

NATIONAL SCIENCE FOUNDATION PROPOSAL and AWARD POLICIES AND PROCEDURES GUIDE, OMB Clearance No. 3145-0058

Part A. Justification

1. **Background.** The National Science Foundation Act of 1950 (Public Law 81-507) set forth NSF's mission and purpose:

“To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense....”

The Act authorized and directed NSF to initiate and support:

- basic scientific research and research fundamental to the engineering process;
- programs to strengthen scientific and engineering research potential;
- science and engineering education programs at all levels and in all the various fields of science and engineering; and
- programs that provide a source of information for policy formulation, and other activities to promote these ends.

Over the years, NSF's statutory authority has been modified in a number of significant ways. In 1968, authority to support applied research was added to the Organic Act. In 1980, The Science and Engineering Equal Opportunities Act gave NSF standing authority to support activities to improve the participation of women and minorities in science and engineering. Another major change occurred in 1986, when engineering was accorded equal status with science in the Organic Act.

NSF has always dedicated itself to providing the leadership and vision needed to keep the words and ideas embedded in its mission statement fresh and up-to-date. Even in today's rapidly changing environment, NSF's core purpose resonates clearly in everything it does: promoting achievement and progress in science and engineering and enhancing the potential for research and education to contribute to the Nation. While NSF's vision of the future and the mechanisms it uses to carry out its charges have evolved significantly over the last four decades, its ultimate mission remains the same.

NSF is seeking to improve its existing mechanisms for the issuance of proposal and award policies and procedures. Previously, these policies and procedures were contained in two separate issuances: the *Grant Proposal Guide* and the *Grant Policy Manual*. These documents were each separately maintained and issued with different effective dates and significant redundancies between the two documents. In 2006, we collapsed these two documents into a new policy framework: the *NSF Proposal and Award Policies and Procedures Guide*.

Part I of this document includes the *NSF Proposal Preparation and Submission Guidelines*, i.e., the *Grant Proposal Guide (GPG)*, and Part II includes the *NSF Award & Administration Guide* (previously known as the *GPM*). These documents are available as a single html file on the NSF website (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp). The initial issuance of

the *NSF Proposal and Award Policies and Procedures Guide* was effective following approval by OMB in 2006. It is anticipated that future issuances of the Guide will be supplemented with additional documents, such as the *NSF Grants.gov Application Guide*.

The new policy framework assists both NSF customers as well as NSF staff by:

1. improving both the awareness and knowledge of the complete set of NSF policies and procedural documents;
2. increasing ease of access to the policies and procedures that govern the entire grant lifecycle;
3. eliminating duplicative coverage between the two documents;
4. increasing the transparency of our proposal and award process; and
5. allowing NSF to better manage amendments between the two documents necessitated by administrative changes.

This process combined the Grant Proposal Guide (OMB Clearance No. 3145-0058) with the Proposal Review Process (3145-0060) to streamline the proposal and award management processes for applicants and awardees. This allows NSF to better manage amendments between the two collections necessitated by administrative changes.

In October 2007, NSF received approval to make a policy change to make award and sub-award information available to be searched by the public in a single searchable website developed by the Office of Management and Budget, as mandated by the *Federal Funding Accountability and Transparency Act (FFATA)* of 2006 (P.L. 109-282).

2. Use of Information. The information collected is used to help the Foundation fulfill this responsibility by initiating and supporting merit-selected research and education projects in all the scientific and engineering disciplines. NSF receives more than 40,000 proposals annually for new or renewal support for research in math/science/engineering education projects and makes approximately 11,000 new awards. The Foundation exercises its authority primarily by making merit-based grants and cooperative agreements and providing other forms of assistance to individual researchers and groups, in partnership with over 2800 colleges, universities and other institutions – public and private, state, local and federal – throughout the United States. The information collected on gender, race, ethnicity or disability is used in meeting NSF needs for data to permit response to congressional and other queries into equity issues. Demographic data allows NSF to gauge whether our programs and other opportunities in science and technology are fairly reaching and benefiting everyone regardless of demographic category; to ensure that those in under-represented groups have the same knowledge of and access to programs and other research and educational opportunities; and to assess involvement of international investigators in work supported by NSF.

The information collected on the proposal evaluation forms is used by the Foundation in applying the following criteria when awarding or declining proposals submitted to the agency: (1) intellectual merit; and (2) the broader impacts of the proposed activity.

The information collected on reviewer background questionnaires is used by managers to maintain an automated database of reviewers for the many disciplines represented by the proposals submitted to the Foundation. Information collected on gender, race, ethnicity and disability status is used in meeting NSF needs for data to permit response to congressional and other queries into equity issues. These data are also used in the design, implementation, and monitoring of NSF efforts to increase the participation of various groups in science, engineering, and education.

3. Use of Automation. Since its inception in 1994, the purpose of the FastLane System has been is to experiment with ways to use the World Wide Web to facilitate end-to-end electronic business transactions and the exchange of information between the National Science Foundation and its client community including researchers, reviewers, research administrators, and others doing business with NSF. The FastLane functions are accessed by using Web browsers that support file upload and forms capabilities. FastLane modules cover every major interaction between NSF and the science and engineering research and education community including:

- communicating the Foundation's strategic priorities to proposer and awardee communities;
- announcing NSF's funding opportunities;
- proposal preparation & submission, including electronic signatures;
- proposal reviews;
- panel travel initiation;
- panel electronic funds transfer information;
- interactive panel system for panel meetings (including proposal ranking and submission and approval of panel summaries);
- proposal and award status inquiries (proposal status includes release of reviews to PIs and co-PIs);
- revised proposal budget preparation and submission;
- supplemental funding request preparation and submission including electronic signatures;
- annual and final technical project reports;
- access to award letters for use by PIs, Co-PIs, and Sponsored Project Offices;
- quarterly federal cash transaction reports (SF 272);
- cash requests;
- post award administrative notifications and requests for NSF approval;
- organizational management; and
- review and/or revision of organizational information.

In FY 2007, there were 21,244 organizations that were registered users of the NSF FastLane system. In FY 2007, 44,573 proposals were submitted electronically to NSF, either through the NSF FastLane system or through use of the Grants.gov portal. Electronic submission accounts for 99.9% of all proposals submitted to NSF.

In addition, 206,000 reviews were submitted via FastLane, in FY 2007. Our users represent a diverse group of proposer and grantee organizations including major U.S universities, small

colleges, community colleges and non-profit organizations. The Proposal Evaluation module in the NSF FastLane System contains the electronic format (attached and available electronically at: https://www.fldemo.nsf.gov/jsp/homepage/prop_review.jsp) used in the evaluation of proposals for the NSF. This FastLane module permits persons reviewing NSF proposals to submit ratings and comments electronically using this application. The reviewer uses a special review PIN (specific to that proposal) to access a template that can be used to "copy and paste" reviewer comments and to record other required information.

Relationship to Grants.gov Activities:

The charter of Grants.gov, one of 24 President's Management Agenda E-Government initiatives, is to provide a simple, unified electronic storefront for interactions between grant applicants and the Federal agencies that manage grant funds. There are 26 Federal grant-making agencies and over 900 individual grant programs that award over \$350 billion in grants each year. The grant community, including state, local and tribal governments, academia and research institutions, and not-for-profits, need only visit one website, Grants.gov, to access the annual grant funds available across the Federal government. In short, Grants.gov provides:

- A single source for finding grant opportunities.
- A standardized manner of locating and learning more about funding opportunities.
- A single, secure and reliable source for applying for Federal grants.
- A simplified grant application process with reduction of paperwork.
- A unified interface for all agencies to announce their grant opportunities, and for all grant applicants to find and apply for those opportunities.

Since the inception of Grants.gov, NSF has been an active partner in Federal-wide electronic grant efforts. NSF worked with representatives from Federal research agencies (most notably the Department of Energy and the National Institutes of Health) under the auspices of the Research and Related subcommittee, toward the development of the SF 424 (R&R); a standardized application for use with research and research-related proposals. NSF continues this leadership role by participating in the Grants Executive Board, Research & Related Subcommittee (Chair), Grants.gov User Group, and Grants.gov Stakeholders Meetings.

Our continuing efforts to synchronize the NSF data requirements contained in the *Grant Proposal Guide* have been very beneficial. A comparison of the data contained in the SF 424 (R&R) reveals a very large percentage of commonality. Of the over 276 discrete data elements contained in the R&R dataset, there are less than 50 unique NSF data elements that are not accommodated – and, each of these data items generally is requested to meet specific NSF programmatic needs. Examples of the types of items not covered in the R&R application include: Deviation Authorization; List of Suggested Reviewers or Reviewers Not to Include; and additional cover data elements to facilitate proposal processing. As we continue our implementation efforts of the SF 424 (R&R), NSF will continue to evaluate those data elements in the *Grant Proposal Guide* that are not currently part of the R&R dataset to determine whether continued collection is warranted. While NSF began accepting proposals via use of the SF 424 (R&R) in FY 2005, until such a time, however, as all NSF proposals are capable of being

submitted through the Grants.gov portal, a separately cleared application format for use by NSF applicants is necessary.

4. Efforts to Identify Duplication. FastLane's forms automatically pull in information about the proposing organization and Principal Investigators that is already available in the NSF database thereby reducing the need to re-enter previously provided data. NSF is expanding its efforts in this area by making use of the FastLane system to fully integrate data, where possible and appropriate. NSF is able to take advantage of FastLane's database orientation to assure that the duplication of information is kept to a minimum.

No duplication exists in the evaluation process since each proposal is evaluated on its own merits. A centralized database is maintained containing the names, background data, and reviewer history of all individuals evaluating proposal for NSF. It also contains the names of potential reviewers. This database can be accessed, and new reviewers added, by any program officer needing reviewers. Program officers cannot remove names from the database once they have been asked to review a proposal. The names and related information about reviewers are maintained in the system indefinitely to account for disclosures under the Privacy Act and to fulfill NSF's policy on releasing the names of all individuals who have reviewed proposals.

5. Small Business Considerations. Proposals from small businesses are solicited in accordance with the NSF Act of 1950, as amended, and the Small Business Innovation Development Act of 1982, as amended. Small businesses are expected to submit proposals in accordance with NSF guidelines governing that particular program. These guidelines contain NSF standard proposal forms, with the addition of specific information required by Federal regulations.

6. Consequences of Less Frequent Collection. Proposers may submit as many proposals as they deem appropriate. Since each proposal is evaluated on its own merits by selected reviewers, proposers are required to furnish separate proposals; each developed in accordance with standardized electronic formats.

Most continuation proposals do not require external review. The reviews submitted at the time of the initial proposal submission, along with annual project performance reports are used as the basis for making awards. The major part of the review process consists of the review of new proposals submitted to the agency. No information is available for new proposals.

7. Collection Inconsistent with Guidelines in 5 CFR 1320.6. Evaluators of NSF proposals are given a pledge of confidentiality that their names will not be released in connection with their comments (see paragraph "10" below).

8. Federal Register Notice. Public Notice was published in the *Federal Register*, August 21, 2007, 72 FR 46667. No substantial comments were received.

Outside Consultation. The process for announcing the availability of support and the process for receiving proposals and making awards has been developed over the course of the

Foundation's history, with assistance from many external sources. These sources include other Federal agencies as well as from proposing organizations. The Foundation also has participated in the Federal Demonstration Partnership (FDP) since its inception. The Federal Demonstration Partnership is a cooperative initiative among 10 federal agencies and 98 institutional recipients of federal funds; its purpose is to reduce the administrative burdens associated with research grants and contracts. The interaction between FDP's 300 or so university and federal members takes place at FDP's three annual meetings and, more extensively, in the many collaborative working groups and task forces that meet often by conference call in order to develop specific work products. The FDP is a unique forum for individuals from universities and nonprofits to work collaboratively with federal agency officials to improve the national research enterprise. At its regular meetings, FDP members hold spirited, frank discussions, identify problems, and develop action plans for change. Then these new ways of doing business are tested in the real world before putting them into effect. Since its inception, the FDP has served as an important mechanism to solicit input and suggestions for improving the NSF proposal and award process.

In addition, a large percentage of NSF program officers, who are responsible for making funding recommendations, are from the research community. These individuals are well aware of the burden associated with the submission of a competitive proposal to NSF and have provided significant input on how the process can be streamlined and improved.

9. Gifts or Remuneration. Not applicable.

10./11. Confidentiality/Sensitive Questions. The Foundation is committed to monitor and identify any real or apparent inequities based on gender, race, ethnicity, or handicap of the proposed principal investigator(s)/project director(s) or the co-principal investigator(s)/co-project director(s). This demographic data allows NSF to gauge whether our programs and other opportunities in science and technology are fairly reaching and benefiting everyone regardless of demographic category; to ensure that those in under-represented groups have the same knowledge of and access to programs and other research and educational opportunities; and to assess involvement of international investigators in work supported by NSF.

Although submission of the data is voluntary, we strongly urge all proposers to provide it so that the quality of the database can be improved. NSF retains these documents as an integral part of its Privacy Act Record System, NSF 50, "Principal Investigator/Proposal File and Associated Records." The information is not released to proposal reviewers. Information from this form is made available only to a person conducting official business for NSF and is treated as confidential to the extent permitted by law.

Information concerning the reviewers/ panelists is maintained in accordance with the requirement of the Privacy Act of 1974 (NSF System of Records, NSF-51, "Reviewer/Proposal File"). Information from this "System of Records" may be released to other government agencies seeking reviewers.

Verbatim but anonymous copies of reviews are sent to principal investigators/project directors. Subject to this NSF policy and applicable laws, including the Freedom of Information Act, reviewers' comments will be given maximum protection from disclosure.

While listings of panelists' names are released, the names of individual reviewers, associated with individual proposals, are not released.

12. Burden on the Public. It has been estimated that the public expends an average of approximately 120 burden hours for each proposal submitted. Since the Foundation expects to receive approximately 45,000 proposals in FY 2007, an estimated 5,400,000 burden hours will be placed on the public.

The Central Contractor Registry (CCR) states it takes approximately one hour for an organization to complete the online registration, depending upon the size and complexity of the organization. The one hour to complete registration includes the time to read the instructions and to complete the form online. CCR does have handbook users may refer during the registration process. CCR recommends factoring in an additional 15 minutes in the instance the user references the handbook. When calculating the burden for this change in 2007, NSF retrieved a list of organizations that submitted proposals to the Foundation in FY 2006 and used a sample (5% error) to determine the percentage of these organizations registered in the CCR. Based on this sample, NSF determined that approximately 184 organizations would be affected, with an average of 1.25 hours to register, for a total of 230 hours.

The Foundation has based its reporting burden on the review of approximately 45,000 new proposals expected during FY 2007. It has been estimated that anywhere from one hour to 20 hours may be required to review a proposal. We have estimated that approximately 5 hours are required to review an average proposal. Each proposal receives an average of 3 reviews, resulting in approximately 675,000 burden hours each year.

The information collected on reviewer background questionnaire (NSF 428A) is used by managers to maintain an automated database of reviewers for the many disciplines represented by the proposals submitted to the Foundation. Information collected on gender, race, and ethnicity is used in meeting NSF needs for data to permit response to Congressional and other queries into equity issues. These data also are used in the design, implementation, and monitoring of NSF efforts to increase the participation of various groups in science, engineering, and education. The estimated burden for the Reviewer Background Information (NSF 428A) is estimated at 5 minutes per respondent with up to 10,000 potential new reviewers for a total of 833 hours.

The aggregate number of burden hours is estimated to be 6,076,063. The actual burden on respondents has not changed.

13. Annualized Cost to Respondents. There is no cost to respondents reviewing proposals electronically or by mail. Those respondents who review proposals by panel are reimbursed for their expenses.

14. Annualized Cost to the Federal Government. The cost estimate for development of the NSF Proposal and Award Policies and Procedures Guide is \$52,029. The main method of

accessing and printing this new Guide will continue to be via download from the NSF website. The Foundation will print a limited number of copies at our in-house printing facility at a cost of \$3,840. The following supporting documentation is the basis used to develop the estimate of the cost to gather information, develop, coordinate and review the Guide. Individuals and/or offices instrumental in this process were polled to determine the staff estimates used. Note that specific pay levels (i.e., ES-1, ES-2) are no longer available for senior NSF management who reviewed the Guide, now that OPM has moved to a pay band system. In FY 2007, NSF expended approximately \$22,340,000 for panel-related costs. This amount indicates travel costs and reimbursements for expenses for flat-rate panelists.

Office of Budget, Finance & Award Management (BFA)

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|----------------------|---------------------------------|
| Policy Head | 1 month x GS-15 = \$10,576 |
| Policy Specialist | 1 month x GS-13 = \$7,609 |
| 3 Policy Specialists | 1 week x GS-14 (avg.) = \$6,225 |
| Other BFA staff | 1 week x GS-14 (avg.) = \$2,075 |

Office of the General Counsel (OGC)

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|---------------------------|---------------------------------|
| Assistant General Counsel | 3 days = \$1,656 |
| Assistant General Counsel | 1 day = \$552 |
| Legal Analyst | 3 days x GS-13 (avg.) = \$1,050 |

Division of Administrative Services (DAS)

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| DAS Staff | 5 days x GS-12 (avg.) = \$1,755 |
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Division of Information Systems (DIS)

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| Division Director | 1 day = \$627 |
| Branch Chief | 3 days x GS-15 (avg.) = \$1,464 |
| Computer Specialists | 2 days x GS-14 (avg.) = \$830 |

Other NSF Staff Offices

30 people at 1 day each = \$17,610

Total Salaries: \$52,029

Estimated printing costs: .08 per page x 160 page document = \$12.80

\$12.80 x 300 copies = **\$3,840**

15. Changes in Burden. Since the burden hours reported are based on the number of proposals expected in any given year, this estimate is considered to be uncontrollable. The

burden is expected to increase proportionately for both the proposal and review processes as the receipt of proposals increases.

16. **Publication of Collection.** Not applicable.

17. **OMB Expiration Date.** Not applicable.

18. **Exceptions for Certifications.** Not applicable.

B. STATISTICAL METHODS. Not applicable.

DATA COLLECTION INSTRUMENT, INCLUDING CORRESPONDING INSTRUCTIONS

See Exhibit 1

ATTACHMENTS:

National Science Foundation Act of 1950 (Public Law 81-507)

NSF Form 1

NSF Form 428 A