



U.S. DEPARTMENT OF
ENERGY

Office of
Science

Advancing Diversity, Equity & Inclusion at DOE/SC National Labs and through DOE Office of Science Business Practices

Presentation to the Committee on Addressing the Underrepresentation of
Women of Color in Tech Regional Workshop

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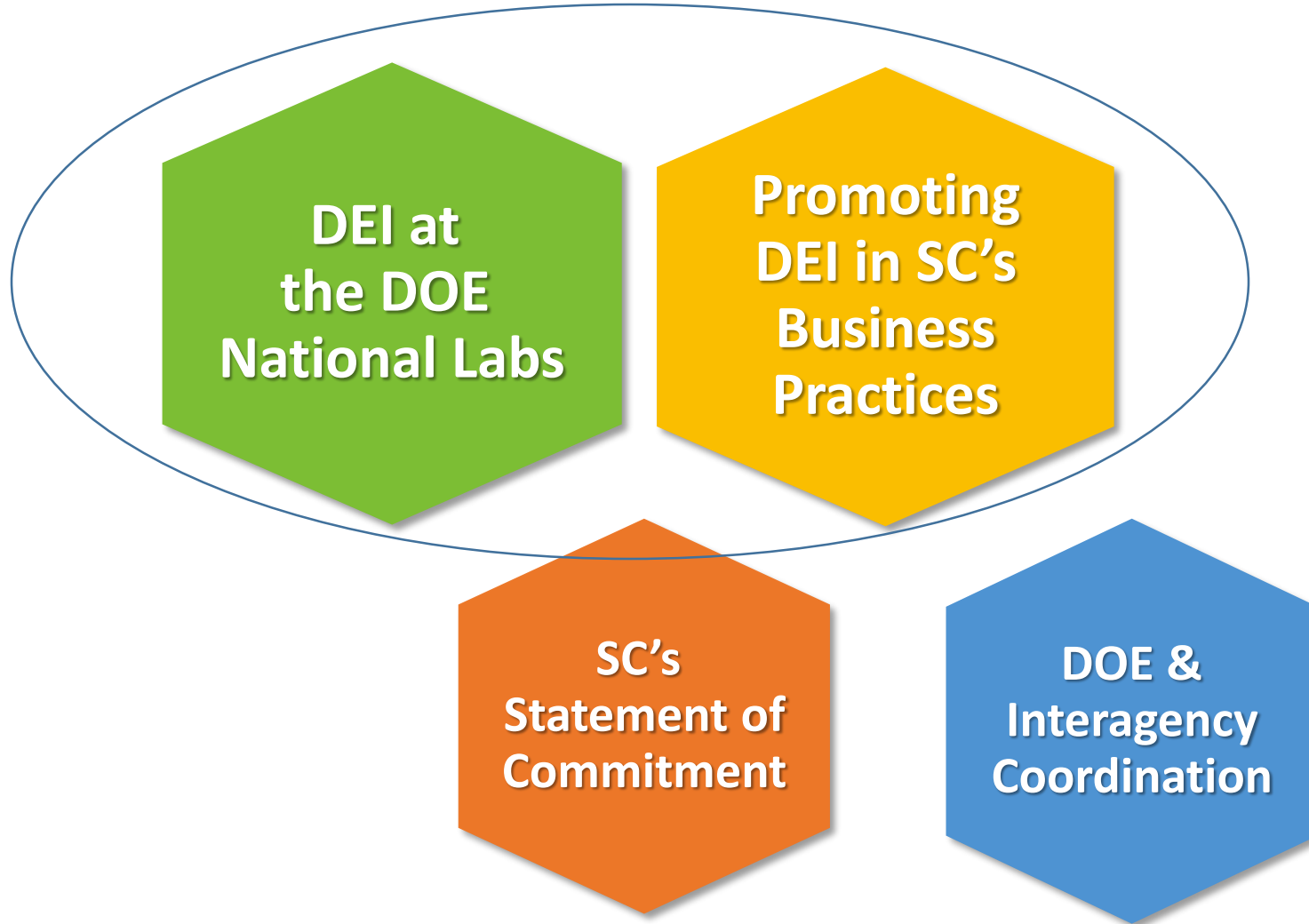
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SC Diversity, Equity & Inclusion Initiatives



DOE Office of Science (SC): By the Numbers



Shown is a portion of SLAC's two-mile-long linear accelerator (or linac), which provides the electron beam for the new Linac Coherent Light Source – the world's first hard x-ray, free-electron laser. For nearly 50 years, SLAC's linac had produced high-energy electrons for physics experiments. Now researchers use the very intense X-ray pulses (more than a billion times brighter than the most powerful existing sources) much like a high-speed camera to take stop-motion pictures of atoms and molecules in motion, examining fundamental processes on femtosecond timescales.

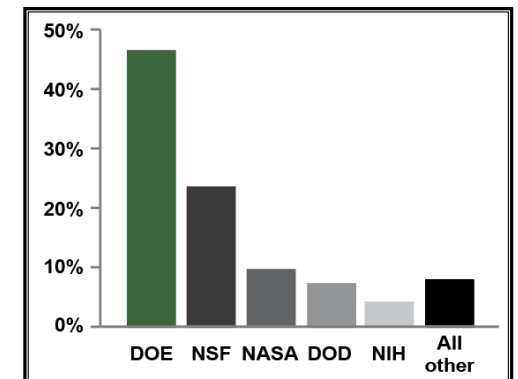
SC delivers scientific discoveries and tools to transform our understanding of nature and advance the energy, economic, and national security of the U.S.

Research

- Provides over 40% of the U.S. Federal support for basic research in the physical sciences; (**FY 2020 Enacted Budget: \$7.0 billion**)
- Supports over 25,000 Ph.D. scientists, graduate students, engineers, and support staff through competitive research awards at over 300 institutions and all 17 DOE national laboratories;
- Maintains U.S. and world leadership in high-performance computing and computational sciences;
- Continues to be the major U.S. supporter of physics, chemistry, materials sciences, and biology - for discovery and for energy sciences.

Scientific User Facilities

- SC maintains the world's largest collection of scientific user facilities (aka research infrastructure) operated by a single organization in the world, used by more than 35,000 researchers each year.

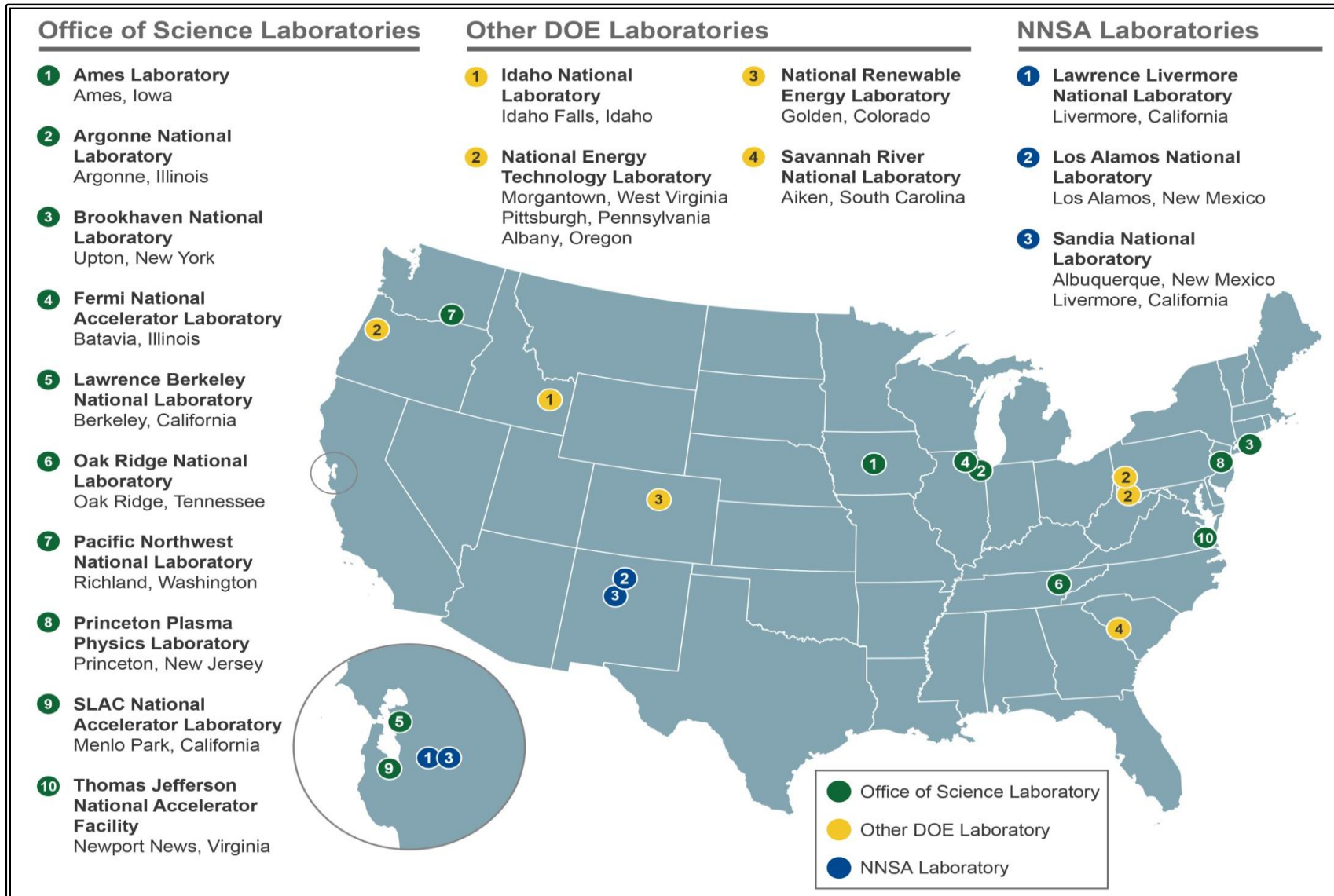


Support for basic research in the physical sciences by agency.
Source: NSF Science and Engineering Indicators

DOE National Laboratories

- SC stewards 10 of the 17 DOE National Laboratories

The Office of Science Manages 10 of the 17 DOE National Laboratories



- The DOE National Laboratories employ over 35,000 scientists, engineers, and technical staff. (Over 14,000 at the 10 SC Labs)
- The 16 of the 17 labs, including all 10 of the SC labs, are government-owned, contract operated under management & operating contracts (M&O).

Diversity, Equity & Inclusion at DOE National Labs

- In 2015, the DOE Office of Science began to take a closer look at the policies and requirements of its 10 DOE national laboratories for fostering diverse and inclusive research environments, as well as policies and procedures for prohibiting discrimination and harassment.
- The DOE laboratories are required under their Management & Operating (M&O) Contracts to have in place “innovative strategies for increasing opportunities to fully use the talents and capabilities of a diverse work force,” including promoting diversity through:
 - The contractor’s workforce
 - Educational outreach
 - Community involvement
 - Subcontracting and technology transfer
- The DOE labs must also meet the requirements set forth in civil rights laws regarding the prohibition of discrimination and harassment and preventing hostile work environments.
- **Up until that time, oversight of these requirements were largely managed by the SC federal site offices.**



A New SC Process for Review of SC Labs' DEI Efforts

- Since 2006, SC leadership has engaged its 10 DOE labs in annual laboratory planning (ALP) processes whereby SC's senior management reviewed the labs' Science & Technology strategic plans and provided detailed feedback to laboratory leadership. A recognized best practice in DOE.
- In 2016, borrowing a page from SC ALP playbook, SC established a process for an SC Headquarters-led annual evaluation of the laboratories' efforts in diversity, equity, and inclusion (DEI).
- In October 2016, the former SC Director issued a memo to the 10 SC laboratories describing:
 1. The steps SC would take to establish uniform guidance for SC laboratories to communicate their DEI strategies to SC, and how SC would review and provide feedback on their strategies, and
 2. A new requirement for the SC laboratories to publicly post their workforce demographic data on their public websites, and update the data annually. (Due by April 2017.)
- The National Laboratory Directors Council (NLDC) came up with a common set of job categories across the DOE lab complex that the labs would use to report demographic information in a consistent manner.



A New SC Process for Review of SC Labs' DEI Efforts

This new process started a shift in oversight from compliance to requiring actionable strategies.

- SC guidance to the 10 labs provided a common set of topics the labs should address in their DEI Strategies, including describing their assessment of the lab's DEI challenges, DEI goals, leadership and staff roles and responsibilities, planned actions, and measures of progress and accomplishments.
- The laboratories' plans include annual workforce demographics and new hires demographics data.
- SC HQ reviews of the labs' strategies – including Program Office leadership level review (Associate Directors), and provides detailed feedback to the contractor leadership through in-person meetings with SC senior management and detailed written feedback.
- After three years of this process, SC decided to commence an external peer review of experts to evaluate the laboratories' DEI efforts. This review occurred in November 2019 and SC is finalizing its official feedback to each of the 10 laboratories.
- The laboratories will be required to address the findings and recommendations from the peer review as part of their FY 2020 performance evaluation.



DOE National Labs Workforce Demographic Data (all 17)

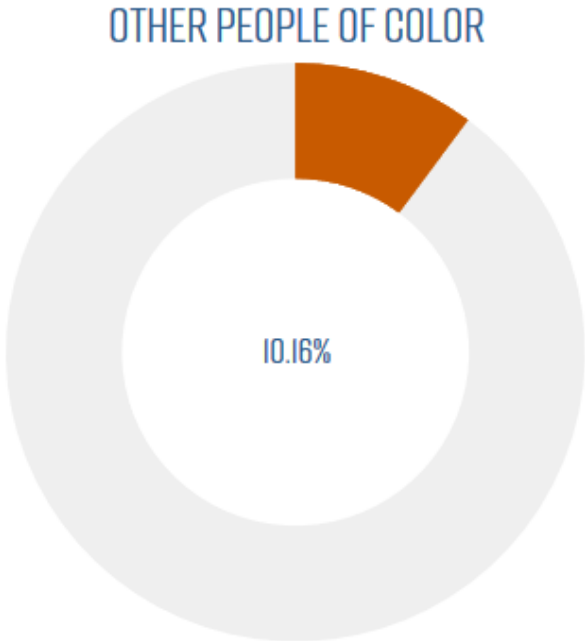
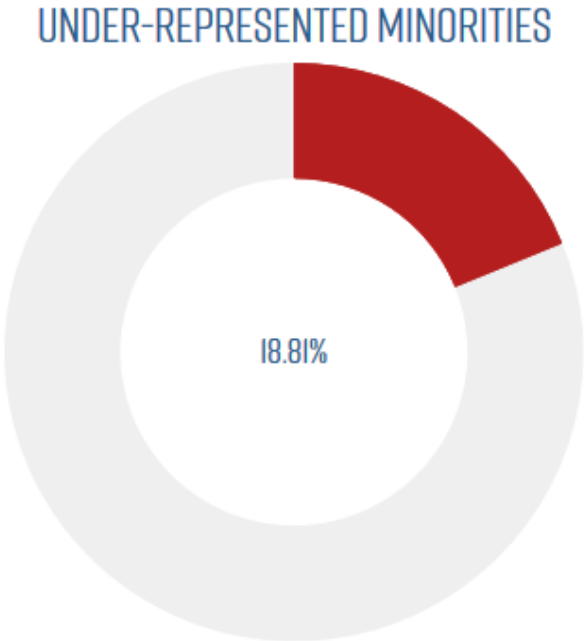
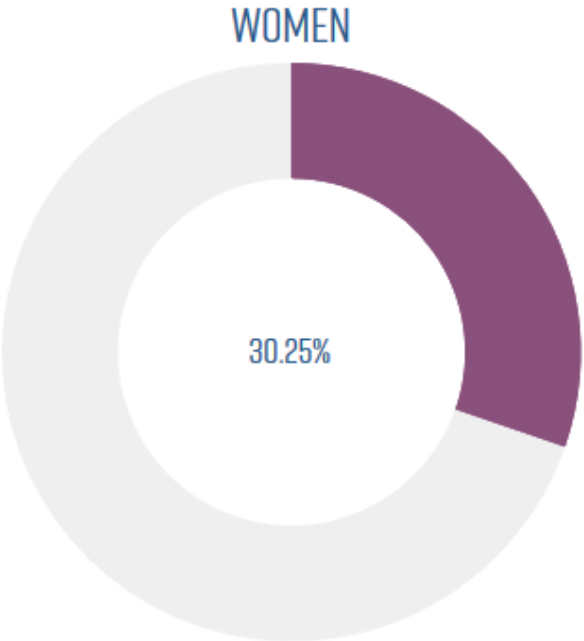
<https://nationalabs.org/staff/diversity/> (NLDC Website)

CHANGE DATA VIEW:



- ALL JOBS
- SENIOR LEADERSHIP
- RESEARCH/TECHNICAL MANAGEMENT
- OPERATIONS MANAGEMENT
- TECHNICAL RESEARCH STAFF
- OPERATIONS SUPPORT STAFF
- POST DOCTORAL
- GRADUATE STUDENT
- UNDERGRADUATE STUDENT

ALL JOBS



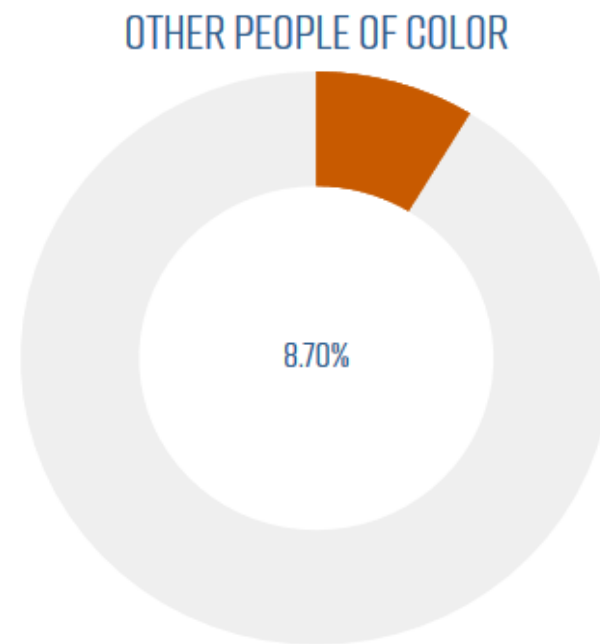
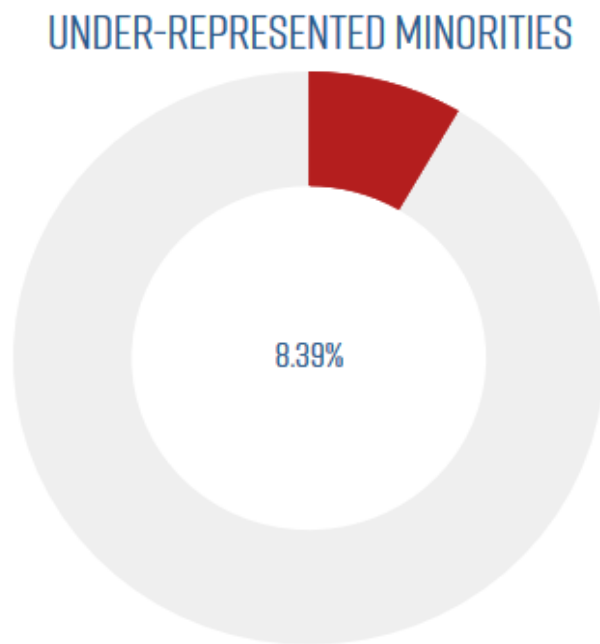
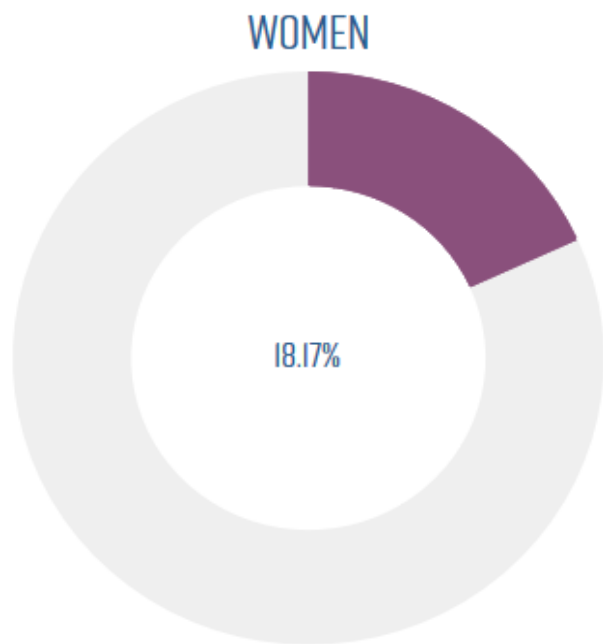
DOE Lab Demographics of Research/Technical Management Staff

CHANGE DATA VIEW:



- ALL JOBS
- SENIOR LEADERSHIP
- RESEARCH/TECHNICAL MANAGEMENT**
- OPERATIONS MANAGEMENT
- TECHNICAL RESEARCH STAFF
- OPERATIONS SUPPORT STAFF
- POST DOCTORAL
- GRADUATE STUDENT
- UNDERGRADUATE STUDENT

RESEARCH/TECHNICAL MANAGEMENT (FIRST-LINE AND MID-LEVEL)



DOE Lab Workforce Demographics All Job Categories

TYPES OF JOBS	TOTAL	WOMEN	%	URM	%	OPC	%
Senior Leadership (Director/President, Deputy Director/Vice President, Associate Lab Director)	265	66	24.91%	20	7.55%	9	3.40%
Research/Technical Management (first-line and mid-level) (Engineering Management, Research Management, Technical Management)	4,552	827	18.17%	382	8.39%	396	8.70%
Operations (or Research Support) Management (Business Management, Computer Systems, Communications, ESHQ, Facilities Ops, HR, Legal, Tech Transfer, Strategic Planning)	2,963	1,122	37.87%	497	16.77%	190	6.41%
Technical Research Staff (Non-management: Researchers, Scientists, or Engineers)	21,698	4,014	18.50%	2,218	10.22%	2,808	12.94%
Operations Support Staff (Non-management: support roles)	25,905	10,602	40.93%	7,426	28.67%	1,165	4.50%
Post Doctoral (Post-doc employees)	2,699	659	24.42%	233	8.63%	985	36.49%
Graduate Student (Funded by Lab)	2,541	746	29.36%	382	15.03%	532	20.94%
Undergraduate Student (Funded by Lab, do not include undergrad student funded by DOE directly (i.e. SULI))	3,113	1,244	39.96%	829	26.63%	392	12.59%
Totals	63,736	19,280	30.25%	11,987	18.81%	6,477	10.16%

Includes: Laboratory recruited roles (includes roles waived from posting), postdoc employees, and students funded by the lab (not DOE funded students)

Excludes: Unknown ethnicity and multi ethnicities

URM = Under Represented Minorities (e.g.: African American/Black, Hispanic/Latino, and American Indian/Alaskan Native)

OPC = Other People of Color (e.g.: Asian/Asian American and Pacific Islanders).

Includes data from all 17 national labs.

<https://nationallabs.org/staff/diversity/> (NLDC Website)

Emerging DEI Promising Practices at DOE Labs

A few examples in areas critical for diverse hiring and retention:

Leadership and accountability:

- Strong, demonstrated commitment by lab leadership to foster a culture at the lab that embraces diversity, equity, and inclusion, and the commitment is embraced at all levels of leadership and management at the laboratory.
- Laboratory DEI goals are incorporated into performance appraisals with clear standards for leadership and staff evaluation.

Recruiting and Hiring practices:

- Openly posting and competing all laboratory positions, including postdoc positions. Screening all job postings for gender biased language using reputable commercial software programs.
- Requiring diverse hiring panels.
- Management oversight and assessment of the diversity of candidate pools before commencing with interviews – and reopening announcement and recruiting if the candidate pools are not diverse.
- Leadership oversight of hiring recommendations.
- Requiring quality diversity and implicit bias awareness training of all hiring panel members and hiring managers. And retraining on a regular basis.



Emerging DEI Promising Practices at DOE Labs (cont'd)

Retention and Institutional Climate:

- Supporting Employee Resources Groups that are formally chartered and have Executive-level champions.
- Supporting family friendly policies and practices that address the diverse needs of individuals at all career stages.
- Providing support and mentorship during onboarding of new employees.
- Providing a range of professional development opportunities to support staff interests in continuing skills development and preparation for career advancement.
- Lab-wide professional climate surveys to assess the lab cultures and identify challenges that need attention, and the use of periodic pulse surveys to assess progress.



Where additional attention is needed...

- Disaggregating workforce demographic information to understand the detailed picture around recruitment, retention, and promotion. This is particularly important to assess efforts to attract, retain, and promote women of color in STEM fields at the laboratories.
- Rigorous practices for ensuring equitable decision making for professional and leadership development opportunities, leadership level assignments, and promotions.
- Greater attention to mentorship and sponsorship of women and underrepresented minorities in STEM at the laboratory at all career stages.
- Strategically using STEM training program participants (particularly graduate students and postdocs) as a direct pipeline to diverse laboratory hires.
- More effective use of partnerships with universities, including Minority Serving Institutions and networks (e.g. NSF INCLUDES Network – funded Alliances) to attract and recruit.
- Taking a more scientific approach to piloting and assessing new practices to see what is effective and what is not.
- Tracking the effectiveness of DEI efforts with meaningful metrics and measures of success.



Promoting DEI in SC's Business Practices – in Progress

- In 2018, the Office of Science initiated an internal review of its business practices to identify opportunities to better promote diversity, equity, and inclusion in our award making and awards management processes, and better communicate policies, practices, and procedures to our research community. SC established an internal D&I Working Group to carry out this review.

Charge:

- Assess what SC is currently doing to improve diversity, equity and inclusion.
- Identify opportunities for SC to demonstrate that diversity, equity, and inclusion are foundation to SC business practices:
 - Through its processes and procedures for research awards to universities and the DOE labs;
 - Through its processes and procedures for PI meetings, workshops, and advisory committees; and
 - Through better outreach and communications (internally and with the SC research communities).



Review of DEI in SC's Business Practices

I. Information Request on DEI in the 8 SC Program Office business practices, and analysis.

II. Deep Dive into SC's practices by topic area:

- Existing flexibilities within current financial assistances policies and regulations;
- Solicitation language, use of Letters of Intent and Pre-proposals;
- Peer Review Processes (Proposals: e.g. reviewer selection process, proposal review processes, associated programs manager and reviewer training, and resources/tools);
- Peer Review Processes (Performance reviews: S&T research reviews at DOE sites, and user facilities reviews);
- Workshops/Roundtables and Principal Investigator Meetings;
- FACAs and Subcommittees/COVs; and
- Notional implementation strategies.

Process for discussion of each topic area included:

- Systematic review of current SC policies and procedures; existing practices of some SC programs offices; analysis of outcomes from SC-sponsored equity workshops (2006-2009); COV recommendations (2012 to present); and known policies and practices of other Federal agencies and institutions.



SC D&I Working Group Discussion Outcomes/Next Steps

- Recommendations for the Office of Science were generated from all discussion topic areas.
- Recommendations include the development of associated resources and tools, and guidance and training.
- A large focus of the recommendations is on ensuring diversity, equity, and inclusion principles are integrated into all SC business practices; e.g. promoting diversity in reviewers, applicants, award selections; ensuring SC business processes such as technical and strategic planning workshops and Federal Advisory Committee activities are supporting diverse participation; and collecting and analyzing data to assess progress.
- Full report to be delivered to SC Senior Management within the next month.
- SC senior management will determine which recommendations to implement, with the goal of beginning a phased approach to implementation immediately.
- Communications to the SC community will be a part of the rollout of any new policies and procedures that SC implements.



Background



SC DEI Website: SC's Statement of Commitment

The DOE Office of Science (SC) is fully and unconditionally committed to fostering safe, diverse, equitable, and inclusive work, research, and funding environments that value mutual respect and personal integrity...

...SC's effective stewardship and promotion of diverse and inclusive workplaces that value and celebrate a diversity of people, ideas, cultures, and educational backgrounds is foundational to delivering on our mission. Harnessing a diverse range of views, expertise, and experiences drives scientific and technological innovation and enables the SC community to push the frontiers of scientific knowledge for the betterment of America's prosperity and security.

Discrimination and harassment undermine SC's ability to achieve its mission by reducing productivity, discouraging or inhibiting talent retention and career advancement, and weakening the integrity of the SC enterprise overall. SC does not tolerate discrimination or harassment of any kind, including sexual or non-sexual harassment, bullying, intimidation, violence, threats of violence, retaliation, or other disruptive behavior in the federal workplace, including DOE field site offices, or at national laboratories, scientific user facilities, academic institutions, other institutions receiving SC funding, or other locations where activities funded by SC are carried out...

...Beyond issues that may rise to the level of legal action, SC expects the scientific community, particularly those engaging in SC-sponsored activities, to always conduct themselves in a manner that is respectful, ethical, and professional. This renewed commitment is part of SC's continuing effort to identify opportunities to improve its policies, practices, and communications in furtherance of its core values and its mission.

For the full SC Statement: <https://science.osti.gov/sc-2/Research-and-Conduct-Policies/Diversity-Equity-and-Inclusion/SC-Statement-of-Commitment>

