7555-01-P

NATIONAL SCIENCE FOUNDATION

Agency Information Collection Activities: Comment Request; Engineering IIP Program Monitoring Clearance

AGENCY: National Science Foundation.

ACTION: Notice.

SUMMARY: Under the Paperwork Reduction Act of 1995, Pub. L. 104-13 (44 USC U.S.C. 3506(c)(2)(A)), and as part of its continuing effort to reduce paperwork and respondent burden, the National Science Foundation invites the general public and other Federal agencies to take this opportunity to comment on this information collection. This is the **second notice** for public comment; the first was published in the FEDERAL REGISTER at 79 FR 9485 and no comments were received. NSF is forwarding the proposed submission to the Office of Management and Budget (OMB) for clearance simultaneously with the publication of this second notice. The full submission may be found at: http://www.reginfo.gov/public/do/PRAMain.

DATES: Comments regarding these information collections are best assured of having their full effect if received by OMB within {INSERT DATE 30 DAYS FROM PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Written comments regarding the information collection and requests for copies of the proposed information collection request should be addressed to Suzanne Plimpton, Reports Clearance Officer, National Science Foundation, 4201 Wilson Blvd., Rm. 1265, Arlington, VA 22230, or by e-mail to splimpto@nsf.gov. Copies of the submission may be obtained by calling (703) 292-7556.

FOR ADDITIONAL INFORMATION: Contact Suzanne Plimpton, the NSF Reports Clearance Officer, phone (703) 292-7556, or send e-mail to splimpto@nsf.gov. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including federal holidays).

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond

to the collection of information unless it displays a currently valid OMB control number.

SUPPLEMENTARY INFORMATION:

TITLE of COLLECTION: Engineering IIP Program; Monitoring Data Collections.

OMB Number: 3145-NEW.

Type of Request: Intent to seek approval to establish specific collections for 5 IIP programs for post-award output and outcome monitoring.

Abstract

***Proposed Project*:** NSF provides nearly 20 percent of federal funding for basic research to academic institutions.[1] Within NSF, the Directorate for Engineering (ENG) has primary responsibility for promoting the progress of engineering in the United States in order to enable the Nation's capacity to perform. Its investments in engineering research and education aim to build and strengthen a national capacity for innovation that can lead over time to the creation of new shared wealth and a better quality of life. Most NSF programs in engineering are

[1]National Science Foundation. (2012). *NSF at a glance*. Retrieved from http://www.nsf.gov/about/glance.jsp.

funded through the Directorate for Engineering, which also sponsors the NSF's Industrial Innovation and Partnerships (IIP) Division. To these ends, ENG provides support for research and implementation activities that may meet national needs. While scientists seek to discover what is not yet known, engineers apply fundamental science to design and develop new devices and engineered systems to solve societal problems. ENG also focuses on broadening participation in engineering research and careers, particularly among those individuals traditionally underrepresented and underemployed in the STEM workforce, including but not limited to, women, persons with disabilities, and racial and ethnic minorities.

This request seeks approval for a group of information collections intended to monitor outputs, short-term, intermediate and long-term outcomes of NSF-ENG investments in research and innovation in the Division of Industrial Innovation and Partnerships (IIP). IIP programs serve the entire foundation by fostering partnerships to advance technological innovation and plays an important role in the public-private innovation partnership enterprise by investing in science and engineering research across all disciplines that have the potential for high impact in meeting national and societal needs. IIP focuses on

leveraging federal, small business, industrial, university, state and community college resources.

Genuine partnerships between academe and industry are an important aspect of IIP programs and should facilitate the types of infrastructure that can sustain and nurture the spread of innovative activity.

Innovation infrastructures educate and train human capital for the research enterprise and the entrepreneurial aspects of innovation; develop social networks characterized by shared commitment and trust; and build a base of operational support without which sustainable partnerships cannot exist. This support includes a diversified base of private investment, a physical place to provide a context for incubation, technical, management, and administrative support, laboratories, communications services, and reliable sources of capital. One end of the innovation spectrum within the division includes unsolicited research proposals generated by the academic community. On the other end of the innovation spectrum, IIP supports small business research proposals aimed at pursuing opportunities to commercialize products and services.

IIP is home to the two Congressionally mandated small business research programs, the Small Business Innovation

Research (SBIR) program and the Small Business Technology Transfer (STTR) program. IIP also manages the Partnerships for Innovation: Accelerating Innovation Research (PFI:AIR) as well as the Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program, which stimulate innovation by building partnerships across the scientific, engineering, and business community. In addition, the IIP leverages industrial support through the Industry/University Cooperative Research Centers (I/UCRC) program. The division also actively participates in NSF-wide programs, such as the Grants Opportunities for Academic Liaison with Industry (GOALI) program. Another NSF-wide program in which IIP actively participates is the Innovation Corps program (I-Corps), which equips scientists with the entrepreneurial tools needed to transform discoveries with commercial realization potential into innovative technologies.[2]2 ENG-funded projects could include research opportunities and mentoring for educators, scholars, small businesses and university students.

These survey questionnaires, individually tailored to measure outputs and outcomes for different programs, will provide essential information for program monitoring

[2]National Science Foundation. (2014) *About IIP*. Retrieved from http://www.nsf.gov/eng/iip/about.jsp.

purposes. Data collected by ENG IIP program monitoring collections will be used for program planning, management, and evaluation. Summaries of monitoring data are used to respond to queries from Congress, the public, NSF's external merit reviewers who serve as advisors, including Committees of Visitors (COVs), and NSF's Office of the Inspector General. These data are needed for effective administration, program and project monitoring, evaluation, and for measuring attainment of NSF's program and strategic goals, as identified by the President's Accountable Government Initiative, the Government Performance and Results Act (GPRA) Modernization Act of 2010, and NSF's Strategic Plan.

The seven (7) program-specific collections included in this request are designed to assist in management of specific programs and to serve as data resources for current and future program evaluations. As such, expected outcomes could vary according to the nature of the program funding, field of study, and other program characteristics.

Office	Programs
Industrial Innovation and Partnerships (IIP)	Grant Opportunities for Academic Liaison with Industry (GOALI)
	Innovation Corps (I-Corps)
	Partnerships For Innovation: Accelerating Innovation Research (PFI:AIR)
	Partnerships For Innovation: building Innovation Capacity (PFI:BIC)
	Small Business Innovation Research (SBIR)

This data collection effort will enable program officers to longitudinally monitor outputs and outcomes given the unique goals and purpose of their programs. This is very important to enable appropriate and accurate evidence-based management of the programs and to determine whether or not the specific goals of the programs are being met.

Grantees will be invited to submit this information on a periodic basis via data collection methods that include but are not limited to online surveys, interviews, phone

interviews, etc. These indicators are both quantitative and descriptive and may include, for example, the characteristics of project personnel and students; sources of complementary cash and in-kind support to the ENG project; characteristics of industrial and/or other sector participation; research activities; education activities; knowledge transfer activities; patents, licenses; publications; descriptions of significant advances and other outcomes of the ENG-funded effort.

Use of the Information: The data collected will be used for NSF internal reports, historical data, program level studies and evaluations, and for securing future funding for the ENG program maintenance and growth. These data could be used for program evaluation purposes if deemed necessary for a particular program. Evaluation designs could make use of metadata associated with the award, and other characteristics to identify a comparison group to evaluate the impact of the program funding and other interesting research questions.

Estimate of Burden

Collection Title	Number of Respondents	Annual Number of Hours/Respondents	Annual Hour Burden
Grant Opportunities for Academic Liaison with Industry (GOALI)	200	2	400
Innovation Corps (I-Corps) Longitudinal Collection	800	.25	200
Innovation Corps (I-Corps) Pre-Course Survey Questionnaire	150	.25	37.5
Innovation Corps (I-Corps) Post-Course Survey	150	.25	37.5

Questionnaire			
Partnerships for Innovation: Accelerating Innovation Research (PFI:AIR)	200	2	400
Partnerships for Innovation: Building Innovation Capacity (PFI:BIC)	30	2	60
Small Business Innovation Research (SBIR)	1,100	2	2,200
Total	2,630	8.75	3,335

Below is an example that shows how the hour burden was estimated for the monitoring system.

The estimated average number of annual respondents

is 2,630, with an estimated annual response burden of 3,335 hours. For post-award monitoring systems, IIP expects to collect data at 1, 2, 5, and 10 years post-award, in order to have the best chance of capturing the more immediate outcomes expected by 1- 2 years post- award, intermediate outcomes at 5 years post-award, and long-term outcomes/impacts at 10 years post award. These seven (7) data collections spread over the span of 10 years; this averages to 0.25 data collections/year. For the IIP division, many awards are made in translational research, such that we might expect a shorter and more condensed timeline of outcomes and impacts. Thus, some programs may wish to collect data quarterly for the first two years of the award, and then once annually at 5 and 10 years post-award. The annual number of responses for the first 2 years post award is included in this table.

For life-of-award monitoring, the data collection burden to awardees will be limited to no more than 2 hours of the respondents' time in each instance.

Respondents: The respondents are PIs, partners or students. For some programs (I-Corps) the burden already includes a response from 3 members of the team in the pre

and post surveys. For all others, one PI or assignee per award completes the questionnaire.

Estimates of Annualized Cost to Respondents for the Hour Burdens: The overall annualized cost to the respondents is estimated to be $215,660. The following table shows the annualized estimate of costs to PI/program coordinator respondents, who are generally university professors. This estimated hourly rate is based on a report from the American Association of University Professors, "Annual Report on the Economic Status of the Profession, 2011-12," *Academe*, March–April 2012, Survey Report Table 4. According to this report, the average salary of an associate professor across all types of doctoral-granting institutions (public, private- independent, religiously affiliated) was $86,319. When divided by the number of standard annual work hours (2,080), this calculates to approximately $41 per hour.

Respondent	No.	Burden Hours	Average	Estimated
PIs, Assignees, Partners or Students	2,630	2	$41	$215,660

Estimated Number of Responses per Report

Data collection for the collections involves all awardees in the programs involved. The table below shows the total universe and sample size for each of the collections.

Respondent Universe and Sample Size of ENG Program Monitoring Clearance Collections:

Collection Title	Universe of Respondents	Sample Size
Grant Opportunities for Academic Liaison with Industry (GOALI)	200	200
Innovation Corps (I-Corps) Longitudinal Collection	800	800
Innovation Corps (I-Corps) Pre-Course Survey Questionnaire	150	150

Innovation Corps (I-Corps) Post-Course Survey Questionnaire	150	150
Partnerships for Innovation: Accelerating Innovation Research (PFI:AIR)	200	200
Partnerships for Innovation: Building Innovation Capacity (PFI:BIC)	30	30
Small Business Innovation Research (SBIR)	1,100	1,100

Dated: February 3, 2015.

Suzanne H. Plimpton,

Reports Clearance Officer,

National Science Foundation.

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