	**300**	**300**	**300**	**–**
Outreach	**1,300**	**1,300**	**800**	**-500**
Total, Workforce Development for Teachers and Scientists	**31,000**	**32,000**	**30,000**	**-2,000**

Program Accomplishments

Science Undergraduate Laboratory Internship (SULI) — In FY 2025, WDTS supported approximately 1,159 placements. Among the participants, about 98 percent reported high quality research experience and positive impacts to their educational and career goals, about 94 percent would consider a career at DOE national laboratories, and about 99 percent would recommend SULI to their peers.

Community College Internship Program (CCI) — In FY 2025, WDTS supported 189 placements for students from community colleges. Among the participants, about 98 percent reported high quality training experience, 99 percent would recommend CCI to their peers, and 97 percent reported positive impacts to their educational and career goals. Additionally, 94 percent of participants reported that they would consider a job or career at DOE national laboratories.

Visiting Faculty Program (VFP) — In FY 2025, WDTS supported a total of 103 faculty and 28 student VFP placements. All VFP Faculty participants reported a positive impact on their careers, and all expressed interest in continuing their research collaboration. All participants would recommend VFP to their peers.

Office of Science Graduate Student Research (SCGSR) Program — The two solicitations from FY 2024 resulted in a total of 141 new awards and the FY 2025 Solicitation 1 produced 70 new awards. FY 2025 Solicitation 2 is under review. The SCGSR program continued to expand its recruitment efforts to attract more graduate applicants to strengthen the U.S. energy scientific workforce. In FY 2025, SC continued its pilot for supplements to SCGSR awardees for international research collaboration experience at prestigious, world class institutions in ally countries. Following a successful first pilot with CERN (European Organization for Nuclear Research) in 2024, SC completed a second cohort with CERN as well as a first cohort with RIKEN Center for Computational Science in Japan in areas of AI, Quantum, and Data Science. Based on participant feedback, these activities contributed to the preparation of future U.S. research leaders and strengthening of U.S. global leadership in critical and emerging technologies.

Albert Einstein Distinguished Educator Fellowship (AEF) — In FY 2025, one WDTS-sponsored AEF participant held a WDTS office appointment and five received placements in Congressional offices. Nine other teachers were sponsored by the following Federal agencies: Library of Congress, Department of Defense, Department of Homeland Security, and U.S. Geological Survey. The AEF Program continues to equip teachers with access to a national network of education leaders and programs, a better understanding of the challenges and possibilities in STEM education, and a renewed passion for making a significant contribution to the educational community.

National Science Bowl® (NSB) — In FY 2025, more than 3,500 middle school students (from 448 schools) and 6,400 high school students (from 846 schools) participated in 115 regional competitions. Forty-nine U.S. States, the District of Columbia, and Puerto Rico were represented at regionals. More than 2,000 volunteers also participated in the local and national competitions. In April 2025, 47 middle school teams and 68 high school teams competed at the National Science Bowl® Championship Finals at the National Conference Center in Leesburg, Virginia, which featured a live web-streaming broadcast of the event to a broad public audience. The NSB continued to inspire young students nationwide to continue striving for high levels of academic success and to follow their passions in STEM, and hopefully, to consider a career to support the DOE mission. Leveraging the NSB leadership and national network, SC led the OSTP's interagency task force to establish an implementation plan and launched the public website (part of ai.org) for the Presidential AI Challenge.

Technology Development and On-Line Application — In FY 2025, the critical upgrade of the online system platform continued. Upon completing the transition of the online application modules for individual programs, the design for administration access management and associated major features has been initiated. The upgrade has significantly increased cybersecurity and system performance through modernizing the online technology supporting all WDTS programs. WDTS continued to add new features to the mentor resource center to better support mentors at DOE national laboratories. WDTS implemented an online portal for DOE national laboratories to submit annual implementation plan and annual summary reports to ensure efficiency and effectiveness of program execution. Modules using data analysis and visualization capability continue to be updated and have demonstrated their usefulness in producing annual program data summary reports to all host DOE national laboratories, compiling data for WDTS evaluation projects, and producing information to address inquiries from internal, external stakeholders, and American public.

Evaluation — In FY 2025, WDTS, in collaboration with Oak Ridge Institute for Science and Education (ORISE), continued building a comprehensive evaluation portfolio to support evidence-based management of workforce development programs and initiatives in WDTS and SC. The program completed a set of evaluation projects based on pre- and post-survey of program participants by term or year, including assessing how undergraduate internships affected participants on their STEM skills/knowledge, education plan, and career goals. The program completed an outcome analysis of "where they are" for past CCI participants. The program completed a study of mentoring based on mentor surveys, which provided insights to better support mentors at DOE national laboratories. WDTS started preparation for a longitudinal evaluation study of the impacts of WDTS-sponsored undergraduate internship programs at DOE national laboratories, including submission of a Paperwork Reduction Act application for OMB approval.

Outreach — In FY 2025, in collaboration with DOE laboratories, ORISE, and institutions of higher education, WDTS supported and co-hosted a series of virtual events (Application Assistance Workshops, IGNITE Off, Internship Abstract Competition, and Virtual Internship Fair) to actively engage students and faculty at all levels and to attract them to apply to workforce training opportunities. In addition to virtual events, WDTS conducted in-person workshops and panels at professional society conferences to recruit applicants and promote DOE, SC, and WDTS opportunities. WDTS supported activities for DOE national laboratories to form and strengthen partnerships with community colleges, which lays a foundation for further development to meet the evolving needs for a modernized technical workforce, especially in DOE mission-critical frontiers including AI, Quantum Information Science, Nuclear Technology, Fusion Energy, Biotechnology, Critical Minerals and Materials, and Radioactive Waste Management. The effort aims to leverage partnerships between DOE national laboratories and local/regional community colleges to co-develop and deliver interdisciplinary pathways to produce well-prepared technical professionals readily employable by DOE national laboratories and regional energy industry partners.

Description

Activities at the DOE Laboratories

WDTS supports activities such as the SULI, CCI, VFP, and SCGSR programs, and innovative pathways. One of the primary goals of these programs is to prepare students to enter STEM careers that are especially relevant to the DOE mission. By providing hands-on research experiences at DOE laboratories under the direction of scientist/engineer mentors, these activities provide workforce training opportunities for participants to engage in authentic research and discovery learning. WDTS activities are aligned with the Administration's goals for preparing a highly skilled future U.S. workforce.

SULI places students from two- and four-year undergraduate institutions as paid interns in science and engineering research activities at DOE laboratories, working with laboratory staff scientists and engineer mentors on projects related to DOE programs. Appointments are for ten weeks during the summer term and 16 weeks during the fall and spring terms.

CCI places community college students as paid interns in technological activities at DOE laboratories, working under the supervision of a laboratory technical professional or research development mentor. CCI provides dedicated technical training for community college students who are interested in technical careers and provides a pathway for those who plan to pursue further educational objectives beyond community college. Appointments are for ten weeks during the summer, fall, and spring terms.

The VFP goal is to increase the competitiveness of faculty members at U.S. institutions of higher education serving many undergraduate students, including all HBCUs, to expand the reach of the Office of Science. The VFP offers dual-track opportunities for both enhancing research capacity and innovating STEM teaching and learning at faculty members' home institutions through extended research collaboration with DOE national laboratories. Appointments are for 10 weeks in the summer.

SCGSR's goal is to prepare graduate students for STEM careers critically important to the SC mission by providing graduate thesis research opportunities at DOE laboratories. The SCGSR program provides supplemental awards for graduate students to pursue part of their graduate thesis research at a DOE laboratory or facility in areas that address scientific challenges central to the SC mission, including artificial intelligence, quantum information science, fusion energy, and critical minerals and materials. U.S. graduate students pursuing Ph.D. degrees in science areas aligned with the SC mission are eligible for research awards to conduct part of their graduate thesis research at a DOE laboratory or facility in collaboration with a DOE laboratory scientist. Research award terms range from three months to one year.

Given Administration priorities, especially the launch of the Genesis Mission, WDTS explores innovative pathway programs for students and educators to have hands-on science experience and gain access to modern science resources with exposure to career opportunities at DOE national laboratories.

Albert Einstein Distinguished Educator Fellowship

The Albert Einstein Distinguished Educator Fellowship Act of 1994 charges DOE with administering a fellowship program for elementary and secondary school mathematics and science teachers that focuses on bringing teachers' real-world expertise to government to help inform federal STEM education programs. Selected teachers spend 11 months in a Federal agency or a Congressional office. WDTS manages the Albert Einstein Distinguished Educator Fellowship Program for the Federal government. SC sponsors placement opportunities in WDTS and in Congressional offices. Other Federal agencies sponsor placement opportunities

in their own offices. Participating agencies include the Department of Defense, Department of Homeland Security, the U.S. Geological Survey, the National Science Foundation, National Aeronautics and Space Administration, and the Library of Congress. The Fellows provide educational expertise, years of teaching experience, and personal insights to these offices to advance Federal STEM education programs.

National Science Bowl®

The DOE National Science Bowl® is a nationwide academic competition testing students' knowledge in all areas of mathematics and science, including energy. High school and middle school students are quizzed in a fast-paced, question-and-answer format. Approximately 340,000 students have participated in the National Science Bowl® throughout its 35-year history, and it is one of the Nation's largest science competitions. WDTS manages the National Science Bowl® and sponsors the National Science Bowl® finals competition. Regional competitions rely upon volunteers, and numerous local organizations, both public and private, support them. Leveraging the NSB national network, SC will also lead a national AI challenge.

Technology Development and On-Line Application

This activity modernizes on-line systems used to manage application solicitations, review applications, and facilitate data collection, curation, and compilation to support evaluation for WDTS programs. The Request continues to support a project to develop, build, and launch new online application and program support systems, with evolving new elements that improve cybersecurity and accessibility to applicants, advance program oversight and assessment, and support more efficient management and execution of programs.

Evaluation

This activity supports work to assess whether WDTS programs meet established goals. This is accomplished through triennial reviews of its program performers, of WDTS itself, and of program performance. These reviews involve peer reviews and Federal Advisory Committee-commissioned Committee of Visitors reviews. In addition, as an important part of assessing STEM workforce training programs, the activity supports efforts to measure short-term program outcomes and assess longer-term program impact. The supported activities include the compilation and analysis of data and other materials, including pre- and post-participation surveys, participant deliverables, notable outcomes (publications, presentations, patents, etc.), and longitudinal participant tracking/outcome analysis. WDTS is also tracking and reporting how its programs, and activities at DOE labs and SC scientific user facilities, fulfill program goals and objectives. In 2023 and 2024, an outcome analysis of over 3,000 SULI participants during 2004 and 2011 was conducted. Between 11 to 17 years post-appointment, over 95% of the SULI alumni have obtained at least a bachelor's degree, about 66% graduate degrees, about 71% remain in STEM fields or occupations, with 56% in industry, 13% universities, and about 5% DOE. In 2024, an outcome analysis of 423 SCGSR alumni who graduated in 2021 or earlier shows nearly 100% doctoral degree completion in STEM fields with 24% employment in DOE national laboratories, 41% industry, and 26% universities. The evaluation studies provide evidence to show the effectiveness of the WDTS programs. Continued efforts will be made to leverage the evaluation to ensure program effectiveness and management excellence.

Outreach

WDTS engages in outreach activities, some in cooperation with other DOE program offices and select federal agencies, to widely publicize its opportunities. The WDTS website (https://science.osti.gov/wdts) is the most widely used tool for prospective program participants to obtain information about WDTS, and it provides a gateway to accessing online applications for the WDTS programs. To help increase the applicant pool, WDTS conducts outreach via multiple venues with consistent brand messaging, such as hosting panels for and giving presentations to various stakeholder groups, sharing information with professional societies, and using virtual platforms to host internship and career fairs. WDTS leverages SC's social media resources to amplify the program opportunities to a broad range of stakeholders. WDTS collaborates with DOE host laboratories and

facilities to attract and recruit applicants and to develop innovative training models to meet evolving scientific and technical workforce needs for DOE, energy industry, and the nation. The Laboratory Equipment Donation Program (LEDP) is operated under Outreach and provides excess laboratory equipment to STEM faculty at accredited post-secondary educational institutions. Through the General Services Administration Energy Asset Disposal System, DOE sites identify excess equipment, and colleges and universities can then search for equipment of interest and apply via the website. The equipment is free, but the receiving institutions pay for shipping costs.

Activities and Explanation of Changes

(dollars in thousands)

FY 2026 Enacted	FY 2027 Request	Explanation of Changes FY 2027 Request vs FY 2026 Enacted
Workforce Development for Teachers and Scientists **$32,000**	**$30,000**	**-$2,000**
Activities at the DOE Laboratories *$24,900*	*$21,200*	*-$3,700*
Science Undergraduate Laboratory Internship (SULI) *$15,300*	*$11,200*	*-$4,100*
Funding for SULI supports approximately 1,008 students.	The Request for SULI will support approximately 738 students.	The funding will support 270 fewer students.
Community College Internship Program (CCI) *$2,300*	*$3,000*	*+$700*
Funding for CCI supports approximately 174 students.	The Request for CCI will support approximately 200 students.	The increase of funding will support activities at DOE national laboratories to work with local/regional community colleges for training more technical professionals for DOE and energy industry.
Visiting Faculty Program (VFP) *$2,100*	*$2,000*	*-$100*
Funding for the VFP supports approximately 66 faculty and 32 students.	The Request for the VFP will support approximately 65 faculty and 28 students.	The funding will support 1 fewer faculty and 4 fewer students.
Office of Science Graduate Student Research (SCGSR) Program *$5,200*	*$5,000*	*-$200*
Funding for the SCGSR program supports approximately 145 graduate students. Funding supports an international research collaboration allowance to provide opportunities for SCGSR awardees to access unique international expertise and/or instrumentation and gain hands-on experience conducting research in an international environment.	The Request for the SCGSR program will support approximately 140 graduate students. The Request supports an international research collaboration allowance to provide opportunities for SCGSR awardees to access unique international expertise and/or instrumentation and gain hands-on experience conducting research in an international environment.	Funding will support 5 fewer students.

(dollars in thousands)

FY 2026 Enacted	FY 2027 Request	Explanation of Changes FY 2027 Request vs FY 2026 Enacted
Albert Einstein Distinguished Educator Fellowship $1,200	$1,100	-$100
Funding supports 5 Fellows due to increased cost for hosting Fellows and administrating programs.	The Request will support 4 Fellows due to increased cost for hosting Fellows and administrating programs.	The funding will support 1 fewer Fellow.
National Science Bowl® $3,400	$6,100	+$2,700
Funding supports the National Finals and provide central management of over 110 virtual and in-person regional events, involving more than 14,000 students from all fifty states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.	The Request will support the National Finals and provide central management of over 110 virtual and in-person regional events, involving more than 14,000 students from all fifty states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. The request includes support for continuing the national AI challenge.	The increase of funding will support the national AI Challenge and K-12 activities in support of the Executive Order titled "Advancing Artificial Intelligence Education for American Youth".
Technology Development and On-Line Application $900	$500	-$400
Funding continues development and operation of the on-line systems and supports new development to meet the evolving needs of the programs. The online application and review system is the backbone infrastructure for the application, review, laboratory placement, award/participation management, outreach, and evaluation of WDTS workforce training programs at DOE national laboratories.	The Request will continue development and operation of the on-line systems and support new development to meet the evolving needs of the programs. The online application and review system is the backbone infrastructure for the application, review, laboratory placement, award/participation management, outreach, and evaluation of WDTS workforce training programs at DOE national laboratories.	The funding will focus on development of new features with higher priority for sustaining the online system.

(dollars in thousands)

FY 2026 Enacted	FY 2027 Request	Explanation of Changes FY 2027 Request vs FY 2026 Enacted
Evaluation $300	$300	$ —
Funding supports a comprehensive evaluation portfolio with short- and long-term projects for assessing WDTS program performance and producing knowledge to inform evidence-based management and evaluation practice.	The Request will support a comprehensive evaluation portfolio with short- and long-term projects for assessing WDTS program performance and producing knowledge to inform evidence-based management and evaluation practice.	No change in funding.
Outreach $1,300	$800	-$500
Funding supports outreach activities in collaboration with DOE host labs and facilities. WDTS will focus the support on recruitment to DOE research and development training opportunities in DOE mission-relevant fields of study. Support will continue for the LEDP program.	The Request will support activities for promoting WDTS programs to broad audiences to recruit more applicants and to leverage institutional partnerships to prepare scientific and technical workforce in DOE priority areas. Support will continue for the LEDP program.	The funding will focus on various outreach activities of higher priority to advancing DOE workforce mission.