

DOE SBIR/STTR Diversity



What	How	Who	Why
<p>SBIR Program Directive:</p> <p><i>Foster and Encourage Increased Participation in DOE SBIR/STTR by Women-owned, Socially and Economically Disadvantaged, and other UR Groups</i></p>	<p>Track Support Educate Innovate</p>	<p>Under-represented (UR) Innovators:</p> <ul style="list-style-type: none">• Women-owned small businesses• Socially and Economically Disadvantaged SBCs• Other UR groups <p>Additionally:</p> <ul style="list-style-type: none">• Those with a commitment to diversifying the U.S. STEM workforce	<p>SBIR Directive National Interest Improved Small Business Performance</p>



HOW

Track

Data collection and
metrics tracking
Pipeline estimates
Goal setting

Educate

Outreach webinars
Social media
Topic & FOA webinars

Support

Website
Application resources
Phase 0 Application
Assistance
Ask-Us webinars
Diversity supplement

Innovate

Inclusive topics
Diversity-promoting
PPFs
Foster inclusivity
Foster collisions

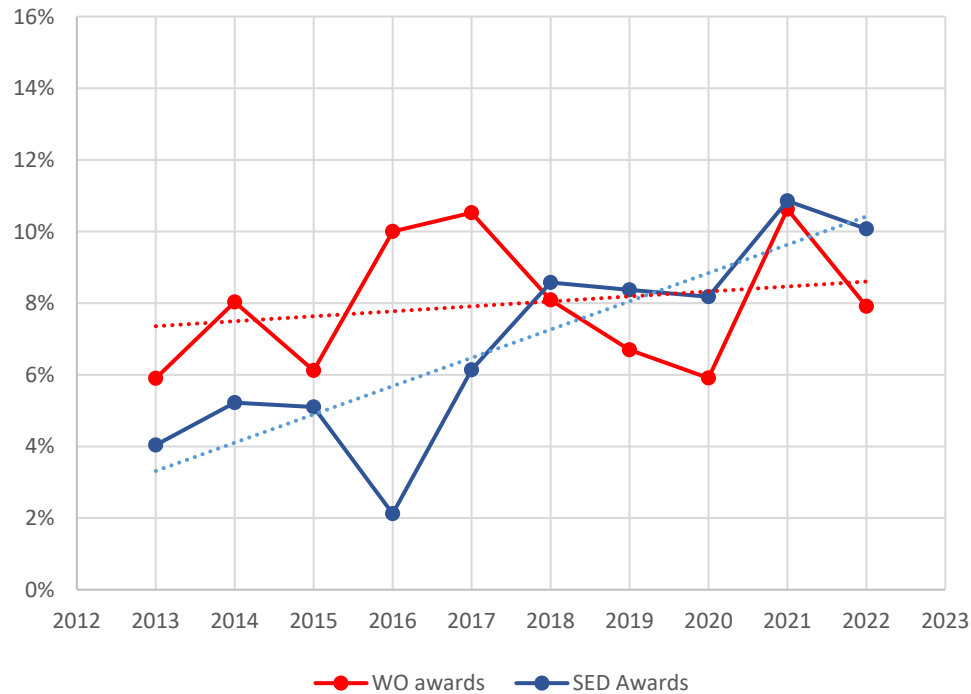


Data Collection and Metrics Tracking

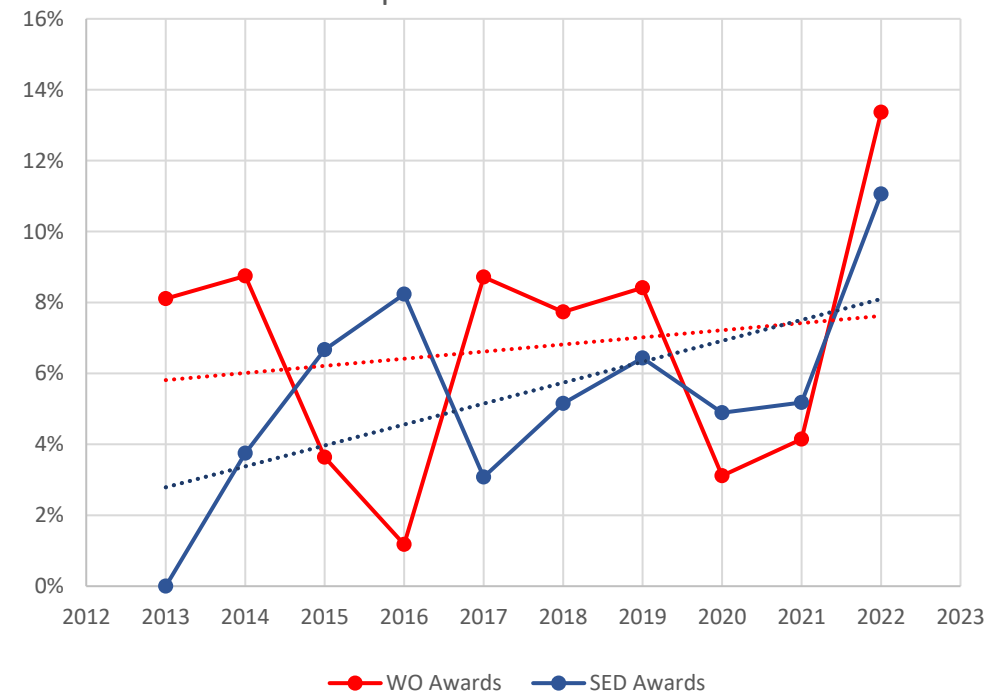
The information we collect regarding ownership and report to SBA are:

- Women-owned small businesses (WOSB)
- Socially and economically disadvantaged small businesses (SED-OSB)

Percent of Phase I Awards:
Under-represented Small Businesses



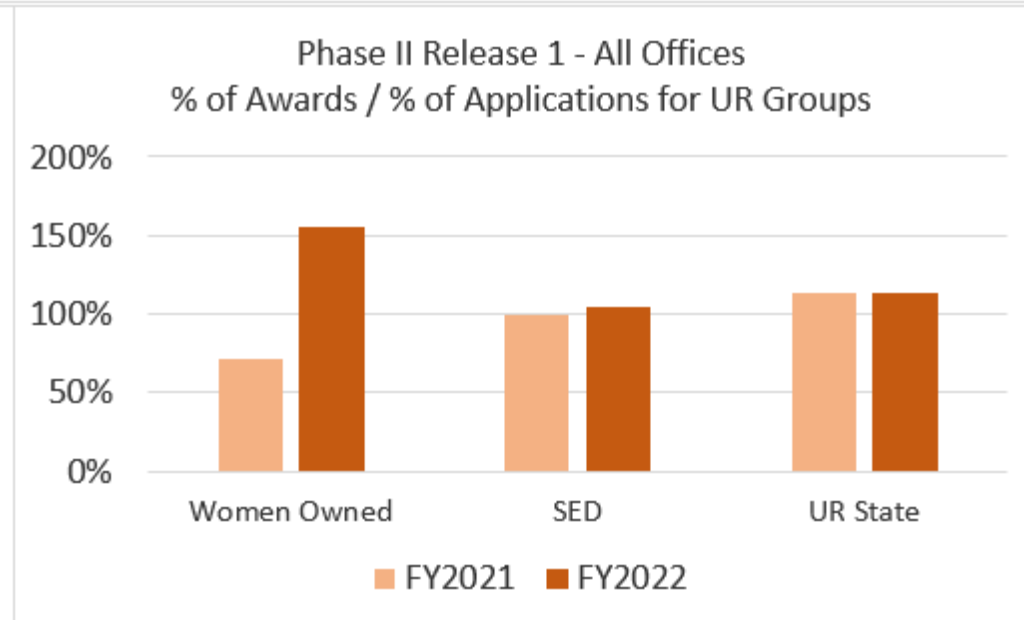
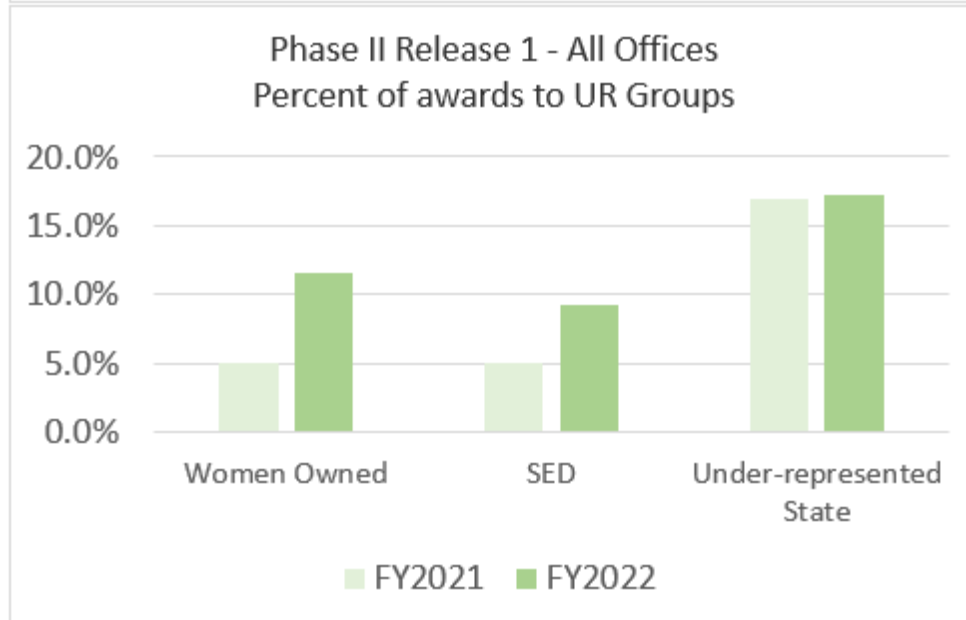
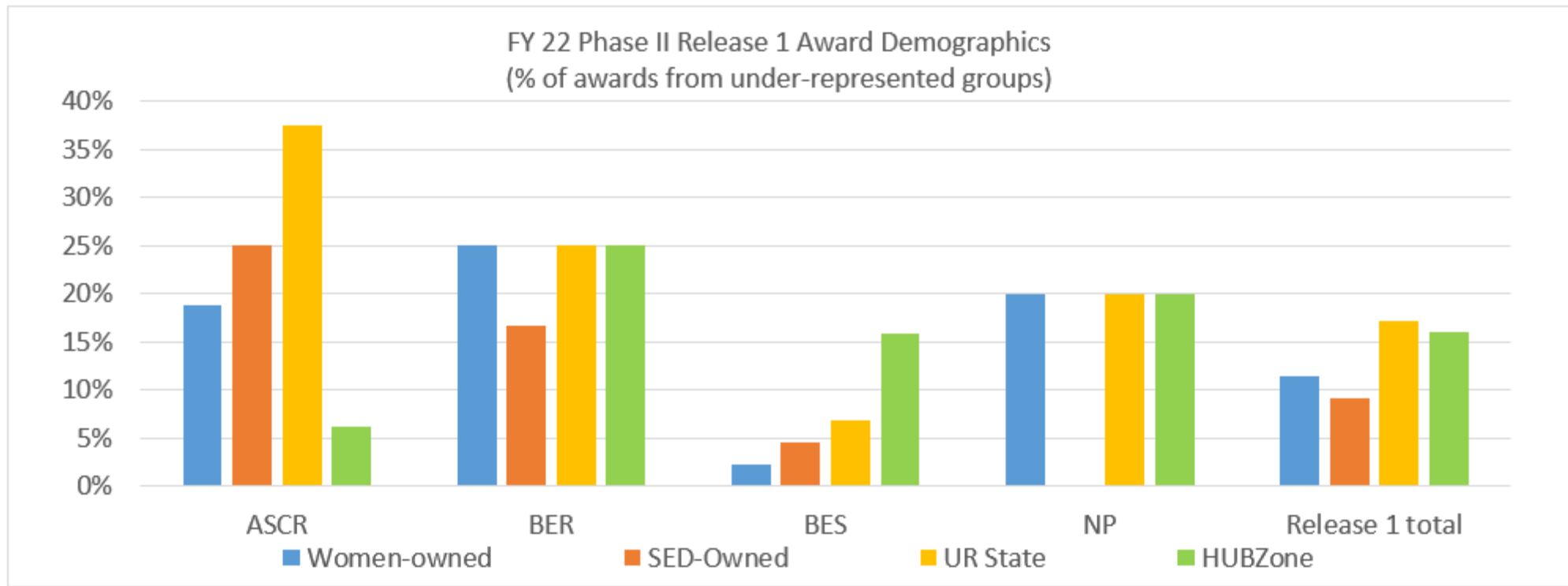
Percent of Phase II Awards:
Under-represented Small Businesses



Diversity FY 22 Phase II Release 1

Notes:

- FY 21 Phase I Release 1 had very good diversity numbers
- Diversity-promoting PPFs in FOA
- Excellent application performance



Pipeline Estimates



What is the potential pool of WOSBs that could be SBIR/STTR applicants?

Top Primary Industries for DOE SBIR/STTR Applicants with WOSB Participation (2013-2020)

Spot

All*	WOSB	2017 % Women- ownership by NAICS Code Per Census.gov	2012 % Women- ownership by NAICS Code per census.gov	%WOSB applicants with NAICS Code	
541715	541715	18.7%	17.6%	39.9%	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
541330	541330	11.6%	9.7%	6.8%	Engineering Services
541713	541713	22.0%	N/A	1.0%	Research and Development in Nanotechnology
334413	334413	9.7%	10.9%	1.2%	Semiconductor and Related Device Manufacturing
541690	541690	21.6%	20.5%	0.9%	Other Scientific and Technical Consulting Services

Total % for Top 5 (of weighted pool) = 49.8%
 Total % for 2012 Calc = 48.8%

Women ownership in top five NAICS industries for DOE SBIR STTR Applicants = 17.6% (weighted sum)



Pipeline Estimates

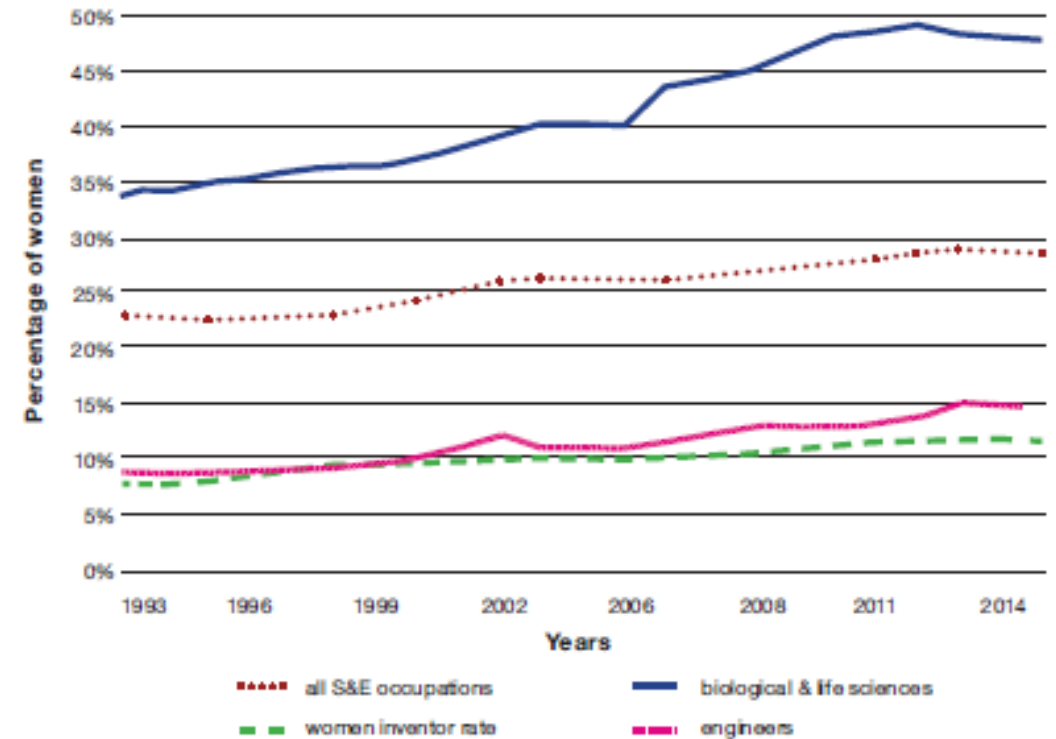


Ownership of businesses with paid employees in DOE SBIR/STTR industries

	WOSB	SED-OSB
Dawnbreaker (2011-2018) Awardees, using 2012 census data	15%	N/A
Dawnbreaker Approach using 2017 census data (2020) Applicants *	16.7%	14.9%
Weighted by applicant NAICS industry (2020) *	17.0%	18.4%
Share of Phase I applications (2019-2022)	10 – 12%	13 - 17%

Challenge:

R&D in biological & life science businesses were included in our analysis (NAICS 541715) and those industries have strong female participation, but DOE-mission focused topics are not-aligned with this area.



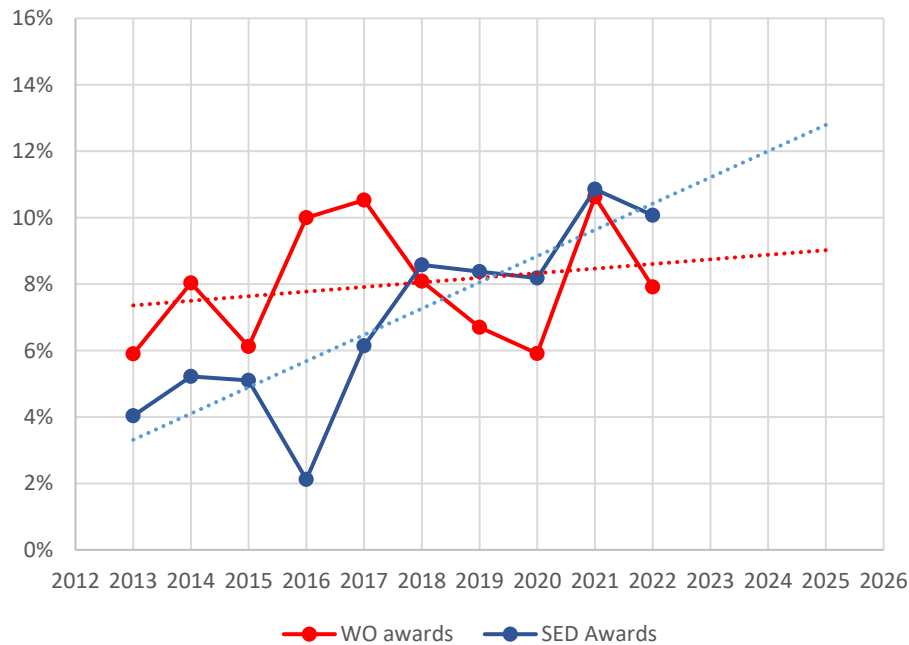
Source: USPTO Progress and Potential: A profile of women inventors on U.S. patents (2019)

Figure 2: Women inventor-patentees compared to women in science and engineering occupations



Goal Setting - Challenges

Percent of Phase I Awards:
Under-represented Small Businesses



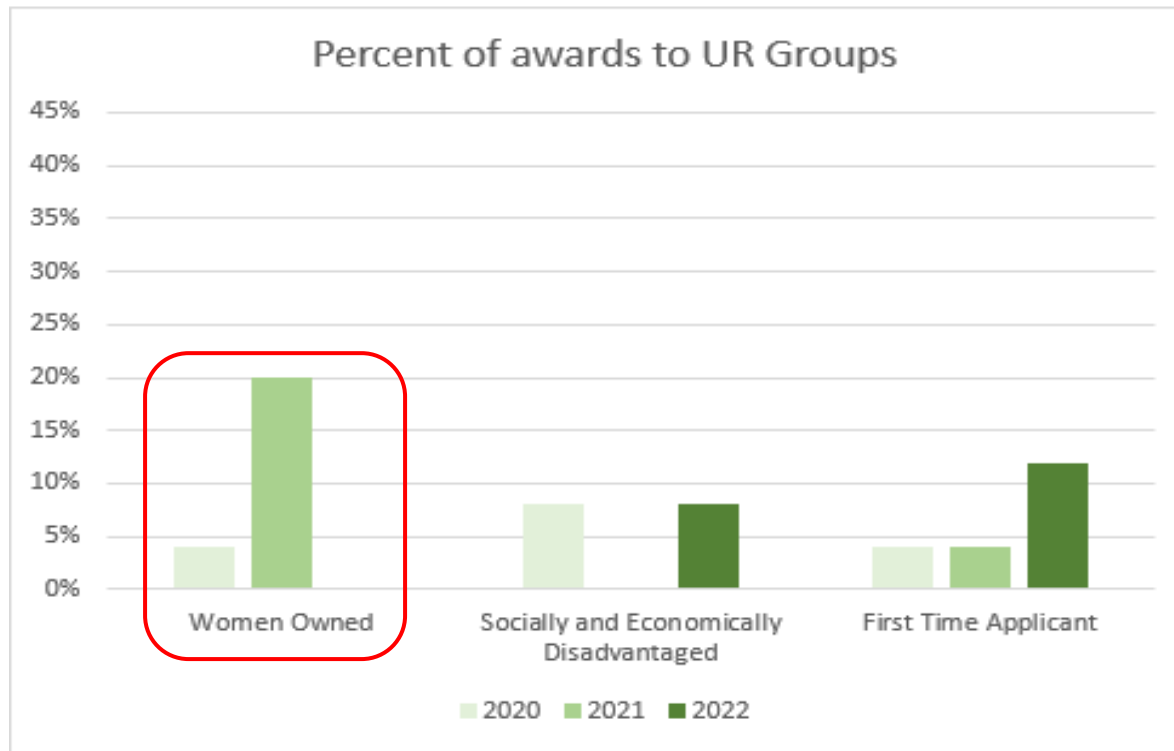
- Equity Action plan suggests the goal should be 15% by FY 2025
- Our analysis of industries which participate in the DOE SBIR/STTR program using 2017 census data predict that the women ownership rate for these industries is approximately 17%, and the SED ownership rate is approximately 18%.
- Under-represented ownership rates for small businesses participating in DOE SBIR are likely somewhat lower as the industry groups analyzed include businesses conducting R&D in the life sciences, which is not aligned with DOE SBIR topics.
- Comparison of these values with the figures below suggest that the Phase I participation rates in these groups should be higher in order to reflect the demographics of the industry. Phase II participation rates have a larger gap

DOE SBIR/STTR Historical Data



Challenge: Variability in applications from one funding opportunity to the next

Phase I Release 1 - NP



Outreach & Social Media

- We seek to elevate awareness of the DOE SBIR/STTR Programs in general and specifically have allocated additional resources to outreach to Under-represented (UR) groups:
 - Travel to meetings, e.g. Black Women Talk Tech and National Society of Black Engineers
 - Use of LinkedIn Sales Navigator and other Proprietary AI tools to identify potential UR entrepreneur applicants and grow outreach network
- Webinars:
 - 30 External Webinars/year
 - 2 Topics and 2 FOA Webinars



Support



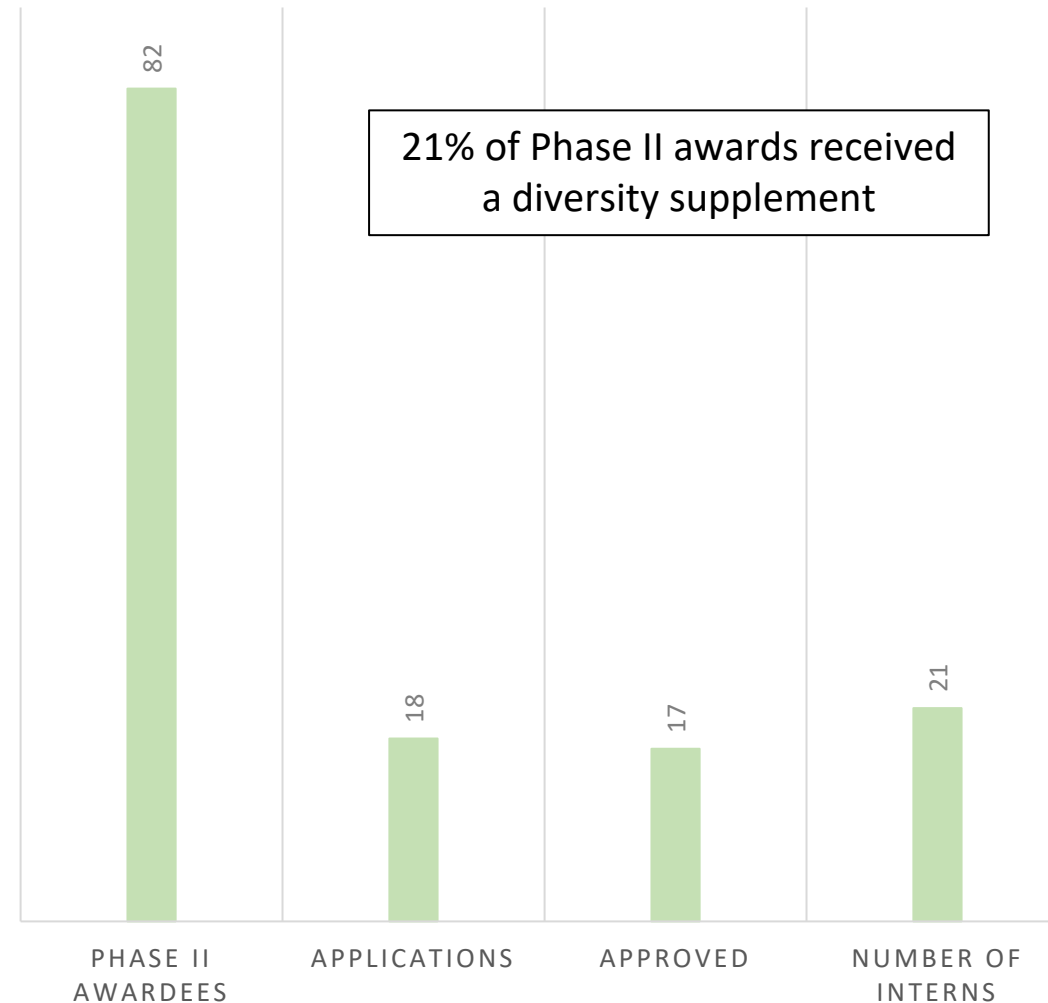
- Our Phase 0 application assistance program, which is open to all first-time applicants, is utilized by almost half of first-time applicants. The Phase 0 participant and application pool is significantly more diverse than the overall applicant pool.
- We have implemented Ask-Us Anything Q&A webinars in FY 2022
 - 7 per Phase I cycle
 - 4 per Phase II cycle
- New Phase I online application guide:
 - Improve the overall experience
 - Reduce confusion and common misconceptions
 - Perform automated population where possible, reducing the applicant workload
 - Reduce errors



Diversity Supplement

Our diversity supplement is designed to provide support for research and entrepreneurial experiences for candidates whose participation will diversify the SBIR/STTR program throughout the continuum from undergraduate to the graduate level..

- Up to \$20,000 in supplemental funding to support the recruited student for a 10-week summer internship during the second summer of the Phase II project period
- Inaugural cycle was FY 2021 Phase II Release 1 (interns participated this summer 2022)



FY 2022 Innovations

- Diversity Promoting Program Policy Factors
 - First instituted in FY 2022
 - Highest ranked applications may receive the following considerations in making selections:
 - Promoting the diversity of institutions receiving awards
 - Promoting institutions not previously funded by a DOE SBIR/STTR award
- Several Equity Topics were introduced recently in FY 2022 Phase I Release 2
 - Technology development that can help underserved and economically distressed communities
 - The awards made to these topics, albeit small in number, were diverse

	% of Awards to WOSB	% of Awards to SED-OSB
Overall Release 2 Equity Topics	16.0%	20.0%
Overall Release 2	8.4%	10.0%

← 2x overall award rate

- THANK YOU! eileen.chant@science.doe.gov