Committee on Equal Opportunities in Science and Engineering (CEOSE)
Meeting Minutes
June 26 - 17, 2022
National Science Foundation
Alexandria, VA 22314

MEETING PARTICIPANTS

CEOSE Members Present

Dr. Jose D. Fuentes, CEOSE Chair, Pennsylvania State University
Dr. Kaye Husbands-Fealing, CEOSE Vice-Chair, Georgia Institute of Technology
Dr. John M. Anderson, Howard University
Dr. Gilda Barabino, Olin College of Engineering
Dr. Suzanne, Barbour, University of North Carolina at Chapel Hill
Dr. Tabbetha Dobbins, Rowan University
Dr. Ryan Emanuel, North Carolina State University
Dr. Ann Gates, The University of Texas - El Paso
Dr. Sandra Graham, University of California-Los Angeles
Dr. Cynthia Lindquist, Cankdeska Cikana Community College
Dr. Gabriel Lopez, University of New Mexico
Dr. Daniela Marghitu, Auburn University
Dr. James R. Martin, University of Pittsburgh
Dr. Vernon Morris, Arizona State University
Dr. Timothy Pinkston, University of Southern California
Dr. Susan Renoe, University of Missouri-Columbia
Dr. Barbara Endemaño Walker, University of California-Santa Barbara
Dr. Nai-Chang Yeh, California Institute of Technology

CEOSE Members Absent

Dr. David R. Wilson, Morgan State University

CEOSE Designated Federal Officer – Executive Liaison

Dr. Alicia Knoedler, Office Head, OIA/OD/NSF

CEOSE Executive Secretary

Dr. Bernice Anderson, Senior Advisor, OIA/OD/NSF

CEOSE Scientific/Technical/Administrative Staff

Ms. Una Alford, Program Analyst, OIA/OD/NSF
Mr. Steven Buhneing, Communications Specialist, OIA/OD/NSF
Ms. Stephanie Hill, Program Analyst, OIA/OD/NSF

Committee on Equal Opportunities in Science and Engineering (CEOSE)
CEOSE Advisory Committee Virtual Meeting
National Science Foundation (NSF)
June 16 – 17, 2022

Meeting Minutes

Day 1

Welcome and Introductions/Meeting Overview – Dr. Jose D. Fuentes, CEOSE Chair

The CEOSE Chair opened the meeting, followed by self-introductions of the committee members. Dr. Fuentes reviewed the meeting agenda, highlighting the various presentations and discussion sessions and emphasizing the working sessions for the preparation of the next CEOSE biennial report to Congress.

NSF CEOSE Executive Liaison Report – Dr. Alicia Knoedler, OIA/Office Head

Dr. Knoedler provided the NSF broadening participation update. Areas covered included: NSF's hybrid work environment and return to site plans; the 29.3% increase for broadening participation in the FY 2023 Budget Request to Congress; the four goals of NSF's new strategic plan for FY 2022-2025, highlighting Goal 1: Empower STEM Talent to fully participate in science and engineering; the three winners of the Alan T. Waterman Award; the NSB engagement with NSF leadership on the development and launch of the new TIP Directorate and Regional Innovation Engines; and recent activities of the Office of Equity and Civil Rights (OECR), namely, a recruitment webinar on finding and hiring persons with disabilities and celebratory programs for Black History, Women's History, Asian American and Native Hawaiian/Pacific Islander and LGBTQ+ Pride months. CEOSE expressed an interest in learning more about NSF's new Technology, Innovation and Partnerships (TIP) Directorate.

Presentation: Overview of NSF's Established Program to Stimulate Competitive Research (EPSCoR) – Dr. Sandra Richardson, OIA/EPSCoR Section Head

The EPSCoR program enhances the research competitiveness of targeted jurisdictions (state, territory, or commonwealth) by strengthening science, technology, engineering and mathematics (STEM) capacity and capability through a diverse portfolio of investments from talent development to local infrastructure. Dr. Richardson discussed the following goals of EPSCOR: 1) catalyze research capability across and among jurisdictions, 2) establish STEM professional development pathways, 3) broaden participation of diverse groups and institutions in STEM, 4) effect engagement in STEM at national and global levels, and 5) impact jurisdictional economic development. She shared a map of the 28 EPSCoR jurisdictions (25

states and 3 territories) and briefly discussed the three investment strategies: workshops and outreach, co-funding, and the research infrastructure improvement awards.

Presentation: CEOSE Subcommittee's Report on the Future of EPSCoR – Co-Chair of the Subcommittee: Dr. Kelly Rusch, North Dakota State University

The Subcommittee Co-Chair shared highlights from the *Envisioning of the Future of NSF EPSCoR* report. Dr. Rusch's presentation focused on the eight recommendations and the 19 actionable suggestions. CEOSE accepted the report with the following recommendations.

R1. **Ecosystem Approach to Investments:** NSF should partner with other federal agencies to create new programs for coordinated and long-term strategic investment that will ensure capacity and support from the basic science questions through commercialization, job creation, and workforce support, while also expanding and using the internal EPSCoR co-funding mechanism and considering programs to encourage collaboration between NSF EPSCoR and non-NSF EPSCoR jurisdictions.

R2. **Increased Integration of NSF EPSCoR:** NSF should adopt a more holistic view of NSF EPSCoR with a greater integration of NSF EPSCoR across the Foundation and more cross-fertilization between the NSF EPSCoR Section and the breadth of directorates within the Foundation and focus on developing internal programs that are more inclusive of the strengths and scientific priorities of NSF EPSCoR jurisdictions.

R3. **Diverse Talent Recruitment and Retention:** NSF should expand investments to grow the critical mass of highly competitive and capable faculty, technical staff and students in NSF EPSCoR jurisdictions and develop new grant programs that will help build nationally competitive, sustainable research, and promote collaborations within and across NSF EPSCoR jurisdictions and beyond.

R4. **Physical and Administrative Infrastructure:** NSF should invest in physical and administrative infrastructure in EPSCoR jurisdictions that supports research and economic development. This includes construction or modernization of research facilities and infrastructure, research instrumentation, and staff to support intellectual property development, commercialization, and corporate engagement—all of which are essential for building the research infrastructure for sustainable research and economic competitiveness in NSF EPSCoR jurisdictions.

R5. **Programs to Promote Intra- and Inter-jurisdictional Research, Education and Workforce Development:** NSF should explore opportunities to fund collaborative proposals across multiple jurisdictions. Interjurisdictional opportunities could support topics of shared interest that are identified by the proposing project team that would leverage existing expertise and resources with the goals of promoting synergistic research, workforce development, and educational activities that can broaden impacts well beyond what single jurisdictions (particularly smaller ones) can accomplish. Providing such opportunities for collaboration also enables brain circulation and network development across multiple jurisdictions. Large intra- and inter-jurisdictional grants could have provisions to enable funding requests for recruitment and retention of young faculty, thereby building a sustainable workforce.

R6. **Support for Workforce, including those with Diverse Career Pathways:** NSF should expand research and collaboration opportunities and related career support/mentoring for individuals at different career stages and pathways within NSF EPSCoR funding programs. EPSCoR projects provide rich and often unique opportunities for early career researchers that can be instrumental in their career advancement, for both academic and other broad career paths. Similarly, mid-career researchers can experience significant advantages in research leadership and advanced publication and grant opportunities that matter for promotion and professional recognition, particularly among underrepresented groups. Specific attention to

these two critical career stages would create a deliberate and parallel effort to other NSF programs that prioritize opportunities for pre-tenure as well as pre-promotion mid-career faculty.

R7. **Proactive Inclusion Strategies: Proactive Inclusion Strategies:** NSF should be accountable for the formation of diverse teams of researchers via partnerships between EPSCoR jurisdictions and researchers from underrepresented groups in all pre- and post-award facets of the EPSCoR program, such as inclusion in panels, committees, commissions, and review boards. EPSCoR researchers, especially those from underrepresented groups, need greater inclusion on NSF panels and advisory committees.

R8. **Access and Opportunity:** NSF should enhance geographic diversity by providing greater infrastructure support for Minority-Serving Institutions (MSIs), Primarily Undergraduate Institutions (PUIs), and Two-Year College (TYCs) to engage in research efforts and enhance collaborations with external partners. Support must also include technical assistance to address gaps in research administration, funding of brick and mortar research facilities, institutional and interinstitutional research collaborations, and establishment of innovative mentoring partnerships. In addition to providing support, EPSCoR must shift to tracking impactful outcomes to inform subsequent support.

Panel Presentation: Centering the Voices of those Often Excluded: K-12 and Informal STEM Education Research Perspectives – Dr. Monya Ruffin-Nash, EHR/DRL Acting Division Director; Dr. Rita Karl, Twin Cities Public Television; Dr. Nancy Maryboy; Indigenous Education Institute; Dr. Nichole Pinkard, Northwestern University

Dr. Ruffin-Nash introduced the panelists and provided an overview of the Division for Research on Learning (DRL) in Formal and Informal Settings in the Directorate for Education and Human Resources (EHR). She described programmatic efforts that are addressing voices that are often excluded in K-12 and Informal STEM education research. She emphasized innovative and rigorous broadening education research, culturally inclusive and adaptive design approaches, wider perspective(s) on learning, and the expansion of STEM entry points for all. Her presentation highlighted examples of increasing STEM visibility and exposure through access and giving attention to multiple levels of identity and intersectionality by focusing on rural communities, LGBTQ communities, refuge families, homeless individuals, and individuals formerly incarcerated.

The presentation by Dr. Pinkard focused on the following question: How can we create a trusted and connected learning landscape in our communities? She identified personal (individual and family), organizational, community barriers that need to be addressed and emphasized that "learning is distributed and influenced by activities and resources provided across settings and over time." Her presentation highlighted the need to identify, understand, and connect key learning components for underrepresented groups: <u>places</u> (the locations where learning happens), <u>people</u> (who supports young people and families), <u>opportunities</u> (available programs and events for young people), and the <u>supports and barriers</u> (what helps young people to join in or keep them from participating).

Dr. Maryboy raised awareness regarding the Native voice of ways of knowing by discussing the importance of indigenous knowledge and skill, translation, education, and the environment.

She emphasized the importance of respectful stewardship in working with native communities and reciprocal responsibilities, noting that indigenous knowledge is rooted in cultural identity and sense of place. She highlighted the project *We are Water: Connecting Communities* that leverages the support of libraries to connect rural, Indigenous, and Latinx communities with water topics through storytelling, hands-on teaching, and a traveling exhibit.

Dr. Karl presented an overview of SciGirls, underscoring how the program is addressing social and environmental challenges to increase the interest and participation of females in science. The implementation approach involves *On Air* broadcast and streaming of the National Emmy Award winning PBS Kids series; the *Online* website with games, episodes, and role model videos; and *On the Ground* STEM programs and professional development at 200+ partner organizations in the US. The examples she highlighted included an episode with deaf girls, a season in Spanish, a role model collection of women in STEM, and profiles of Black women in STEM.

Overall, CEOSE members applauded the panel for addressing intersectionality from a community engagement/family involvement perspective in the context of culture and competitiveness.

NCSES Data Briefing – Dr. Amy Burke, Program Director, SBE/NCSES

Dr. Burke highlighted selected diversity data in the 2022 *Science and Engineering Indicators*. This report is a congressionally mandated biennial report to the president and Congress and can be found at https://ncses.nsf.gov/indicators. The new definition of the STEM workforce is workers at all education levels working in occupations that use significant levels of S&E expertise and skills. She presented trend data about the demographic composition of the STEM workforce from 2010 to 2019 by education level; geographic data regarding the concentration of the STEM workforce by state and geographic innovation in selected occupational fields; and precollege performance data on the National Assessment of Educational Progress (NAEP) science assessment by race or ethnicity for grades 4, 8 and 12. The data supported the following key takeaway messages:

- Women are 45% of the STEM workforce with a bachelor's degree or higher and 26% of the STW (Skilled Technical Workforce).
- Blacks were nearly 10% of the STW in 2019 and Hispanics had grown from 15% to nearly 20% from 2010 to 2019—comparable to their shares of the total U.S. working population of about 12% and 18%, respectively in 2019.
- Among S&E degree recipients at the bachelor's degree level or above, Black, Hispanic, and American Indian or Alaska Native individuals are underrepresented.
- The percentage of students scoring NAEP Proficient or above in science is lower for students who qualify for free or reduced-priced lunch.

CEOSE applauded NCSES for the visuals that help identify progress and gaps and indicated that some of the graphics may be included in the upcoming 2021-2022 CEOSE report. Additionally, a member stated that that data revealed how much more needs to be accomplished and that the

challenges are more complex when socioeconomic status (SES) is an additional variable in data analysis.

Discussion: CEOSE Liaison Reports – CEOSE Liaisons

The CEOSE Liaisons to the NSF Advisory Committee (AC) provided overviews of the meetings they attended and/or announced upcoming AC meetings. Some of the relevant broadening participation discussions/concerns highlighted were:

- **MPS –** increasing the diversity of nominations for the Alan T. Waterman awards
- **ENG –** expansion of ENG levels of influence in broadening participation via Inclusive Mentoring Hubs and the Centers for Equity in Engineering; return on investment in the context of what we say vs. what we do vs. how we reach out (re: merit review data); the need for an ADVANCE-like investment for URM; increased collaborations with EPSCoR jurisdictions
- **EHR –** former CEOSE member Juan Gilbert is a new member helping the Committee advance the notion that it takes diversity to have diversity; support of GRANTED focusing on MSIs in FY 2023 with a strong emphasis on understanding and measuring impact
- **BIO –** focus on building bridges with TIP
- **SBE –** funding updates regarding Build and Broaden 2.0 to ensure that MSIs are receiving at least 50% of the award funding; discussion of (external) criticisms about how SBE proposals are reviewed
- **OPP –** forthcoming report of a subcommittee on diversity and inclusion in the polar programs

Day 2

Opening Remarks – Dr. Jose D. Fuentes, CEOSE Chair

The Chair opened the meeting and directed attention to the need to identify ideas for discussion with NSF leadership. He pointed out that the intent is to share advice and/or address a few of the issues discussed on the first day (e.g., the diversity within STEM employment ranks at NSF, how to transition from hitting targets to changing mindsets, and deeper examination of what different directorates are developing as new programs focused on individuals and institutions, etc.).

Working Session: 2021-2022 CEOSE Report—CEOSE Work Groups

The Committee held four breakout sessions for members to work on the four sections of the next CEOSE report, developing outlines, volunteering for writing assignments, and identifying resources needed. Prior to working in the small group sessions, the CEOSE Vice Chair provided the overview of the report that will address the critical issues of defining and understanding intersectionality in the STEM enterprise. Dr. Husbands Fealing revisited the bold leadership

recommendation of the 2019-2020 and outlined the key sections for the 2021-2022 report. She stressed the importance of 1) advancing the making visible the invisible theme, 2) highlighting the impact of what NSF is doing beyond funding and outcomes, and 3) summarizing the input and influence of CEOSE's work, especially for messaging broadening participation as a solution and not a problem.

The members engaged in an open discussion About the importance of the next CEOSE report. Some of the key points included the following. Include K-12 data and share what we know and what we do not know. Emphasis the criticality of broadening participation during this unprecedented time in our history. Highlight the agency's goal focused on increasing proposal submission and funding rates by 10 percent. Stress the need and urgency for disaggregated data. Emphasize the need for transformative change as well improving the numbers regarding the STEM workforce. Develop a recommendation regarding intersectionality that can be accomplished and measured.

CEOSE Discussion: Topics/Ideas to Share with Leadership

Members identified several areas to discuss with NSF leadership for the afternoon session with the NSF Director and/or future meetings with NSF leaders. The areas included the following: how NSF is responding to the recommendation for bold leadership action, the diversity of advisory committees, use of data to identify gaps, and broadening participation efforts of the new directorate. Additionally, the Chair commented on the positive executive meeting with NSF leadership on June 7, 2020, emphasizing that NSF leadership is very supportive of CEOSE's activities.

Discussion with NSF Leadership –Dr. Karen Marrongelle, NSF/OD, Chief Operating Officer

Dr. Marrongelle greeted the membership and applauded the work of the Subcommittee on the Future of EPSCoR. She provided a brief overview of the Director's recent visits to higher education institutions and STEM organizations in Florida, Connecticut, New York, and Pennsylvania. In addition to reporting on leadership transitions, her remarks called attention to NSF's new agency strategic plan, the new GRANTED initiative, and the development of an equity plan in response to an Executive Order.

Members encouraged more Director's visits to MSIs, bringing with him some of NSF's champions of BP. CESOE expressed support for the agency priority goal related to merit review outputs and outcomes and the GRANTED Initiative. CEOSE suggested advancing geographic diversity by focusing on the needs of the various types of MSIs within EPSCoR jurisdictions and reaching historically underrepresented groups in a broader context of understanding regional differences and opportunities. Leadership and CEOSE conveyed optimism about the opportunities in the TIP Directorate to attract new investigators and new organizations for regional impacts. Members also shared their concerns about the persistent K-12 achievement gap and encouraged interagency collaborations to address precollege STEM education.

Leadership Roundtable: Bold Leadership Actions – NSF Senior Leaders: Dr. Alicia Knoedler, OD/OIA, Office Head; Dr. Joanne Tornow, BIO/OAD, Assistant Director; Dr. Margaret Martonosi, CISE/OAD, Assistant Director; Dr. Don Millard, ENG/OAD, Acting Deputy Assistant Director; Dr. Tim Patten, GEO/OAD, Deputy Assistant Director; Dr. Sarah Williams, OD/OECR, Acting Deputy Office Head; Dr. Anne Emig, OD/OISE, Cluster Lead; Dr. Kelli Craig-Henderson, SBE/OAD, Acting Assistant Director; Dr. Sylvia Butterfield, EHR/OAD, Acting Assistant Director; Dr. Michelle Bushey, MPS/OAD, Acting Staff Associate; Dr. Gracie Narcho, TIP/OAD. Deputy Assistant Director

Moderated by Dr. Knoedler, a panel of NSF Senior Leaders briefly highlighted current and future actions in response to the bold leadership recommendation of the 2019-2020 CEOSE report. Dr. Butterfield described the bold leadership actions in the following *EHR* investments: Racial Equity in STEM Program Description, AI - Augmented Learning for Persons with Disabilities, HBCU Broadening Participation Centers, LSAMP and HSI Centers, and NSF INCLUDES. Additionally, several innovative efforts were noted such as STEM Education Postdoctoral Research Fellowships, ECR BCSER, and Taking Action: COVID-19 Diversity, Equity, & Inclusion Challenge. She pointed out that EHR's budget for investing in broadening participation has increased from 52% to 62%, allowing increased focus on systemic racism in STEM, learning opportunities for individuals with disabilities, and expanded activities of centers and alliances to conduct broadening participation research.

Providing solutions that improve the quality of life, the *SBE* briefing highlighted four actions. Dr. Craig-Henderson briefly shared the history of the Science of Broadening Participation investment and its contributions to what works and what does not work knowledge base. She described the more recent Bold and Broaden program, designed to support fundamental research at minority-serving institutions and to encourage research collaborations with scholars at MSIs. She emphasized the importance of having a dedicated BP Program Officer ("first time ever") in SBE and discussed the engagement of the SBE community in the cross-directorate opportunity, Broadening Participation in STEM Entrepreneurship and Innovation.

CISE is requiring research proposals requesting >$600K in the selected programs (Core, CPS, and SaTC) to include a meaningful plan to broaden participation in computing. Dr. Martonosi stressed that this approach is increasing the collaboration and coordination efforts for broadening participation expertise, allowing PIs to plug into departmental and national BP plans and resources. The BPCnet Resource Portal (https://bpcnet.org) is one example that was highlighted for identifying and vetting best and promising practices for the computing community. Other unique opportunities in CISE include: the CISE BPC Alliances, the CISE MSI Research Expansion Awards; the CISE CUE Solicitation that has the *Pathways track* to address the multiple entry and exit points through two-year colleges as part of effective pathways to computing degrees and careers and the *Mobilizing track* to support the development of a

shared national vision around innovation and inclusion in undergraduate computing education; and the CSGrad4US Fellowship Program, designed to increase the number and diversity of US Citizens and Permanent residents pursuing doctoral programs in CISE-related fields.

The response from *BIO* highlighted funding opportunities to develop the next generation of leaders in BP/DEI (i.e., Postdoctoral Fellowship in Biology-BP Track and Capacity Building for New Faculty at R2s and MSIs) and programs to transform BP/DEI across institutions and organizations (i.e., Research Experiences for K-12 Teachers and Culture Change by Engaging Scientific Societies). Dr. Tornow presented a visualization to show how the portfolio of broadening participation investments in BIO is considering institution type, accommodating multiple career paths, targeting career transition points, and addressing culture explicitly. She pointed out that career pathways are not always simple and linear but have different on ramps and career pivots and that there are different barriers for different groups of people.

MSP is investing in several bold initiatives to advance diverse STEM leadership and increase representation of people from underrepresented groups in MSP careers. Dr. Bushey stated that MPS is investing in people throughout the STEM pathways from high school to senior faculty. Several programs (e.g., LEAPS MPS 22-604 and MSP ASCEND 22-501) are recasting the role of PIs and/or valuing risk taking. She shared how ASCEND aims to develop the next generation of BP leaders, and she emphasized the attention to and support for addressing reentry challenges in MPS careers. Programs supporting the transformation of BP/DEI across institutions included PREC (NSF 21-620), PREP (NSF 21-610), and PAARE (NSF 22-525).

OISE highlighted the modest BP success of the International Research Experiences for Students program (IRES). This program has doubled awards to R2, PUI, MSI institutions. The contributing factors for these positive results were improved outreach linked to more, stronger proposals from targeted groups and enhanced reviewer education that contributed to better understanding of objectives. Additionally, Dr. Emig stressed that EPSCoR co-funding allowed more good awards to be funded, giving prominence to US geographic diversity in an international context. She stated that the communication and coordination lessons learned will be applied to other programs in the ISE portfolio.

Pointing out that BP progress has somewhat stalled in *ENG*, Dr. Millard highlighted two tracks of the broadening participation in engineering solicitation. The *ENG*. *BPE: Inclusive Mentoring (IM) Hubs* investment is connecting and dynamically building networks for racial and ethnic groups not sufficiently represented in engineering. The IM hub offers free access to mentoring and network opportunities, building on the successful practice of connecting people at different types of institutions/organizations at different points in their careers—a continuum of mentoring. Dr. Millard shared how the BPE: *Centers for Equity in Engineering* track has been catalyzing culture change in engineering colleges to create equitable and inclusive practices that recruit and retain a diverse community of students. These center- oriented projects must consider the culture, the organizational structure, and the pedagogical changes that are needed to transform the College of Engineering into an environment in which all students are equally

included, engaged, and enabled to establish their identities as professional engineers. Three additional efforts were highlighted: Engineering Research Initiation (ERI), Emerging Frontiers in Research and Innovation (EFRI) Planning Grants to Promote Diverse Participation, and Culture of Inclusion in Engineering Research Centers (ERCs).

In discussing the new directorate, *TIP*, Dr. Narcho stressed the importance of supporting the full spectrum of STEM talent at all levels and for the full range of jobs, especially at a time when NSF is trying to support emerging technologies and to grow new industries. She highlighted the Regional Innovation Engines (RIE)program that is asking communities to identify what are those societal economic challenges that they need to pursue and how do we bring in all the relevant stakeholders to address that challenge. She noted that the technology push approach is an opportunity for everybody in the nation to participate in the STEM enterprise. RIE is bringing in multi sector teams that would be the beneficiaries of the research results to help define the research questions and how the research should proceed. This approach will help to accelerate research to commercialization and promote opportunities for experiential learning for all students. She also discussed the listening sessions that TIP conducted with MSIs, highlighting the several issues raised like, the need capacity building and infrastructure support at small institutions, need to address geographic isolation, and the value of mentoring.

GEO has three programmatic investments to develop the next generation of "BEAJDI" leader in STEM: the career development approach via GEOPaths (NSF 22-555), leadership development approach of GOLDEN-EN (PD 21 178Y), and the approach driving cultural change via CTEC (NSF 22-562). GOLD-EN**:** Geoscience Opportunities for Leadership in Diversity – Expanding the Network supports projects designed to identify barriers that exist within academia and/or the geosciences that prevent the development of diversity champions and to employ strategies that will create and sustain cohorts of diversity leaders to maximize collective impact in the geosciences. Dr. Patten also emphasized the importance of community driven research approaches to engage students in authentic career relevant experiences in the geosciences and to create inclusive environments in the geosciences that are attractive and supportive to students from historically underrepresented groups in STEM. Again, GEO's major BP effort in response to the CEOSE recommendation is supporting cohorts of diversity champions to create BEAJDI leaders who advocate and stand for accessibility justice, equity, diversity inclusion in the geoscience ecosystem.

OECR is responsible for enforcing compliance with civil rights laws, overseeing the NSF equal employment opportunity or EEO program, and promoting DEI within the NSF workforce. OECR is working in partnership with both the awardee community and internal NSF. Dr. Williams reported that OECR has several activities that are aligned with CEOSE report suggestions. For example, the Title IX reviews and the notification requirements regarding sexual harassment, other forms of harassment or sexual assault demonstrate leadership in directing BP/DEI mindset change and action. She emphasized the responsibility of the organizations to identify, address, and monitor situations involving harassment and to take preventative steps to avoid

harassment before it occurs. The second example, the Equity and Compliance Research Initiative, involves external stakeholder engagement and proactive barrier mitigation activities to build awareness around the importance of NSF's leadership role in promoting equity compliance in STEM research. She indicated that this initiative conducts outreach, provides technical assistance, and facilitates program barrier mitigation forums to promote full participation in the STEM enterprise.

The Q&A after these leadership presentations covered a range of topics for continued discussion: the unique challenges, responses, and opportunities across the directorates; collecting data and moving off the baseline to identifying metrics to track progress and assess impacts; diversity and equity issues of the work environment within directorates at NSF; and the concerns of the external STEM community around the urgency to change culture, address research security, and examine changes in international engagement.

Announcements and Final Remarks

The reports from the writing subgroups provided insights about the content outlines of the various sections. The tentative plans for the 2021-2022 CEOSE report were to share draft sections by mid-September 2022 and work on the recommendation/suggestion table at the October 2022 meeting, anticipating a draft report to finalize at the February 2023 meeting. The report will include leadership exemplars from the research directorate and offices. Members pointed out that the urgency of broadening participation during these challenging times can inspire change at multiple levels, both within and beyond the NSF, and that CEOSE can bring different perspectives to advancing intersectionality in STEM as a theoretical framework for program development and measurement of the impact of the BP portfolio.

The Chair announced that the meeting will be virtual in October 2022. After thanking everyone for a highly productive meeting, the Chair adjourned the meeting.