

# EFRI Response to the 2014 Committee of Visitors (COV) Report

## Introduction

This report is the response to the Committee of Visitors (COV) Report for the Emerging Frontiers in Research and Innovation (EFRI) program. The COV review of EFRI was conducted September 22-23, 2014.

The EFRI 2014 COV report was transmitted to Dr. Patrick Farrell, Chair of the Engineering Advisory Committee (ENG AdCom). This response is based on the report provided by Dr. Gilda Barabino, Chair of the 2014 EFRI COV, to the ENG AdCom on April 15, 2015. The report was accepted by the ENG AdCom with the following comment; *“The one topic from the COV report that was discussed at the AdCom was the issue of industry representation on the EFRI review panels. Apparently the COV itself was split regarding whether the current representation, a minimum of one industry participant, but often not more than one, was sufficient. The general AdCom view is that industry participation in evaluating these proposals for very new areas of research is important, and the AdCom itself did not take a firm position on whether the minimum number of industry participants in review panels should be significantly changed.”*

The 2014 EFRI COV report covered random samples on EFRI new proposal actions during the period FY2011-2013. This included competitive, returned and withdrawn actions.

Responses below are focus on specific recommendations noted in the COV Report.

## Merit Review Process

### 1.1 COV Recommendations

- Consider weighting criteria for pre-proposals toward evaluation of the transformative nature and impact of the idea while weighting full proposals toward elements that focus on feasibility.
- Consider establishing templates with solicitation-specific criteria to reduce inconsistencies; use templates for pre-proposal review and integrate into FastLane.

### 1.2 EFRI Response

We agree with the recommendation and will revise the pre-proposal instructions and criteria in the upcoming Solicitation (FY 2016).

With regard to the suggestion to establish templates, we used to do this but its effectiveness was in question because of the process of cutting and pasting from the template to the FastLane during submission. We will decide if we will implement the use of template again in the FY16 Solicitation. If so, we will have a process in place to monitor and improve its effectiveness.

## **Selection of Reviewers**

### **2.1 COV Recommendations**

- Create a process to identify the attributes of a good reviewer for a given EFRI solicitation.
- Conduct post-review evaluation of whether attributes were met.

### **2.2 EFRI Response**

Each EFRI Solicitation delineates EFRI-specific and Topic-specific review criteria. We will put in place a process to assure the Program Directors seek reviewers that are best qualified to evaluate proposals based on those criteria.

Regarding representation of industry experts in the EFRI review process mentioned in the introduction above, EFRI program will continue to ensure adequate industry representation in its review processes, including selection of future EFRI Topics. In particular, we will consult with NSF SBIR/STTR program directors to identify entrepreneurial industry experts as potential reviewers.

## **Management of the Program**

### **3.1 COV Recommendations**

- A strategy for “life after EFRI” should be developed.
- NSF could evaluate EFRI staffing needs to ensure that they are commensurate with the operational needs.
- The preliminary proposal could be simplified; e.g. eliminate detailed budget.

### **3.2 EFRI Response**

We agree that post-EFRI support is very important and that it requires commitments beyond the EFRI program. We will consult with ENG Program Directors and senior leadership to examine lessons learned and will develop strategies for post-EFRI support of EFRI Topics.

EFRI operations are supported through the Office of Assistant Director for Engineering (OAD). We will conduct a staffing needs evaluation to ensure that they are commensurate with the operations needs by taking resource limitation into consideration.

The current EFRI budget instructions are already simplified but we will look into simplifying it further, as well as other ways of simplifying the overall pre-proposal preparation. We plan to implement the changes in FY16 Solicitation.

## **Portfolio of Awards**

### **4.1 Recommendations**

- Consider whether upward adjustment is necessary.

- In support of broader representation, for example, the calls could encourage consortiums across states or geographic areas.
- Strive to broaden participation beyond PhD and research intensive PhD institutions.

## **4.2 EFRI Response**

We will evaluate the current level of support to determine if an increase above \$2M is needed.

Supporting projects from all geographical areas within U.S. is important to NSF. Currently, we do have a number proposals submitted from institutions in EPSCoR states to the EFRI program. We hesitate placing this suggestion as a requirement. We may consider putting a statement to encourage collaborations with experts from distributed geographical areas when appropriate for proposed research goals, activities and research capacities for investigators and their institutions.

Broadening participation beyond PhD and research intensive institutions is important to us and we will continue to strive to do that through all means including outreach and targeted training workshops.

## **OTHER TOPICS - Sustaining EFRI Topics**

### **5.1 COV Recommendations**

- Provide incentives for PDs to become champions of topics, e.g. travel funds, staff assistants.
- Establish mechanisms to ensure community solicited topics are championed.
- Enhance marketing and outreach to increase idea generation from the community.

### **5.2 EFRI Response**

For FY2016, ENG/OAD plans to provide travel funds for Program Directors to meet with EFRI funded research teams assuming travel budget allows. We will also make sure staffing assistance is provided as needed.

Our current mechanism for championship of community suggested ideas as EFRI topics is as follows. We inform ENG Program Directors of the highly rated community-suggested EFRI topic ideas. The Program Directors then choose which topics to champion. In FY2015's search for new topics, the top community-solicited ideas were championed.

We agree with the recommendation to enhance marketing and outreach and plan to explore the best ways to accomplish this.

## **OTHER TOPICS - Topic Selection**

### **6.1 COV Recommendations**

- Document topic selection process in detail so there is a process for internal review and refinement.
- Repeat Topic
  - > If topic remains relevant to NSF mission and national needs.

- > If topic is emerging as measured by proposal pressure or if highly recommend, but not funded.

## **6.2 EFRI Response**

We will document the best practices of the EFRI topic selection process in detail for internal review and revision as needed.

The recommendation for conditions under which to repeat a topic is consistent with our current practice and we will continue to implement it in this manner.

## **Appendix: Diversity and Conflict of Interest Report**

### 1. The diversity, independence and balance of the COV members

The 12 members of the COV included three individuals from the business community, eight from the academic community and one from a Gov't Agency (DOE). The committee had six women including one African-American who was the Chair. The committee was also geographically diverse.

### 2. Conflict of Interest report

A Conflict of Interest (COI) briefing was provided prior to the COV meeting as well as at the start of the COV meeting. All COV members completed the NSF COI form. All members of the COV were barred from seeing proposals from their home institution. None of the COV members was involved in the review of a program in which he or she had a pending proposal. The ENG COI officer was available at all times during the COV meeting to answer questions and/or resolve issues regarding conflicts of interest. No real or apparent conflicts arose during the course of the COV review of the EFRI program.