

BER Response to the Report of the BERAC Committee of Visitors Review of the Biological Systems Science Division

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Introduction

The Committee of Visitors (COV) reviewed the Biological Systems Science Division (BSSD) in the Office of Biological and Environmental Research (BER) for the period October 1, 2016 through September 30, 2020 (Fiscal Years 2017, 2018, 2019, 2020), including the processes used to create and manage the research portfolio. The COV presented findings and recommendations in a report presented to, and accepted by, the Biological and Environmental Research Advisory Committee (BERAC) on April 22, 2022 during the Spring BERAC meeting. The report provided helpful recommendations and constructive comments for the management of programs in the Division that comprise a wide range of Laboratory Science Focus Areas, University Funding Opportunity Announcements, and User Facilities.

BER has compiled the following responses to the major recommendations that were itemized in the Executive Summary of the COV report. These recommendations are broadly representative of the more detailed findings throughout the report.

Acronyms Used in this Report

BER	Biological and Environmental Research
BSSD	Biological System Sciences Division
DEI	Diversity Equity and Inclusion
DOE	Department of Energy
EESSD	Earth and Environmental Systems Sciences Division
FAIR	Funding for Accelerated, Inclusive Research
JGI	Joint Genome Institute
NSTC	National Science and Technology Council
RDPP	Research Development and Partnership Pilot
RENEW	Reaching a New Energy Sciences Workforce
SBIR	Small Business Innovation Research
SC	Office of Science

Responses to Major Recommendations

COV Recommendation	Response
DOE should strive to provide annual budget allocations in a timely manner and increase program management and administrative staff to match recent changes in portfolio size, scope, and complexity.	BER will continue to work within SC to provide budget allocations to funded projects in as timely a manner as possible in accordance with DOE financial guidance, and seek to augment professional staff as needed to adapt to changes in the portfolio. BER is already engaged in activities to replace recently retired staff and is seeking additional expertise for temporary details within the Office.
Preferably at the agency-wide level, DOE needs to address diversity, equity, and inclusion through demographic data collection and the implementation of policies and practices that support a diverse community of scientific innovators.	DOE Office of Science has developed a statement of commitment for diversity, equity, and inclusion: https://science.osti.gov/SW-DEI/ SC is currently working on an implementation strategy for a SC-wide DEI policy with trackable metrics.
At the Division level and higher, DOE should clarify the role of education and outreach in its mission while promoting greater inclusion of junior and new investigators by helping them navigate DOE funding mechanisms.	BER agrees that reaching out and engaging the broader research community, particularly junior and early career researchers, is in BER's long-term interests. While there is excellent outreach progress within individual projects such as the Bioenergy Research Centers (BRCs), KBase and DOE's National Microbiome Data Collaborative (NMDC), BER-BSSD will develop standardized presentations for use at PI and scientific meetings geared towards introducing early career researchers to our programs. BER-EESSD recently issued new funding opportunities that target new researchers, including RENEW and RDPP. BER-BSSD will post a similar opportunity under the FAIR effort highlighted in the President's FY 2023 Budget Request. BER will track the success and impact of these new efforts.
Develop standardized metrics for evaluating portfolio elements to guide strategic decisions and provide more information about research directions, such as when to sunset large projects because funding priorities have changed.	SC's standardized review criteria solicits detailed comments from reviewers on scientific progress within portfolio elements at regular intervals. These reviews are impactful and regularly result in changes in the portfolio, occasionally leading to the sunset of projects. The Strategic Plans for each Division also guide priorities and program changes. These plans draw input from multiple sources, including the BER Advisory Committee, interagency efforts (e.g., NSTC subcommittees), and DOE mission.

<p>Develop proactive structures to increase the level of transparency in decision-making and community engagement when responding to needs or opportunities that arise suddenly, such as congressional mandates.</p>	<p>BER agrees and will seek out means of community engagement when on a compressed timeline.</p>
<p>Clarify merit review criteria across programs and justify eligibility of universities versus national labs for different funding mechanisms in the solicitation documents.</p>	<p>BER will work to clarify review criteria across programs as well as eligibility of different institutions through more standardized presentations to the research community, particularly at PI and scientific meetings.</p> <p>SC's four standardized merit review criteria are consistent across the portfolio, and there are additional criteria included that differ among User Facilities, Lab programs, and University-led projects. BER funds Labs and Universities differently. Whereas university research tends to be more oriented towards small teams or single PI projects, the DOE Labs manage large science teams that take advantage of lab capabilities, including User Facilities. The combination of single PI, small team, and large team projects that are complementary and well-coordinated has been a huge success.</p> <p>BSSD will develop standardized communication materials to clarify different components of the portfolio and the merit review criteria for each component.</p>
<p>Maximize the value and comparability of reviewer ratings by developing more detailed scoring rubrics and providing consistent guidance to reviewers on evaluating merit review criteria.</p>	<p>BER agrees and will provide more consistent guidance to reviewers in evaluating and scoring proposals to help improve comparability of reviewer ratings across programs.</p>
<p>Create mechanisms and require sustainability plans to scale up and disseminate promising new technologies developed with program funding.</p>	<p>BER agrees and will work with the SBIR office and seek assistance from DOE's larger Office of Technology Transfer (OTT) to expand opportunities to showcase new technologies to the commercial sector.</p>
<p>Increase the strategic oversight of JGI's programmatic scope and direction.</p>	<p>BER agrees and will work with JGI to ensure that the scope and direction of its capabilities remain aligned with the direction of the BER portfolio needs.</p>