

**Basic Energy Sciences (BES)
Response to the Report of the Basic Energy Sciences Advisory Committee**

Committee of Visitors (COV) Review of the BES Scientific User Facilities Division (SUFD)

Date of COV: April 12-14, 2016 (COV report approved by BESAC on June 10, 2016)

Date of Response: July 12, 2016

Program Points of Contact: Harriet Kung (BES) and James Murphy (SUFD)

COV Recommendation	BES Response
1. Facility review process description and effectiveness	
a) Consider how to incorporate effective and efficient budget reviews into triennial facility reviews.	a) BES concurs and had already implemented this recommendation as part of the triennial review of the SNS and HFIR in August 2015. This effort will continue with the nanoscience research center triennial reviews in FY16, and the light source reviews in FY17.
b) Strive to send review results and guidance to facilities within 6 months of the review.	b) BES concurs with the recommendation and will strive to provide review results within this timeframe.
2. General Issues	
a) Provide sufficient travel support for program managers to have direct knowledge of their projects and constituencies.	a) BES concurs with the recommendation and will continue to work with SC management to seek additional travel support for program managers.
b) Consider partnering with the National User Facility Organization to collect and evaluate facility experiences with outreach to industrial users, and to identify best practices.	b) The BES facility directors and user administrators have implemented various outreach activities with industry in recent years, and are engaged with NUFO to share experiences and best practices.
3. Accelerator & Detector R&D	
a) Increase the ADR program budget to support its broadened mission.	a) BES is committed to a robust Accelerator and Detector research program and will continue to implement the program based on BES programmatic priorities and budget availability.
b) Expand the pool of new ideas coming into the ADR program by encouraging the submission of proposals from new university groups. Workshops on topics relevant to ADR, such as photon and neutron detectors, would help connect University groups with DOE labs.	b) BES encourages submission of applications from all research institutions through the annual Funding Opportunity Announcements, including the Early Career Research Funding Announcement. BES sponsors workshops to assess the state of the art and develop prioritized research directions for future R&D. A detector workshop was held in 2012 and an optics workshop was held in 2013. BES is planning a workshop on future electron sources to be held in the fall of 2016.

c) Formalize the whitepaper submission process in the FOA for ADR, such that whitepapers with a well-defined format are submitted through, and recorded in, PAMS.	c) BES concurs with this recommendation and will use PAMS for tracking the whitepaper statistics.
d) Expand the ADR program scope to include longer term R&D projects specific to light sources that cannot be supported by HEP's General Accelerator R&D program.	d) The ADR program funds research in support of light and neutron sources. BES will continue to support longer-term investments as appropriate, as exemplified by recent support for compact Laser-Plasma-Accelerator-driven free-electron laser.
4. Light Sources	
a) Continue to pay attention to the issues of beam line staff development, career path and workload as part of the facility review process, particularly beam line staffing levels.	a) BES recognizes the importance of beamline staff career development and workload balance. This issue will continue to be an important part of the triennial facility operation reviews.
b) Modify the facility triennial review process to explicitly include benchmarking against international peer facilities.	b) BES concurs with the recommendation and will include this assessment as part of the prepared materials for the triennial facility operation reviews.
c) Continue to evaluate the optimal balance between a rigorous and useful review process and the considerable time demands on facility staff required to support it.	c) BES concurs with the recommendation and will continue refine the facility review process.
d) Keep a written record of questions, answers and action items associated with monthly teleconferences with facility directors.	d) BES concurs with the recommendation and will keep written notes for light source facility operation conference calls.
5. Nanoscale Science Research Centers	
a) Explore ways to enhance the visibility of the NSRCs – particularly their uniqueness for nano research – both within and outside of DOE.	a) The NSRCs have achieved some visibility at forums such as NUFO, displays at Congressional events, and booths and symposia at technical conferences. BES will continue to support the NSRCs outreach efforts to enhance their visibility.
b) Keep the NSRC's competitive and cutting-edge by pursuing means to significantly enhance the NSRC capital budget.	b) BES is committed to support the NSRCs to maintain their competitive status.
c) Continue development of the NSRC Portal, including clear descriptions of the unique advantages of the NSRCs for research in nano and micro science.	c) BES concurs with the recommendation and will share this recommendation with the NSRCs for implementation. The goal will be to make the portal a more effective way for prospective users to obtain information on available capabilities and make contacts with appropriate NSRC staff.
6. Neutron Scattering Facilities	
a) Join with other agencies, such as DOC, NSF, and NIH, in assessing the current status and future directions for neutron science in the U.S., which would include neutron measurement capacity and capabilities needed to enhance the international competitiveness of the U.S. scientific community.	a) BES is open to participating in such an activity.
b) Be mindful of how the termination of support for general-user programs can affect the national neutron scattering scientific user community and scientific productivity.	b) BES is mindful of the needs of the neutron scattering scientific community. The completion of new instruments at the SNS via the SING and SING-II projects along with potential additional instruments at the SNS and the HFIR will address the national needs.
c) Make it a priority to recover, at other BES user facilities, the unique experimental capabilities that	c) BES is concerned with maintaining the capabilities that were initially lost by the closure of

were lost to general users with the termination of BES funding for the Lujan Center.

the Lujan Center. To this end, SNS and HFIR was tasked with providing enhancements to those instruments capable of mitigating lost Lujan capabilities and is being accomplished. Most specifically this has been directed toward local structure analysis and reflectometry including polarized beam.