

**NATIONAL SCIENCE FOUNDATION
ALEXANDRIA, VA 22314**

**FY 2018 BISO Committee of Visitors (COV)
Recommendations and Responses from OISE**

I. Quality and Effectiveness of Merit Review Process

Recommendations 1:

- Justification for the review method used (e.g., internal review because of specific NSF policy) should be described in the RA.
- Rationale for the choice of particular additional reviewers, whether internal or external, should be better articulated and described by POs in RAs.
- POs should be better trained to ensure consistency in the handling of BISO proposals.

Responses:

- OISE will develop a mechanism to review and will convey that one consolidated proposal to support U.S. participation in ICSU, related international unions and U.S. National Committees would be preferred. The justification for the review method will be described in the review analysis (RA).
- The rationale for reviewer selection will be better described in the RA.
- One proposal to request funding will be submitted to OISE rather than distributed throughout NSF research Directorates/Office. Use of a single proposal will allow NSF consistency in handling the review process.
- OISE will work with NSF's Policy Office to ensure adherence to NSF merit review criteria and processes.

Recommendations 2:

- BISO projects are unique and idiosyncratic compared with the bulk of NSF proposal submissions;; therefore it would be useful if NSF developed a set of example activities in regard to the two merit review criteria that are more specific to the types of projects typically presented by BISO (e.g., participation in ICSU Unions and the attendant national membership fees, the U.S. National Committee activities and costs, the International Visitors Office (IVO)).
- Provide instruction and education to reviewers about BISO activities and guide them in how to use the merit review criteria. For instance, what specific criteria characterize competitive vs. non--competitive Intellectual Merit for a proposal to pay dues for a scientific Union or for funding of the IVO?

Responses

- OISE will work with NSF's Policy Office to develop an appropriate review process for the proposal that takes into account the idiosyncratic nature of BISO's activities.
- Once a review process has been established, reviewers will be given specific guidance as to how to review the proposal – including background information on what BISO is and what it does to support unions.

Recommendation 3:

- A template for the reviewers detailing the specific additional considerations for BISO proposals evaluation should be developed.

Response:

- Specific review guidance may include a template for future use.

Recommendation 4:

- Documentation on rationale for decisions on core activities and supplemental awards should be consistently provided.

Response:

- Having one cognizant proposal will allow the cognizant OISE Program Manager (PM) to provide a consistent rationale for award recommendations.

Recommendations 5:

- Post-award communication with PIs will be further improved.
- Context Statements should be mandatory.

Responses:

- Having one cognizant PM for one award will allow for improved post-award communication with the PI.
- An appropriate Context Statement will be developed.

Recommendation 6:

- External reviewers from relevant scientific communities should be used for proposal evaluation whenever possible. Additional clarification should be provided on merit review in the review template to ensure that the nature of the proposals (especially in the area of core activities) is properly reflected in the reviews.

Response:

- OISE is working with NSF's Policy Office to develop an appropriate review process. A combination of internal and external reviews is being considered.

II. Questions concerning the selection of reviewers.

Recommendations 1--3:

- All proposals from NAS to NSF should be managed through a single point--of--contact (preferably OISE) for initial review and assignment to NSF Directorates and their POs for consideration. Initial review should include an assessment of quality, and possible revision, before further consideration.
- A more rigorous and thorough reviewer selection process should be adopted that leads to more diverse input from an appropriate number of COI--free reviewers for each submission.
- Reviewers should be provided with a fact sheet that describes ICSU and the NSF position in regard to US participation in international science to ensure a common basis for proposal assessments (e.g., it might include the OISE metrics for a successful international activity).

Responses:

- See above responses. The proposed new funding mechanism will identify OISE as the single point--of--contact for proposal submission.
- See above responses. OISE will work with NSF Policy to identify an appropriate review process and selection of COI--free reviewers.
- OISE will develop an ICSU fact sheet for reviewers. OISE may also consider a "training" webinar for reviewers.

III. Questions concerning the management of the program under review.

Recommendations 1:

- POs should be encouraged to request regular reverse site visits in the case of some awards to ensure that the institution is taking responsibility for implementing their plans in a timely and regular manner. Although this implies more work for POs, this kind of interaction is a good approach, as it prevents misaligned expectations and is conducive to a successful project.
- Coordinating official(s) should be designated at NSF (e.g., in OD/OIA) to address the problem of poor institutional memory. The NAS team at NSF is a good idea, should be continued and should be more involved in the process than simply collating submissions.
- Internal mechanisms (at NSF) should be developed to reduce dwell time.
- The review process should be improved by increasing the number of external reviewers. The COV suggests a minimum of three reviewers for BISO--related proposals (other than small dollar travel grant applications). This would be addressed if a single omnibus proposal for all ICSU Union activities was adopted rather than the current approach of multiple similar proposals.

Responses:

- Having one consolidated award will ease the burden of multiple PMs having to conduct reverse site visits. The workload for one Cognizant PM will not be onerous.
- Having one Cognizant PM should address the issue of proposal dwell time.
- See above responses for reviewer selection. OISE is working with NSF Policy to develop appropriate reviewer selection.

Recommendations 2:

- Main recommendation: For each proposal, a member of the National Academies of Sciences, Engineering, and Medicine (NASEM) should be required as a PI or co--Pi in every BISO proposal. The COV notes that there is an OISE advisory body that includes NASEM members, but it is unclear whether this group is active in developing or vetting proposals to NSF.
- Additional “Program Specific Criteria” should be added as part of the review requirements. A template should be provided for reviewers.

Responses:

- OISE will consider a specific requirement that a member of NASEM be a PI or co--PI on the proposal.
- Additional review criteria will be specified.

Recommendations 3:

- Mechanisms should be developed to allow a more dynamic portfolio by means of collaborative efforts between NSF and NASEM. Although the existing MOA (March 17, 2016) considers “Changes in Status of USNCs and Related International Unions,” this seems to be a latent item which needs to be expanded and acted upon.
- To avoid supporting poorly performing national committees, they should be evaluated on a regular basis.

Responses:

- OISE will require strong justification for the need to support the Unions included in the proposal.
- OISE will communicate that the number of Unions and USNCs that can be supported through an NSF award will be limited.

IV. Questions about Portfolio Processes

Recommendation 2:

- NSF should evaluate progress of awarded BISO proposals with respect to the objectives in BISO’s strategic plan. A common best practice is to generate a strategic plan and periodically review and update it to guide the focus and objectives of an organization. From that strategic plan, a typology of related outcomes could be generated for use in the proposal funding evaluation. This may involve hiring internal program evaluation specialists or contracting with external program evaluation specialists. Such personnel

have expertise that is specialized for this work vs. engaging scientists from different disciplines that constitute e.g., the COV. This would only be cost effective if an omnibus program was funded rather than upwards of 16 separate individual Union proposals.

Response:

- Having one consolidated proposal for U.S. representational activities with ICSU will allow for closer monitoring of performance. The Cognizant NSF PM will be able to closely monitor activities under the award (e.g. better communication with the PI, reverse site visits, consultation with NSF's evaluation team in the Office of Integrative Affairs to develop appropriate indicators and metrics of success).

Recommendations 3:

- Projects should be required to collect and report impact--related metrics (e.g., workshop participation and outcomes;; Union dues and travel – metrics of US participation including leadership activities). Data should be aggregated so that trends and comparisons can be evaluated across the overall ICSU participation supported by the NSF.
- Regular evaluations of the portfolio should be performed (perhaps as part of the Recommendation in point 4 below), using appropriate metrics. An omnibus program would allow use of more typical NSF oversight practices such as site visits, panel reviews, external reviews, annual reports, etc.

Responses:

- OISE will require that impact--related metrics be addressed in the annual and final reports.
- See above response. Under the new proposed approach, NSF will be better able to evaluate the performance of the activities proposed.

Recommendations 4:

- NSF should consider an arrangement, such as a cooperative agreement, that would manage both the core (dues) and related activities (e.g., meetings and workshops). An open solicitation could be used, or other mechanisms to introduce appropriate competition. A pilot might also be a viable solution. An advantage of using a cooperative agreement is that it is feasible to aggregate and evaluate broader impact, review content of the portfolio, employ a project analyst and address balance and change in the investment portfolio.
- The COV recommends that NSF consider mechanisms to enable Unions or other similar Entities outside of NAS (e.g., societies) to compete for awards, perhaps through specific solicitations in order to level the playing field, improve fairness, and make awards that are more strategic investments.

Responses:

- OISE has explored the possibility of an open solicitation and found that this approach would not be ideal given the complexities involved in supporting U.S. participation in international scientific organizations. While a Cooperative Agreement mechanism was

also considered, given OISE's proposed new approach, there are legal aspects of a cooperative agreement that make the mechanism inappropriate for this situation.

Recommendation 5:

Regular reviews should be performed (e.g., every 5 years, staggered so that review burden is distributed over time) with appropriate stakeholders. These reviews should include an evaluation of the Union's relevance to NSF priorities, involvement by the community, and the competitive processes used to allocate resources.

Response:

- NSF will explore mechanisms to conduct such reviews.

Other Topics

Recommendations 1:

- Please see the Executive Summary
- Some members of the COV felt that the activities of the BISO's International Visitors Office should not be funded by NSF.

Responses:

- NSF will revisit support for the International Visitors Office.

Recommendation 2:

- Please see the Executive Summary

Response:

- The responses above address the Executive Summary.

Recommendation 3:

- Please see the Executive Summary

Response:

- The responses above address the Executive Summary.

Recommendation 4:

- The template should include an Executive Summary field.

Response:

- The recommendation to include an Executive Summary in the COV template will be communicated to the Office of Integrative Activities for consideration.

Diversity and Conflict of Interest Report

OISE held the Board on International Scientific Organizations (BISO) Committee of Visitors (COV) review on February 28-2018. The COV was composed of eight (8) members from the scientific community chosen for their scientific expertise and their understanding of the global scientific community. The 8 COV members composed a diverse committee with respect to geographic, institutional, gender, ethnicity, age, and scientific representation. The table below describes the main features of the COV with respect to these characteristics. Note that because demographic information is self-reported, data may not be available for all members of the Committee.

The COV was briefed on issues of Conflict of Interest and Confidentiality. Each COV member completed an NSF Conflicts of Interest form. There were no conflicts of interest reported for this COV. Additional materials requested by the Committee were screened before provision to the COV to avoid any conflicts of interest. None of the COV members was involved in the review of a program in which he or she had a pending proposal. The OISE COI officer was available at all times during the COV meeting to answer questions and resolve issues regarding conflicts of interest.

DEMOGRAPHICS

Ethnicity

Hispanic – 1

Not Hispanic – 7

Race

White --- 7

Black or African American --- 0

Asian --- 1

Gender

Female --- 2

Male --- 6

Institution Type

PhD --- 8

Geographic

Northeast --- 0

Mid-West – 6

Southeast SE --- 2