

**NATIONAL SCIENCE BOARD (NSB)**

**\$4,840,000**  
**+ 300,000 / 6.6%**

The FY 2011 Request for the National Science Board is \$4.84 million, an increase of \$300,000, or 6.6 percent, over the FY 2010 estimate of \$4.54 million. The FY 2011 Budget Request will enable the Board to fulfill its policy-making responsibilities for NSF and provide advice to the President and Congress on significant national policy issues in science and engineering (S&E) research and education. This increased funding will allow the Board to enhance its responsibilities related to the American Recovery and Reinvestment Act of 2009 (ARRA), increase activities in the review of major research facilities projects, and to complete three studies on merit review criteria, data policies and the support framework for leading-edge, transformative research.

**NSB Funding**  
(Dollars in Millions)

	FY 2009		FY 2011 Request	Change over FY 2010 Estimate	
	Omnibus Actual	FY 2010 Estimate		Amount	Percent
Personnel Compensation and Benefits	\$2.45	\$2.86	\$3.10	\$0.24	8.4%
Other Operating Expenses	1.58	1.68	1.74	\$0.06	3.6%
<b>Total, NSB</b>	<b>\$4.03</b>	<b>\$4.54</b>	<b>\$4.84</b>	<b>\$0.30</b>	<b>6.6%</b>
Full-Time Equivalent Employment	17	17	18	1	5.9%

Totals may not add due to rounding.

**Appropriation Language**

For necessary expenses (including payment of salaries, authorized travel, hire of passenger motor vehicles, the rental of conference rooms in the District of Columbia, and the employment of experts and consultants under section 3109 of title 5, United States Code) involved in carrying out section 4 of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1863) and Public Law 86-209 (42 U.S.C. 1880 et seq.), ~~\$4,540,000~~:**\$4,840,000**: *Provided*, That not to exceed ~~\$2,800,000~~**\$2,500** shall be available for official reception and representation expenses.

**National Science Board**  
**FY 2011 Summary Statement**  
(Dollars in Millions)

	Enacted/ Request	Expired	Total Resources	Obligations Incurred/Est.
FY 2009 Appropriation	\$4.03	-\$0.01	\$4.02	\$4.02
FY 2009 ARRA	-	-	-	-
FY 2010 Estimate	4.54	-	4.54	4.54
FY 2011 Request	4.84	-	4.84	4.84
\$ Change from FY 2010 Estimate				\$0.30
% Change from FY 2010 Estimate				6.6%

Totals may not add due to rounding.

## **National Science Board in Context**

As an independent federal agency, NSF does not fall under any cabinet department; NSF's activities are guided by the National Science Board within guidelines provided by the President and Congress. The Board, established by the Congress in 1950, has dual responsibilities to: a) provide national science policy advice to the President and Congress; and b) establish policies for NSF. The Board is composed of 25 presidentially appointed, Senate-confirmed members, including the NSF Director, representing the broad U.S. science and engineering community. Board Members, who serve 6-year terms on staggered appointments, are drawn from industry, academe, non-profit organizations and professional scientific societies, and represent the breadth of S&E disciplines and geographic areas. They are selected for their eminence in research, education, or public service.

The Board meets several times a year to review and approve major NSF awards and new programs, oversee and provide policy direction to NSF, and address significant science and engineering related national policy issues. It initiates and conducts studies and reports on a wide range of policy topics, analyzes NSF's budget to ensure progress and consistency along the strategic direction set for NSF and to ensure balance between new investments and core programs. The Board also identifies issues that are critical to NSF's future.

## **Summary of FY 2011 Request**

### **Staffing**

Most of the Board's FY 2011 Budget Request supports a small and independent core of full-time policy, administrative, and operations staff. Over 64 percent of the 2011 request, or \$3.10 million, is for Board member and staff salaries and benefits. The Board Office staff provides both the independent resources and capabilities for coordinating and implementing S&E policy analyses and development, and the operational support that is essential for the Board to fulfill its mission. An independent attorney, reporting to the Board not the NSF Director, is under recruitment. Additional staff support is needed for the portfolio review of facilities, including major facilities, being undertaken by the Board's Subcommittee on Facilities, and for support of major Board studies currently underway.

### **New Activities**

For FY 2011, the Board intends to complete several studies critical to the functioning of the agency. These include a reconstitution of the 1996 Task Group on Review Criteria to examine the agency's merit review process with a focus on the two merit review criteria. The Board will also develop a report on data policies to ensure that data collected through NSF sponsored research is available to the broad science, engineering and education communities. Another area of interest to the Board is the support structures for potentially transformative and interdisciplinary mid-to-large-scale research. In addition to these reports, the Board will continue to address the appropriate and proper use of Intergovernmental Personnel Act (IPA) personnel in senior management positions.

## **Ongoing National Science Board Activities**

### **Policy Guidance**

The Board issues policy guidance in the form of official statements, resolutions, and reports to the President and Congress. Recent reports have examined topics such as cost sharing, science and engineering education, the science and technology workforce, Major Research Infrastructure program, and research and development efforts of alternative sustainable energy. In FY 2010, the Board expects to release findings on factors impacting the next generation of Science, Technology, Engineering and

Mathematics (STEM) Innovators, and a policy statement Companion Piece to *Science and Engineering Indicators 2010*, its statutory biennial statistical report. For FY 2011, the Board will continue work on three priority studies: Merit Review, data policies, and the support framework for transformative research at NSF.

Experience has shown that the Board will receive requests from the President and/or Congress asking for reports on a range of national policy topics related to S&E research and education. The Board welcomes such requests, and will also continue to identify high priority topics focused specifically on NSF, or more broadly on national S&E policy issues, in FY 2011.

### **Other Responsibilities**

The Board expects to continue to be significantly engaged with assisting the agency in its responsibilities stemming from the American Recovery and Reinvestment Act. Additional responsibilities specific to FY 2011 also include NSF's implementation of components of the Action Plan for STEM Education and new efforts to be implemented regarding enhancement of NSF support for potentially transformative research as a result of new Board guidance.

The Board's on-going activities include review of the following:

- OIG Semi-annual Reports to Congress and NSF management responses;
- The NSF Budget Submission for transmittal to OMB;
- NSF's research infrastructure portfolio;
- Foundation's annual Merit Review Report; and
- Large awards or proposal funding requests.

The Board has established several standing committees to assist with its responsibilities. The Committee on Audit and Oversight reviews the operations of the Foundation's Office of Inspector General (OIG), as well as NSF compliance with procedures for financial accountability and information technology security. The Committee on Strategy and Budget (CSB) focuses on strategic planning and new investments for NSF. Review of the Foundation's budget request is also vested in CSB. The Board recently established within CSB the Subcommittee on Facilities (SCF) to provide increased guidance and review of the NSF-funded research equipment and facilities portfolio, including both MREFC-funded and R&RA-funded facilities.

The Committee on Education and Human Resources (CEH) focuses on Foundation activities in such priority areas as S&E workforce development, math and science education, and underrepresented populations and regions in S&E programs. The newly constituted Committee on Science and Engineering Indicators (SEI) manages the process for development and review of the Board's biennial report, *Science and Engineering Indicators*, and associated products.

The Board is responsible for direct review and approval of the Foundation's largest awards, and is responsible for the review and approval of Major Research Infrastructure projects at all stages of development, including budget planning, review of proposals and management effectiveness, and approval of awards. The members of the Committee on Programs and Plans (CPP) review proposals for major awards, the health of the Foundation's peer review system, and program performance and accountability. The Board monitors the critical infrastructure that supports research in Antarctica through the CPP Subcommittee on Polar Issues.

The Executive Committee acts on behalf of the Board between meetings on grants, contracts, or other arrangements, and other instances where an immediate decision is required. In addition, the Committee

has developed a prioritization process for the full Board to determine major Board policy activities for subsequent fiscal years.

### **Science and Engineering Indicators**

In January 2010, the Board delivered *Science and Engineering Indicators (SEI) 2010* to the President and to Congress, in keeping with its statutory responsibility. SEI is an important biennial statutory publication of the major, high quality quantitative data on the status of U.S. science and engineering. Over the past several years, the Board has heightened its efforts to expand the audience for *Indicators*, implementing several enhancements that encourage audiences outside the normal community of users to become familiar with the data resources in *Indicators* and to facilitate the use of *Indicators* data in policy decisions and analyses. Planning for the 2012 edition of *SEI* will continue into FY 2011.

### **Research Facilities Guidance and Oversight**

In FY 2011, the Subcommittee on Facilities will continue its review of the development, construction, operations, maintenance, and decommissioning of research equipment and facilities supported by NSF. This is an essential component of annual and long-term budget planning undertaken by the National Science Board. Subcommittee responsibilities include:

- Undertaking an annual review of the portfolio of all NSF-funded research facilities. This review considers projects from the Major Research Equipment and Facilities Construction (MREFC) account, as well as large and mid-size research facilities and infrastructure funded by the Research and Related Activities (R&RA) account. The review considers currently operating facilities, as well as those under construction and in early and late-stage planning. The review considers impacts on the long-term budgets of NSF divisions, directorates, and the Foundation as a whole; and further considers potential partnership among NSF directorates and offices and with other organizations.
- Providing to the Board a clear assessment of the impact that specific projects and the overall facilities portfolio will have on long-term budget planning at NSF. This includes consideration of whether existing facilities continue to be the best use of NSF's limited resources given alternative potential uses of funding for research facilities and individual investigator-led research.
- Recommending to the Board guidance to be provided to NSF management on the prioritization of all projects that have completed a Conceptual Design Review (CDR) and are being considered for further funding to develop preliminary designs.

### **Effective Communication with the Public**

Effective communications and interactions with our constituencies contribute to the Board's work of identifying priority science and technology issues, and developing policy advice and recommendations to the President and Congress. To this end, the Board will continue to increase communication and outreach with the university, industry, professional scientific societies, the broader science and engineering research and education community, Congress, federal science and technology agencies, and the public. To enhance and improve upon outreach activities, it is important to make the Board's discussions on policy decisions and recommendations more accessible and widely-available. To this end, in FY 2010 the Board is upgrading the technology in the Board Room and plans, with help from the Office of Legislative and Public Affairs, to webcast addresses by prominent scientists in honor of NSF's 60th anniversary, during 2010 and 2011. The Board recently implemented a new website focused on the Board's policy functions and will work to enhance its functionality for the public and for secure access to documents by Board members.

**Electronic Records for Researchers and Public**

One of the major functions of the Board Office is to keep the records of Board decisions and policy pronouncements. The records of these decisions, and policy statements and reports on national science and engineering policy issues prepared for the President and Congress, are currently housed in various formats and media. Electronic and paper documents are not easily accessible to the public, other Federal agencies, or staff of the Foundation because they are maintained in inconsistent systems of records, as individual reports and statements, or in testimony, letters and other communications with Congress and other agencies. For older records, many have been archived as paper documents and their existence relies merely on the memory of staff who participated in the policy discussions. This situation creates substantial barriers to frequent requests by interested members of the public, science historians, and NSF staff who wish or need to understand the underlying process for particular decisions or to obtain original documents relevant to a policy position.

The Board will continue development of electronic resources to search, identify and retrieve relevant documents, in a common format, for use by stakeholders including members of the public, Congress, other agencies, and NSF staff. Most records of the Board, throughout its 60 year history, are still in paper format. This work will permit historians, the media, policy analysts, and other members of the public and federal establishment to feel confident in the completeness of the information they are obtaining on Board discussions and decisions, facilitate NSF staff implementation of Board policies within the Foundation, and reduce the administrative cost and effort associated with information retrieval.

Other costs associated with Board activities support website maintenance; transcription services; report printing; and logistical support for Board meetings, workshops and roundtables. The Board's logistical support provides limited services for events including: travel planning assistance for invited speakers and participants; mailing of announcements and invitations; local transportation planning, printing, audio-visual and other services for off-site events; and additional low-level meeting, workshop and roundtable support.

**National Science Board  
Personnel Compensation and Benefits and General Operating Expenses**  
(Dollars in Thousands)

	FY 2009	FY 2009	FY 2010 Estimate	FY 2011 Request	Change over	
	Omnibus Actual	ARRA Actual			FY 2010 Estimate	FY 2011 Request
Personnel Compensation and Benefits	\$2,450	-	\$2,860	\$3,099	\$239	8.4%
Staff Development & Training	36	-	47	49	2	4.3%
Advisory & Assistance Services	1,015	-	980	990	10	1.0%
Travel & Transportation of Persons	232	-	330	350	20	6.1%
Communications, Supplies and Equipment	291	-	320	350	30	9.4%
Representation Costs	3	-	3	3	-	-
<b>Total, NSB</b>	<b>\$4,027</b>	<b>-</b>	<b>\$4,540</b>	<b>\$4,841</b>	<b>\$301</b>	<b>6.6%</b>
Full-Time Equivalent	17		17	18	1	

Totals may not add due to rounding.

