

Workforce Development for Teachers and Scientists

Overview

The Workforce Development for Teachers and Scientists (WDTS) program's mission is to ensure that the Department of Energy (DOE) has a sustained pipeline for the science, technology, engineering, and mathematics (STEM) workforce. Accomplishing this mission depends on 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. These activities support the development of the next generation of scientists, engineers, and technical professionals to address challenges in energy, environment, and national security.

WDTS activities rely significantly on long-standing partnerships with DOE's 17 national laboratories, which employ more than 30,000 individuals with STEM backgrounds. The DOE laboratory system provides access to leading scientific expertise, world-class scientific user facilities, capabilities, and resources, and large-scale, multidisciplinary, interdisciplinary, and transdisciplinary research programs unavailable in universities or industry. WDTS leverages these assets to provide authentic hands-on research and discovery learning opportunities for students and educators in support of the DOE workforce development mission.

Highlights of the FY 2026 Request

The WDTS FY 2026 Request of \$25.0 million is a decrease of \$6 million below the FY 2025 Enacted level. The FY 2026 Request prioritizes funding for workforce training programs that attract and train students and educators for STEM learning and authentic research experiences at DOE laboratories. The Request continues support for undergraduate internships, graduate thesis research, and visiting faculty program to help sustain a skilled workforce pipeline. The Request continues support for the technology infrastructure modernization and evaluation activity, which is critically important for sustaining the workforce training programs. It also prioritizes support for the DOE National Science Bowl®, a signature STEM competition testing middle and high school students' knowledge in science and mathematics. By encouraging and preparing students to pursue STEM careers, these programs address the DOE's STEM mission critical workforce pipeline needs required to advance science innovation and energy, environment, and national security.

**Workforce Development for Teachers and Scientists
Funding**

(dollars in thousands)

	FY 2024 Enacted	FY 2025 Enacted	FY 2026 Request	FY 2026 Request vs FY 2025 Enacted
Workforce Development for Teachers and Scientists				
Science Undergraduate Laboratory Internship (SULI)	15,300	15,300	10,200	-5,100
Community College Internship Program (CCI)	2,000	2,000	2,000	–
Visiting Faculty Program (VFP)	2,100	2,100	2,000	-100
Office of Science Graduate Student Research (SCGSR) Program	5,000	5,000	5,000	–
Reaching a New Energy Sciences Workforce (RENEW)	9,000	–	–	–
Internships and Visiting Faculty Activities at DOE Labs	33,400	24,400	19,200	-5,200
Albert Einstein Distinguished Educator Fellowship	1,200	1,200	1,100	-100
National Science Bowl	3,100	3,100	3,100	–
Technology Development and On-Line Application	700	700	500	-200
Evaluation	300	300	300	–
Outreach	1,300	1,300	800	-500
Total, Workforce Development for Teachers and Scientists	40,000	31,000	25,000	-6,000

Program Accomplishments

Science Undergraduate Laboratory Internship (SULI)— In FY 2024, WDTs supported approximately 1,163 placements. Among the participants, more than 98 percent reported positive impacts to their educational and career goals, more than 96 percent would consider a career at DOE national laboratories, and 98 percent would recommend SULI to their peers. As in prior years, participants continue to make notable contributions to research projects as evidenced by co-authorship in peer reviewed journals, patents, and/or presentations at scientific meetings.

Community College Internship Program (CCI)— In FY 2024, WDTs supported 167 placements for students from community colleges. Among the participants, 100 percent would recommend CCI to their peers and 98 percent reported positive impacts to their educational and career goals. Additionally, 100 percent of participants reported that they would consider a job or career at DOE national laboratories.

Visiting Faculty Program (VFP)— In FY 2024, WDTs supported a total of 126 faculty and 29 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. The SCGSR program continued to expand its recruitment efforts to attract more graduate applicants to strengthen the U.S. energy scientific workforce. In FY 2024, SC implemented a pilot for providing supplemental funding for active SCGSR awardees to have international research collaboration experience at CERN, the European Organization for Nuclear Research.

WDTs Pathway Programs for Students and Educators— To help prepare K-12 students and attract more undergraduate students, WDTs has developed innovative pathway programs for students and educators with hands-on research experience and exposure to scientific and technical careers at DOE national laboratories. In 2024, 11 WDTs Pathway Summer Schools for over 200 high school and early undergraduate students were implemented in collaboration with 9 laboratories and 7 WDTs Pathway Summer Institutes were established to support more than 80 Educators from middle/high schools and community colleges with 5 laboratories. The scientific topics of the pathway programs are Artificial Intelligence, Machine Learning, Data Science, Quantum Information Science, Battery Science, Electrochemistry, Catalysis, High Performance Computing, and Fusion Energy Science.

Albert Einstein Distinguished Educator Fellowship (AEF)— In FY 2024, one WDTs-sponsored AEF participant held a WDTs office appointment and five received placements in Congressional offices. Ten other teachers were sponsored by the following Federal agencies: Library of Congress, Department of Defense, Department of Homeland Security, U.S. Geological Survey, National Aeronautics and Space Administration, and National Science Foundation. 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 2024, more than 3,500 middle school students (from 425 schools) and 6,000 high school students (from 795 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 2024, 47 middle school teams and 68 high school teams competed in 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.

Technology Development and On-Line Application— In FY 2024, the upgrade of the online platform continued and the transition of the online application modules for individual programs is mostly complete. The

upgrade will significantly increase cybersecurity and modernization of online technology supporting all WDTS programs. WDTS has completed the upgrade development for system integration with responsive design for SULI, CCI, VFP, and SCGSR. The upgrade incorporated mobile-friendly designs for these programs to reduce barriers for students and educators from a wide range of institutions, schools, backgrounds, and communities. WDTS also added major features to the mentor resource center to better support mentors at DOE national laboratories. Modules using data analysis and visualization capability continue to be developed 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 and external stakeholders.

Evaluation— In FY 2024, WDTS, in collaboration with 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, including assessing how undergraduate internships affected participants on their STEM skills/knowledge, education plan, career goals, and outcome analysis of where they are. The program also completed a study of mentoring based on newly completed mentor surveys, which provided insights on support needed for 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 2024, in collaboration with ORISE, DOE laboratories, and institutions of higher education, WDTS supported and co-hosted a series of virtual events (Application Assistance Workshops, IGNITE Off, Internship Abstract Competition, Virtual Internship Fair, Virtual Intern Panel and Networking, and Virtual Graduate Student Recruitment 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. In response to the WDTS annual proposal call, DOE national laboratories have developed a comprehensive set of outreach activities. They focus on: expanding model outreach practices, such as “mini-semesters” over winter break and training past participants to serve as WDTS program “ambassadors” on social media and at in-person events at their home institutions; engaging faculty and administrators from community colleges as champions for WDTS programs by connecting them with world-class expertise, unique lab capabilities and facilities; promoting best practices for mentoring; and raising awareness of DOE, SC, and WDTS opportunities to broad audiences.

Workforce Development for Teachers and Scientists

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 ongoing research 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 technician or researcher 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.

The VFP goal was to increase the competitiveness of faculty members at U.S. institutions of higher education impacting many undergraduate students, including all HBCUs, to expand the reach of 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 convergence topics of interest to multiple SC research programs. U.S. graduate students pursuing Ph.D. degrees in physics, chemistry, materials sciences, non-medical biology, mathematics, computer or computational sciences, or specific areas of environmental sciences 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.

Recognizing the impact of STEM talent pool on a highly skilled future DOE workforce, WDTS works with DOE national laboratories to develop innovative pathway programs for students and educators with hands-on science experience and exposure to scientific and technical careers at DOE national laboratories. WDTS Pathway Summer Schools (PSSs) engage early and establish continuous connection through multiple touch points with high school students, recent high school graduates, and lower-division undergraduate students for better STEM learning and entries to STEM careers later. WDTS Pathway Summer Institutes connects STEM educators from middle or high schools and community colleges to DOE national laboratories with authentic research and professional development opportunities. Through the STEM educators, the program reaches many students to enhance STEM learning and encourage careers in science discovery and innovation to support DOE mission.

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 National Science Foundation, National Aeronautics and Space Administration, the Library of Congress, the Department of Defense, the U.S. Geological Survey, and the Department of Homeland Security. The Fellows provide educational expertise, years of teaching experience, and personal insights to these offices to advance Federal science, mathematics, and technology 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 34-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.

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 accessibility to applicants, advance program oversight and assessment by WDTS program staff, and allow more efficient management and execution of programs by DOE laboratory staff.

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 annually solicits proposals from DOE host laboratories and facilities to develop and execute outreach activities aimed at recruiting more applicants for

WDTS laboratory-based programs, and to encourage WDTS program participants to pursue careers supporting the SC and DOE mission, including staffing needs at DOE national laboratories. 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.

Workforce Development for Teachers and Scientists

Activities and Explanation of Changes

(dollars in thousands)

FY 2025 Enacted	FY 2026 Request	Explanation of Changes FY 2026 Request vs FY 2025 Enacted	
Workforce Development for Teachers and Scientists	\$31,000	\$25,000	-\$6,000
Activities at the DOE Laboratories	\$24,400	\$19,200	-\$5,200
Science Undergraduate Laboratory Internship (SULI)	\$15,300	\$10,200	-\$5,100
Funding for SULI supports approximately 1008 students.	The Request for SULI will support approximately 672 students.	The funding will support 336 fewer students.	
Community College Internship Program (CCI)	\$2,000	\$2,000	\$ —
Funding for CCI supports approximately 174 students.	The Request for CCI will support approximately 174 students.	No change in funding.	
Visiting Faculty Program (VFP)	\$2,100	\$2,000	-\$100
Funding for VFP supports approximately 66 faculty and 32 students.	The Request for the VFP will support approximately 63 faculty and 30 students.	The funding will support 3 fewer faculty members and 2 fewer students.	
Office of Science Graduate Student Research (SCGSR) Program	\$5,000	\$5,000	\$ —
Funding for SCGSR supports approximately 168 graduate students.	The Request for the SCGSR program will support approximately 145 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.	No change in funding.	

(dollars in thousands)

FY 2025 Enacted	FY 2026 Request	Explanation of Changes FY 2026 Request vs FY 2025 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® \$3,100	\$3,100	\$ —
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.	No change in funding.
Technology Development and On-Line Application \$700	\$500	-\$200
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 reduced funding level will limit the new feature development for the online system.
Evaluation \$300	\$300	\$ —
Funding supports a comprehensive evaluation portfolio with short- and longer-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.

(dollars in thousands)

FY 2025 Enacted	FY 2026 Request	Explanation of Changes FY 2026 Request vs FY 2025 Enacted
Outreach \$1,300	\$800	-\$500
Funding supports outreach activity proposal solicitations from DOE host labs and facilities WDTS will maintain support of recruitment of STEM students to DOE research and development workforce mission-relevant fields of study, and particularly to fields related to SC research programs. Support will continue for the LEDP program.	The Request will support outreach activity proposal solicitations from DOE host labs and facilities. WDTS will maintain support of recruitment of STEM students to DOE research and development workforce mission-relevant fields of study, aligned with DOE and SC priorities. Support will continue for the LEDP program.	The reduced funding level will support fewer proposals.