

## Program Direction

### Overview

The Office of Science (SC) Program Direction (PD) budget supports a highly skilled federal workforce to develop and oversee SC investments in basic research, and construction and operation of scientific user facilities, which are critical to the American scientific enterprise. SC research and facility investments transform our understanding of nature and advance the energy, economic, and national security of the United States. In addition, SC accelerates discovery and innovation by providing broad public access to all DOE research and development findings.

SC requires sophisticated and experienced scientific and technical program and project managers, as well as experts in acquisition, finance, legal, construction management, and environmental, safety, and health oversight. The SC basic research portfolio includes extramural grants and contracts supporting nearly 28,000 researchers located at over 300 institutions and the 17 DOE national laboratories, spanning all 50 states and the District of Columbia. The portfolio of 28 scientific user facilities serves over 36,000 users per year. SC also oversees ten of DOE's 17 national laboratories.

### Headquarters

The SC Headquarters (HQ) includes the eight SC research program offices (Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, Isotope R&D and Production, and Accelerator R&D and Production), Workforce Development for Teachers and Scientists, Project Assessment, and SBIR/STTR Programs Offices, as well as several resource management functions, and HQ-based field management functions.

The SC HQ federal staff:

- Conduct scientific program and research infrastructure planning, execution, and management across SC, in part by extensive engagement with the scientific community to identify research opportunities and develop priorities.
- Establish and maintain competitive research portfolios, which include high-risk, high-reward research, to achieve mission goals and objectives.
- Conduct rigorous external peer review of research proposals and ongoing programs. Each year, SC manages over 5,000 ongoing laboratory, university, non-profit, and private industry research awards and conducts over 31,000 peer reviews of new and renewal proposals.
- Provide safety, security, and infrastructure oversight and management of all SC user facilities and other current research investments.
- Provide oversight and management of all line item construction projects and other capital asset projects.
- Provide oversight and management of the maintenance and operational integrity of the ten SC-stewarded national laboratories.
- Provide policy, strategy, and resource management in the areas of laboratory oversight, information technology, grants and contracts, budget, and human capital.

### Consolidated Service Center

The Consolidated Service Center (CSC) provides business management to support SC's federal responsibilities. These functions include legal and technical support; financial management; grant and contract processing; safety, security, and health management; intellectual property and patent management; environmental compliance; facility infrastructure operations and maintenance; and information systems development and support. As part of this, the CSC:

- Monitors the multi-appropriation, multi-program funding allocations for all ten SC national laboratories through administration of laboratory Management and Operating (M&O) contracts and is responsible for over 3,000 financial assistance awards (grants and cooperative agreements) per year to university, non-profit, and small business-based researchers.
- Provides support to SC and other DOE programs for solicitations and funding opportunity announcements, as well as the negotiation, award, administration, and closeout of contracts and financial assistance awards using certified contracting officers and professional acquisition staff.

### Site Offices

SC site offices provide contract management and critical support for the scientific mission execution at the ten SC national laboratories. This includes day to-day business management; approvals to operate hazardous facilities; safety and security oversight; leases; property transfers; sub-contracts; and activity approvals required by laws, regulations, and DOE policy. As part of this, the site offices:

- Maintain a comprehensive contract management program to ensure contractual mechanisms are managed effectively and consistently with guidelines and regulations.
- Evaluate laboratory activities including nuclear, radiological, and other complex hazards.
- Provide federal project directors to oversee construction projects and other major capital asset projects.

### Office of Scientific and Technical Information

Office of Scientific and Technical Information (OSTI) fulfills the Department's responsibilities for providing public access to the unclassified results of its research investments and limited access to classified research results. DOE researchers produce over 50,000 research publications, datasets, software, and patents annually. OSTI's physical and electronic collections exceed one million research outputs from the 1940s to the present, providing access to the results of DOE's research investments. OSTI implements DOE's public access mandates, including the government-wide requirement that peer-reviewed publications resulting from federal funding is made available to the public within 12 months of publication in a journal.

### **Highlights of the FY 2022 Request**

The FY 2022 Request is \$202.0 million and will support a total level of approximately 810 FTEs. SC will utilize available human capital workforce reshaping tools to manage federal staff in a manner consistent with its long-term workforce restructuring plan as part of the DOE Agency Reform Plan<sup>a</sup>. SC will continue to review, analyze, and prioritize mission requirements and identify those organizations and functions aligning with Administration and Department program objectives and SC strategic goals while maximizing efficiency through functional consolidation.

The FY 2022 Request supports:

- Three-hundred and nine (309) SC HQ federal staff, spread among the eight research program offices, Workforce Development for Teachers and Scientists, Project Assessment, and SBIR/STTR Programs Offices, as well as several resource management functions, and HQ-based field management functions.
- Two (2) FTEs to support the Office of the Under Secretary for Science and Energy.
- Twenty-five (25) FTEs in the Office of the Chief Human Capital Officer operating the Shared Service Center (SSC) and supporting HR Advisory Offices.
- Thirty-seven (37) FTEs in the DOE Office of the Chief Council. This activity is realigned from Field Offices to Headquarters.
- Two (2) FTEs supporting the President's Council of Advisors on Science and Technology (PCAST).<sup>b</sup>
- Three-hundred and ninety-three (393) Consolidated Service Center (CSC) and site office federal staff.
- Forty-two (42) OSTI federal staff to manage SC's public access program.

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<sup>a</sup> OMB Memo M-17-22

<sup>b</sup> PCAST is required by Executive Order 13539, as amended by Executive Order 13596.

**Program Direction  
Funding**

(dollars in thousands)

	<b>FY 2020 Enacted</b>	<b>FY 2021 Enacted</b>	<b>FY 2022 Request</b>	<b>FY 2022 Request vs FY 2021 Enacted</b>
<b>Program Direction</b>				
Salaries and Benefits	135,611	142,245	146,387	+4,142
Travel	4,300	1,500	4,600	+3,100
Support Services	24,626	27,341	28,876	+1,535
Other Related Expenses	13,188	12,687	13,812	+1,125
Working Capital Fund	8,575	8,227	8,325	+98
<b>Total, Program Direction</b>	<b>186,300</b>	<b>192,000</b>	<b>202,000</b>	<b>+10,000</b>
Federal FTE	785	778	810	+32

**Program Direction**

**Activities and Explanation of Changes**

(dollars in thousands)

FY 2021 Enacted	FY 2022 Request	Explanation of Changes FY 2022 Request vs FY 2021 Enacted
<b>Program Direction</b>	<b>\$192,000</b>	<b>\$202,000</b>
		<b>+\$10,000</b>
Salaries and Benefits	\$142,245	\$146,387
		+\$4,142
Funding supports 778 FTEs to perform scientific oversight, program and project management, essential operations support associated with science program portfolio management, and support for the Office of the Chief Human Capital Officer operating the SSC and supporting HR Advisory Offices.	The Request will support 810 FTEs to perform scientific oversight, program and project management, essential operations support associated with science program portfolio management, and support for the Office of the Chief Human Capital Officer operating the SSC and supporting HR Advisory Offices.	The increase will support a 2.7% pay raise and the projected salary and benefit requirements for the requested FTE levels.
Funding supports costs associated with Federal employee benefits, including health insurance costs and retirement allocations in FERS.	The Request will support costs associated with Federal employee benefits, including health insurance costs and retirement allocations in FERS.	
Travel	\$1,500	\$4,600
		+\$3,100
Funding supports facility visits where the use of electronic telecommunications is not practical for mandated on-site inspections and facility operations reviews. Ensuring scientific management, compliance, safety oversight, and external review of research funding across all SC programs requires staff to travel, since SC senior program managers are not co-located with grantees or at national laboratories.	The Request will support facility visits where the use of electronic telecommunications is not practical for mandated on-site inspections and facility operations reviews. Increase travel is expected as people return to work in office and travel is safe again. Ensuring scientific management, compliance, safety oversight, and external review of research funding across all SC programs requires staff to travel, since SC senior program managers are not co-located with grantees or at national laboratories.	The increase will support the projected travel requirements for FY 2022. Ongoing analysis of travel may determine the shift of funding for improved communications.

(dollars in thousands)

FY 2021 Enacted	FY 2022 Request	Explanation of Changes FY 2022 Request vs FY 2021 Enacted	
<p>Funding also supports travel for the SC Federal Advisory Committees, which will include over 170 representatives from universities, national laboratories, and industry, representing a diverse balance of disciplines, professional experience, and geography. Each of the six advisory committees provides valuable, independent advice to the Department regarding the complex scientific and technical issues that arise in the planning, management, and implementation of SC programs.</p> <p>Funding supports the PCAST advisory committee travel.</p>	<p>The Request will also support travel for the SC Federal Advisory Committees, which will include over 170 representatives from universities, national laboratories, and industry, representing a diverse balance of disciplines, professional experience, and geography. Each of the six advisory committees provides valuable, independent advice to the Department regarding the complex scientific and technical issues that arise in the planning, management, and implementation of SC programs.</p> <p>The Request will continue to support the PCAST advisory committee travel.</p>		
<p>Support Services</p>	<p>\$27,341</p>	<p>\$28,876</p>	<p>+ \$1,535</p>
<p>Funding supports select administrative and professional services including: support for the Small Business Innovation Research/Small Business Technology Transfer program; grants and contract processing and close-out activities; accessibility to DOE's corporate multi-billion dollar R&amp;D program through information systems managed and administered by OSTI; travel processing; correspondence control; select reports or analyses directed toward improving the effectiveness, efficiency, and economy of services and processes; and safeguards and security oversight functions.</p> <p>Funding supports essential information technology infrastructure; necessary upgrades to SC's financial management system; ongoing operations and maintenance of IT systems; and safety management support.</p>	<p>The Request will support select administrative and professional services including: support for the Small Business Innovation Research/Small Business Technology Transfer program; grants and contract processing and close-out activities; accessibility to DOE's corporate multi-billion dollar R&amp;D program through information systems managed and administered by OSTI; travel processing; correspondence control; select reports or analyses directed toward improving the effectiveness, efficiency, and economy of services and processes; and safeguards and security oversight functions.</p> <p>The Request will support essential information technology infrastructure; necessary upgrades to SC's financial management system; ongoing operations and maintenance of IT systems; and safety management support.</p>	<p>The increase will support the projected support service contract requirements for FY 2022.</p>	

(dollars in thousands)

<b>FY 2021 Enacted</b>	<b>FY 2022 Request</b>	<b>Explanation of Changes FY 2022 Request vs FY 2021 Enacted</b>
Funding supports federal staff training and education to maintain appropriate certification and update skills.	The Request will fund federal staff training and education to maintain appropriate certification and update skills.	
<b>Other Related Expenses</b>		
\$12,687		
Funding supports fixed requirements associated with rent, utilities, and telecommunications; building and grounds maintenance; computer/video maintenance and support; IT equipment leases, purchases, and maintenance; and site-wide health care units. It also includes miscellaneous purchases for supplies, materials, and subscriptions.	The Request will support fixed requirements associated with rent, utilities, and telecommunications; building and grounds maintenance; computer/video maintenance and support; IT equipment leases, purchases, and maintenance; and site-wide health care units. It will also include miscellaneous purchases for supplies, materials, and subscriptions.	The increase will support the projected fixed requirements for FY 2022.
<b>Working Capital Fund</b>		
\$8,227		
Funding supports the SC contribution to the WCF for business lines: building occupancy, supplies, printing and graphics, health services, corporate training services, and corporate business systems. SC research programs also contribute to WCF.	The Request will support the SC contribution to the WCF for business lines: building occupancy, supplies, printing and graphics, health services, corporate training services, and corporate business systems. SC research programs also contribute to WCF.	The increase will support the projected WCF charges.

**Program Direction  
Funding**

(dollars in thousands)

	<b>FY 2020 Enacted</b>	<b>FY 2021 Enacted</b>	<b>FY 2022 Request</b>	<b>FY 2022 Request vs FY 2021 Enacted</b>
<b>Program Direction</b>				
HQ Salaries and Benefits	63,672	70,993	74,268	+3,275
HQ Travel	2,432	1,068	2,965	+1,897
HQ Support Services	17,884	20,529	22,068	+1,539
HQ Other Related Expenses	5,339	5,015	6,137	+1,122
HQ Working Capital Fund	8,575	8,227	8,325	+98
<b>Total, Headquarters</b>	<b>97,902</b>	<b>105,832</b>	<b>113,763</b>	<b>+7,931</b>
Field Offices Salaries and Benefits	65,723	64,611	65,525	+914
Field Offices Travel	1,795	417	1,535	+1,118
Field Offices Support Services	4,661	4,037	3,950	-87
Field Offices Other Related Expenses	6,822	6,626	6,608	-18
<b>Total, Field Offices</b>	<b>79,001</b>	<b>75,691</b>	<b>77,618</b>	<b>+1,927</b>
OSTI Salaries and Benefits	6,216	6,641	6,594	-47
OSTI Travel	73	15	100	+85
OSTI Support Services	2,081	2,775	2,858	+83
OSTI Other Related Expenses	1,027	1,046	1,067	+21
<b>Total, Office of Scientific and Technical Information</b>	<b>9,397</b>	<b>10,477</b>	<b>10,619</b>	<b>+142</b>
<b>Total, Program Direction</b>	<b>186,300</b>	<b>192,000</b>	<b>202,000</b>	<b>+10,000</b>
<b>Program Direction Summary</b>				
Salaries and Benefits	135,611	142,245	146,387	+4,142
Travel	4,300	1,500	4,600	+3,100
Support Services	24,626	27,341	28,876	+1,535
Other Related Expenses	13,188	12,687	13,812	+1,125
Working Capital Fund	8,575	8,227	8,325	+98
<b>Total, Program Direction</b>	<b>186,300</b>	<b>192,000</b>	<b>202,000</b>	<b>+10,000</b>
Federal FTE	785	778	810	+32

**Program Direction  
Funding Detail**

(dollars in thousands)

	<b>FY 2020 Enacted</b>	<b>FY 2021 Enacted</b>	<b>FY 2022 Request</b>	<b>FY 2022 Request vs FY 2021 Enacted</b>
<b>Technical Support</b>				
System review and reliability analyses	2,051	1,373	1,414	+41
<b>Management Support</b>				
Automated data processing	10,500	10,850	11,414	+564
Training and education	954	577	737	+160
Reports and analyses, management, and general administrative services	11,121	14,541	15,311	+770
<b>Total, Management Support</b>	<b>22,575</b>	<b>25,968</b>	<b>27,462</b>	<b>+1,494</b>
<b>Total, Support Services</b>	<b>24,626</b>	<b>27,341</b>	<b>28,876</b>	<b>+1,535</b>
<b>Other Related Expenses</b>				
Rent to GSA	637	775	850	+75
Rent to others	1,412	2,162	2,234	+72
Communications, utilities, and miscellaneous	3,234	2,622	3,598	+976
Other services	1,978	551	855	+304
Operation and maintenance of equipment	—	—	—	—
Operation and maintenance of facilities	1,515	1,340	1,391	+51
Supplies and materials	426	491	583	+92
Equipment	3,986	4,746	4,301	-445
<b>Total, Other Related Expenses</b>	<b>13,188</b>	<b>12,687</b>	<b>13,812</b>	<b>+1,125</b>
<b>Working Capital Fund</b>	<b>8,575</b>	<b>8,227</b>	<b>8,325</b>	<b>+98</b>

**Program Direction  
Funding Summary**

(dollars in thousands)

	<b>FY 2020 Enacted</b>	<b>FY 2021 Enacted</b>	<b>FY 2022 Request</b>	<b>FY 2022 Request vs FY 2021 Enacted</b>
Other	186,300	192,000	202,000	+10,000
<b>Total, Program Direction</b>	<b>186,300</b>	<b>192,000</b>	<b>202,000</b>	<b>+10,000</b>

## Public Access<sup>a</sup>

The Department of Energy fulfills Legislative and Executive requirements to provide increased public access to scholarly publications and digital data resulting from DOE research funding. DOE's enabling authorization and subsequent legislation require DOE to provide publicly available collections of unclassified R&D results through the Office of Scientific and Technical Information (OSTI). The DOE Public Access Plan, required by a 2013 OSTP policy memorandum, added peer-reviewed, final accepted manuscripts to the types of unclassified scientific and technical information already made publicly accessible as required by longstanding statutes. For digital data resulting from sponsored research (as defined by OMB Circular A-110), the Plan requires the submission of data management plans with funding proposals to DOE and provides guidelines for preserving and ensuring access to digital research data as appropriate.

Implementation of the Plan has been carried out through DOE internal agency policy directive, with requirements specified in national labs' management & operating contracts and annual performance plans, and in the terms and conditions of DOE financial assistance awards (grants and cooperative agreements). Under the DOE policy, DOE-funded researchers are required to submit metadata and final accepted manuscripts to DOE or to their institutional repositories, and DOE makes these research papers freely accessible to the public within 12 months of publication through the portal DOE PAGES (Public Access Gateway for Energy and Science), developed and hosted by OSTI. Since implementation of the DOE policy, DOE is among the top agencies in implementing public access, with DOE PAGES providing free access to over 130,000 scholarly publications resulting from DOE research funding. More recently, the concept of "public access" has broadened to "open science," where DOE has taken a leadership role in the federal government in assigning persistent identifiers to related research objects, such as the datasets and software underlying findings described in publications. Persistent identifiers (PIDs) are an essential element in promoting research integrity, reproducibility, and discoverability, and DOE provides an "identifier service" to its national labs and, through interagency agreements, to several federal agencies.

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<sup>a</sup> Responds to the reporting requirement specified by the FY 2018 House Energy and Water Development Appropriations Committee Report 115-230 to provide an update on the DOE Public Access Plan; <https://www.energy.gov/downloads/doe-public-access-plan>; <https://www.osti.gov/public-access-policy>; <https://www.energy.gov/datamanagement/doe-policy-digital-research-data-management>.