

**Charge from the Business and Operations Advisory Committee to  
the Subcommittee on NSF's Strengthened Oversight of Large Facility Cost Surveillance**

**Dated August 14, 2017**

The National Science Foundation (NSF) hereby initiates the formation and operation of an ad hoc Subcommittee of the NSF Business and Operations and Advisory Committee (the Committee) on End-to-End Cost Surveillance. The purpose of the Subcommittee is to issue a report to the Committee that fully evaluates NSF's strengthened "end-to-end cost surveillance policies and procedures" for Major Facility projects (i.e., Large Facilities). The report should specifically state whether or not the Subcommittee feels the strengthened policies and procedure are sufficient. The report may include recommendations to NSF for further improvement depending on the outcome. The review will pertain to both construction and operations awards.

**Context:**

On May 24, 2014, NSF's Office of Inspector General (OIG) issued an Escalation Memorandum in connection with five recommendations related to NSF's oversight of Large Facility Awards. As NSF's Audit Resolution Follow-up Official, NSF's Chief Operating Officer, Richard O. Buckius, provided detail of his review and conclusions regarding these recommendations in a memorandum entitled "*NSF's Management of Large Facilities Construction Project*," dated January 13, 2015, and addressed to Allison Lerner, Inspector General, and Marty Rubenstein, Chief Financial Officer (Attached).

One of the OIG's escalated recommendations stated, in part, the following:

*"NSF management, using a risk-based approach, develops end-to-end cost surveillance policies and procedures for its cooperative agreements to ensure adequate stewardship over federal funds."*

Dr. Buckius' response to this recommendation established NSF's commitment to completing the third-party analysis detailed in this document, as follows:

*"NSF has begun to strengthen cost estimating and cost monitoring oversight procedures, as outlined in the attached SOG 2014-2 (Attachment B). NSF will call for increased end-to-end cost surveillance policies and procedures. Once these are implemented, NSF will invite a qualified third-party organization to evaluate the results. The third-party expert needs to have in-depth knowledge of project management cost estimating and cost accounting." [Emphasis added.]*

**Charge to the Subcommittee:**

The Committee hereby charges the Subcommittee to prepare a report for the Committee in support of the Foundation's goal to ensure that its current cost surveillance policies and procedures are sufficient to ensure sound, end-to-end oversight of all NSF Large Facility construction and operations awards. Specifically, the Subcommittee should review and evaluate NSF's current oversight framework relating to Large Facility costs including the following: (1) proposal cost estimates; (2) NSF cost analysis of those estimates; and (3) post-award cost and performance monitoring.

With respect to the three areas of review delineated above, the Subcommittee's evaluation should include review of the following components of NSF's Large Facilities cost surveillance policies and procedures:

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- **Proposal Cost Estimates:** Large Facilities Manual (LFM 17-066, dated March 2017), Sections 2.0: "Large Facility Life Cycle and the MREFC Process", and 4.2: "Cost Estimating and Analysis."
- **Cost Analysis of Proposal Estimates:**
  - Standard Operating Guidance (SOG) 16-4: "Standardized Cost Analysis Guidance." (DACS/CSB)
  - SOG 2017-XX: "Selection of Independent Cost Estimate Reviews" (LFO)
- **Post-Award Cost and Performance Monitoring:**
  - SOG LFO-2017-2: "Earned Value Management System (EVMS) Validation, Surveillance, and Acceptance"
  - SOG 2016-5: "Guidance on Pre and Post-award Cost Monitoring Procedures for Large Facility Construction and Operations Awards Administered by CSB."

At a minimum, the Committee recommends that the Subcommittee meet with the following:

- Program staff
- BFA staff including Division of Acquisition and Cooperative Support (DACS)/Cooperative Support Branch (CSB), Contracts Branch; Large Facilities Office (LFO); and Division of Institution and Award Support (DIAS)/Cost Analysis and Pre-award Branch (CAP)
- MREFC Panel discussants and Office of the Director (OD) support staff
- NSB discussants for recent projects authorized by the Board (See below)
- Representatives from other agencies with analogous facilities (as necessary)

The Committee requests that the Subcommittee focus on the following Large Facilities projects, which have moved forward under NSF's strengthened policies:

- Regional Class Research Vessel (RCRV) Cost Analysis #3 – Construction Award
- Antarctic Infrastructure Modernization for Science (AIMS) Cost Analysis #2 – Establishing the Total Project Cost and plans for an Independent Cost Estimate (ICE). This project is awarded through a FAR-based contract, but processes are analogous.
- National Ecological Observatory Network (NEON) – Supplement to the initial operations award
- Large Hadron Collider High Luminosity Up-Grades (LHC-HL) Cost Analysis #1 and plans for cost analysis #2 and ICE.
- Ocean Observatories Network (OOI) – Cost analysis of the operations proposals (re-competition)

The Subcommittee may collaborate with the Committee if the Subcommittee deems it necessary to do so.

**Subcommittee Membership:** The Subcommittee shall include:

- Subcommittee Liaison from the BOAC
- Independent, qualified individuals from outside NSF with an in-depth knowledge of project management, cost estimating and cost accounting

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This may include other members from the BOAC or representatives from other federal agencies or organizations.

**Additional Background:**

- Summary status of cost-related National Academy of Public Administration (NAPA) recommendations to-date.
- Pertinent language from the American Innovation and Competitiveness Act (AICA) of 2017; Section 110.

**Activities of the Subcommittee:** The Subcommittee is requested to provide a written report to the Committee providing an assessment of its end-to-end review of NSF's strengthened cost surveillance policies and procedures. The Committee requests an update on Subcommittee activities at three-month intervals and a final report by June 30, 2018. NSF will organize and convene at least one in-person meeting at NSF, comprised of the Subcommittee, NSF staff cognizant of the projects and issues concerning the Subcommittee, and with the individuals mentioned above necessary to carry out this charge. Additional in-person meetings will be considered depending on need and budgetary resources. NSF will provide logistical and travel support for invited non-local participants. Participants will be invited to submit written materials to the Subcommittee for reference in their report preparation. The Subcommittee may organize additional meetings by conference call or other virtual technology as it deems necessary to do so. The Subcommittee chair will submit its written report to the Committee and provide a verbal presentation at a duly organized Committee meeting subsequent to submittal to NSF. The Subcommittee liaison to the Committee will facilitate this presentation, and will ensure that the report is discussed and deliberated at the meeting. The Committee will accept the report and make it publicly available. The Committee may also provide feedback to NSF and any additional comments it has to offer on the report by way of a cover letter to NSF. On or before the meeting where the Subcommittee's written report is discussed, the Committee's Designated Federal Officials may extend the Subcommittee's charge and activities as deemed necessary by NSF; otherwise, the Subcommittee will terminate upon completion of the activities set forth in the charge.