

Original February 2012, revised August, 2013

Nanoscale Science and Engineering Centers (NSECs)

Class of 2001 Final Report Guidelines

The NSEC Final Report covers the renewal period of the NSEC. The Final Report is due 90 days after the end of the last no-cost extension period.

- Submit final Cost Sharing Certification through FastLane. Ensure that the cumulate amount of Cost Sharing Certified to meets or exceeds that specified in the Cooperative Agreement.
- Upload the data in this report to NSECWeb.
- Send any final Highlight in PowerPoint format to your Program Directors and to <u>NSEChighlights@NSF.gov</u>
- Submit a Project Outcomes Report via Research.gov at the time of the Final Report, see the FAQ at http://www.nsf.gov/pubs/policydocs/porfaqs.jsp

Significant Change: Transition from FastLane to the new Research Performance Project Report (RPPR) system in Research.gov as follows:

In accordance with the instructions provided in this document, the Nanoscale Science and Engineering Centers (NSEC) Annual Project Report must be submitted directly to the cognizant NSEC Program Director as a single PDF via e-mail and include the contents as specified in these final report guidelines. The submitted report will be uploaded into the NSF eJacket system by the Program Director. The final report will be reviewed and approved within eJacket, as was done when the reports were submitted via FastLane. The center does not use <u>Research.gov</u> to submit the contents of its Annual Report, but it does use <u>Research.gov</u> to indicate that the Report has been submitted, as described below.

- Submit notification to <u>Research.gov</u> as follows:
 - 0 **Cover Tab**: Review all the information displayed in the Cover tab within the Final Project Report section of <u>Research.gov</u>. Please verify the information in the Cover Tab within the Final Project Report section of

Research.gov. If any corrections are required, contact the Research.gov Help Desk 7 AM - 9 PM Eastern Time, Monday through Friday (except federal holidays) at <u>rgov@nsf.gov</u> or 1-800-381-1532.

- O <u>Accomplishments Tab</u>: Under the Accomplishments tab, insert the following statement into the first box that asks "What are the major goals of the project?"
 - "In accordance with the instructions provided to the Nanoscale Science and Engineering Centers (NSECs) in the NSEC Final Reporting Guidelines, the Final Project Report has been submitted separately directly to the cognizant NSEC Program Director and includes the content specified in the guidelines. The report is uploaded into the NSF eJacket system."
 - Next, there are four boxes under the question, "What was accomplished under these goals (you must provide information for at least one of the 4 categories below)?" In the first box, Major Activities, insert the same statement identified above: "In accordance with the instructions provided to the Nanoscale Science and Engineering Centers (NSECs) in the NSEC Final Reporting Guidelines, the Final Project Report has been submitted separately directly to the cognizant NSEC Program Director and includes the content specified in the guidelines. The report is uploaded into the NSF eJacket system."
 - Leave the next three boxes blank.
 - The last three boxes have a "nothing to report" or "no change" checkbox. Do not enter any text; just mark the "nothing to report" or "no change" checkbox for each question.
- **Products tab:** Under the products tab, do not enter any information. Mark the "nothing to report" checkbox for each question.
- **Participants tab:** The section "What individuals have worked on the project?" will be pre-populated with the names of the PIs for the NSEC. Review and edit as appropriate.

• For the "What other organizations have been involved as partners?" question, mark the "nothing to report" checkbox.

• For the "Have other collaborators or contacts been involved?" mark No.

• **Impact tab:** Mark the "nothing to report" checkbox for all of the questions.

- **Changes/Problems tab:** Mark the "nothing to report" checkbox for all of the questions.
- Certify and submit. Check the Certification checkbox and click on the Submit Report Button.

Note: All of the information regarding the center's accomplishments, contributions, publications, products, etc. must be contained within the Final Report that is submitted directly to the NSEC Program Director. Entering "nothing to report" in the Final Report submission in <u>Research.gov</u> does not imply that the center did not make progress or contributions during the reporting period. It is a means of allowing the NSECs to continue to report under the Annual Reporting guidelines and submitting an integrated set of documents useful to site visit teams and to NSF program officers.

NSEC FINAL REPORT Guidelines: Class of 2001 - Renewal award

CONTENTS

1. NSF Cover page

2. Table of Contents

Narrative Sections:

3. Project Summary (Limit 5 pages)

The summary should include the mission, goals, and the most significant achievements of the NSEC in two sections: Intellectual Merits and Broader Impacts of the NSEC.

4. List of Center Participants, Advisory Boards, and Participating Institutions

- (a) List all individual faculty level center participants that received support (continuous or otherwise) during the renewal award period. Indicate in **Bold** the current participants. Support can be in the form of salary support, and/or support for students, postdoctoral students, equipment, or other monetary support. List separately as "Affiliated Participants" all those who form an integral part of the Center but who receive no support from the NSEC award. For each name list the appropriate discipline / department.
- (b) List members of the *external advisory boards*. Indicate in **Bold** the current participants.
- (c) List all *academic participating institutions* that have a significant participation in activities of the center. Include minority-serving institutions that have substantial research and / or educational interactions with the center. *Note: there does not need to be a financial relationship between the center and the academic participating institutions*.
- (d) List all *participating industrial institutions* that have a significant participation in activities of the center. *Note: there does not need to be a financial relationship between the center and the participating industry.*
- (e) List all remaining *non-academic participating institutions* that have a significant participation in activities of the center. Include state supported institutions, national laboratories and other federal agencies, international partners, museums, etc. *Note: there does not need to be a financial relationship between the center and the non-academic participating institutions*.
- (f) List all *graduate students* who received Ph.D. degrees under this program during the renewal award. List in each case the faculty advisor(s) and the current employment status (industry, academia, national lab, unemployed, etc.) of the student (if known).
- (g) List all *Postdoctoral participants* who were associated with the Center during the renewal period. List in each case the faculty advisor(s) and the current employment status (industry, academia, national lab, unemployed, etc.) of the post-docs (if known).

5. Quantifiable Outputs

Insert Table 1 here (see appendix)

6. Research Program, Accomplishments, and Plans (Limit 5 pages per Thrust and 1 page per Seed)

State the title of each Thrust pursued over the course of the renewal period; list the names of each faculty investigator and senior participants by name, discipline/department; list number of graduate students, undergraduate students, and postdocs. Summarize the overall organization of the research program under manageable themes or thrusts. Describe major accomplishments under each thrust for the renewal award. <u>Underline</u> the name of each investigator wherever it occurs. Where applicable, the progress towards proof-of-concept test beds and their impact on the overall research program should be described. Describe the seed projects for the renewal period and major outcomes for these.

7. Center Diversity – Current status and progress since the start of the renewal.

Insert Diversity Table Here. (See Table 2 below)

Summarize what elements of the NSECs diversity strategic plan were effective in increasing the diversity of the center's leadership, faculty, undergraduate, graduate student, postdoctoral associates, and REU students.

8. Education (Limit 10 pages)

Summarize the key education activities over the renewal award period. Include new Nanoscale Science and Engineering (NSE) course titles, modified NSE course titles, NSE degree programs, NSE minors, NSE Certificates, etc. If applicable, provide a narrative of REU activities, minority programs; outreach to K-12 institutions; web based educational activities; public outreach; and, others as appropriate.

9. Outreach and Knowledge Transfer (4 pages)

Describe key successes over the renewal award period of the Center of collaboration and interaction with industry, national labs, and international; workshops; web based outreach activities; and others as appropriate. Describe spin-off of companies and other tech transfer activities.

10. Shared and other Experimental Facilities (2 pages)

Describe major shared and other major experimental facilities or laboratories created as a result of the NSEC.

11. Center Management (2 pages)

Describe the faculty and leadership teams, management team, various committees, and any major changes. Provide an organization chart.

12. Honors and Awards

List and briefly describe the major honors and awards given to Center participants during the renewal award.

13. Highlights

Provide new Science and Education Highlight as appropriate.

In addition to the annual report, prepare **<u>all</u>** highlights in MS PowerPoint, with one highlight per file, using the following file name: 'University' NSEC 'cooperative agreement number' 'author name' 'highlight title.' For example, a Highlight by Barbara Jones on Novel Nanoprobes from Stanford would read:

Stanford NSEC 0425897 Barbara Jones Novel Nanoprobes. Please send all highlights via e-mail attachment to your NSF NSEC program officer with a copy to nsechighlights@nsf.gov. NSEC Highlights may be made available to the public through NSF websites, brochures, CDs, and other media outlets.

• Highlights should be posted on your Center's website.

14. Publications and Patents

List of NSEC-supported publications **and** patents (current award period). *List invention disclosures, patents applied for and, patents granted, as well as any licensed patents*. Enter numbers in Table 1. Distinguish among primary NSEC support (> 50%), partial NSEC support (<50%), and use of shared facilities (optional). Underline or boldface all faculty level participants.

Enter all publications from the beginning of this award through the Products module in Research.gov. Include only articles actually published. Once uploaded, publications will appear under this award number on the NSF.gov and Research.gov websites.

Table 1: Quantifiable Outputs

The quantifiable outputs table will include data on the research, technology transfer, and education outputs of the center from inception through the renewal award.

Outputs

Total for Renewal Award

Publications resulting from NSEC Support that acknowledge the NSEC award:

- in Peer Reviewed Technical Journals
- in Peer Reviewed Conference Proceedings
- in Trade Journals
- With Multiple Authors
- co-authored with NSEC faculty

Publications from the NSEC

- that do not acknowledge the NSEC award:
 - in Peer Reviewed Technical Journals

NSEC Technology Transfer:

- Inventions Disclosed
- Patents Filed
- Patents Awarded
- Patents Licensed
 Software Licensed
- Software LicensedSpin-off Companies Started (if applicable)

Degrees to NSEC Students:

- Bachelors Degrees Granted
- Masters Degrees Granted
- Doctoral Degrees Granted

NSEC Graduates Hired By:

- Industry:
- NSEC participating Firms
- Other US Firms
- Government
- Academic Institutions
- Other
- Unknown

NSEC Influence on Curriculum:

- New Courses Based on NSEC Research
- Courses Modified to Include NSEC Research
- New Textbooks Based On NSEC Research
- Free-standing Course Modules or Instructional CDs
- New Full Degree Programs (specify name of program and where implemented in footnote)
- New Degree Minors or Minor Emphases (specify in name of program and where implemented in footnote)
- New Certificate (specify name of program and where implemented in footnote)

Information Dissemination/ Outreach:

- Workshops, Short Courses to Industry
- Workshops, Short Courses to Others
- Seminars, Colloquia, etc.
- World Wide Web courses

Table 2: NSEC Personnel – US Citizens and Permanent Residents

	Total							Women						AA-NA-PI						Hispanic						Disabled					
Year of annual report	0 7	0 8	09	1	1	C u m	07	0 8	0 9	1 0	1 1	C u m	0 7	0 8	0 9	1	1	C u m	0 7	0 8	0 9	1	1	C u m	0 7	0 8	09	1 0	1 1	C u m	
Director and Thrust Leaders																															
Senior Faculty																															
Junior Faculty																															
Post Docs																															
Doctoral Students																															
Masters Students																															
Undergraduate Students (non-REU)																															
REU Students																															

Cum = Cumulative for the renewal award. Note the cumulative total may be larger than the sum of the columns due to no cost extensions.

<u>AA-NA-PI</u>: Include all individuals belonging to the following groups (either wholly or mixed):

 $AA = \underline{A}$ frican \underline{A} merican/Black

NA = <u>N</u>ative <u>A</u>merican/Alaska Native

PI = Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

<u>Hispanics</u> comprise an ethnic, not a racial group. Hispanic or Latino: a person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race.

<u>Persons with a disability(ies)</u> – A person with hearing, visual, mobility/orthopedic, or other impairment. Other For additional information on groups underrepresented in Science Technology Engineering and Mathematics (STEM), please see, <u>http://www.whitehouse.gov/omb/fedreg_1997standards/</u>