

## Appendix C: FY 2008 Program Assessment Rating Tool (PART) Performance Measure Results

In FY 2008, 17 of 23 PART targets, or 74 percent, were achieved and are summarized below. Detailed results on each goal follow.

1. Research Grants: Time to Decision	●
2. Education Grants: Time to Decision	●
3. Major Research Instrumentation (MRI) Program: Time to Decision	●
4. Science and Engineering Centers: Time to Decision for Pre-Proposals	■
5. Research Grants: Percentage of Proposals from Outside the Top 100 Institutions	●
6. Education Grants: Percentage of Proposals from Outside the Top 100 Institutions	■
7. Major Research Instrumentation (MRI) Program: Percentage of Proposals from Outside the Top 100 Institutions	●
8. CAREER Program: Number of Applicants from Minority-Serving Institutions	●
9. Graduate Research Fellowship Program: Number of Applicants from Underrepresented Groups	●
10. SBIR/STTR Programs: Percentage of Phase I Awards to New PIs	■
11. Science and Engineering Centers: Percentage of Non-Academic Partner Institutions	■
12. GRF, IGERT, GK-12 Programs: Number of Graduate Students Funded	■
13. MREFC Facilities: Construction Cost and Schedule	■
14. Major Multi-User Research Facilities: Operations	●
15. FFRDC Operational Facilities	●
16. National Optical Astronomy Observatory (NOAO): Observing Time	●
17. National Center for Atmospheric Research (NCAR): Number of Users of Datasets	●
18. TeraGrid Users	●
19. Polar Programs: Support for Research in the Antarctic	●
20. Polar Programs: Construction Cost and Schedule	●
21. K-12 Math & Science Education: Rigorous Examination of Effectiveness of Resources	●
22. K-12 Math & Science Education: Rigorous Evaluation of DRK-12 Development Projects	●
23. K-12 Math & Science Education: Math & Science Partnerships – Adequate Yearly Progress	●

- Goal Achieved
- Goal Not Achieved

**ANNUAL PERFORMANCE GOAL 1:  
RESEARCH GRANTS: TIME-TO-DECISION**

**Goal:** For 70 percent of proposals submitted for Research Grants, inform applicants whether their proposals have been recommended for award or declination within six months of deadline, target date, or proposal receipt date, whichever is later, while maintaining a credible and efficient merit review system.

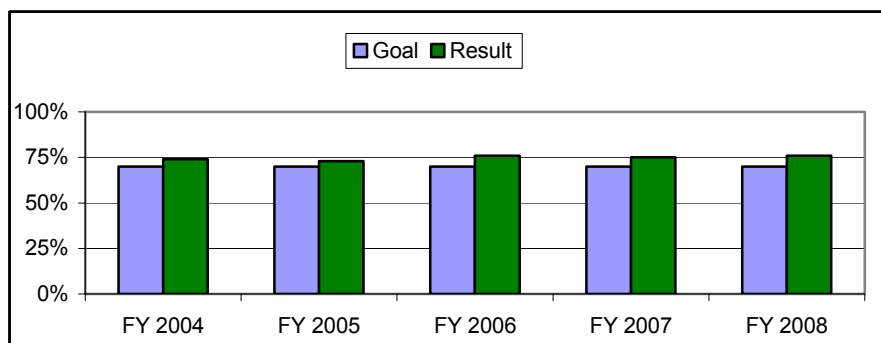
**Program Description:** NSF’s Research Grants program is a set of proposals dealing primarily with “traditional” research projects. Excluded from this category are grants for equipment, education, postdoctoral fellowships, planning and travel grants, and symposia, as well as cooperative agreements for centers and facilities. Also excluded are most of the programs in the Education and Human Resources (EHR) Directorate and the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

**Intent of the Goal:** This goal is intended to ensure that proposal decisions will be made available in a timely manner and conveyed to investigators in order that they may plan activities more effectively. Given the increasing complexity and growing numbers of proposals being submitted to NSF each year, and the increased attention throughout the Foundation to improving the quality and transparency of the merit review process, this is an ambitious goal for all program officers as they manage their proposal workloads and overall portfolios of awards.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	70%	74%
FY 2005	70%	73%
FY 2006	70%	76%
FY 2007	70%	75%
FY 2008	70%	76%



**Agency Efforts to Improve Performance and Efficiency:** The time-to-decision goal was achieved Foundation-wide (under the Stewardship goal) and in three program portfolios: Research Grants, Education Grants, and the Major Research Instrumentation (MRI) Program. NSF program officers are held accountable for making recommendations on funding of proposals in a timely manner (within six months from proposal receipt), and in notifying investigators about these recommendations, while maintaining a credible and efficient merit review system. The time-to-decision goal has been achieved despite the increasing numbers and complexity of proposals submitted to NSF.

**PART Evaluation:** This goal was established in the Fundamental Science and Engineering (FSE) PART (PART ID: 10004400) conducted in FY 2005.

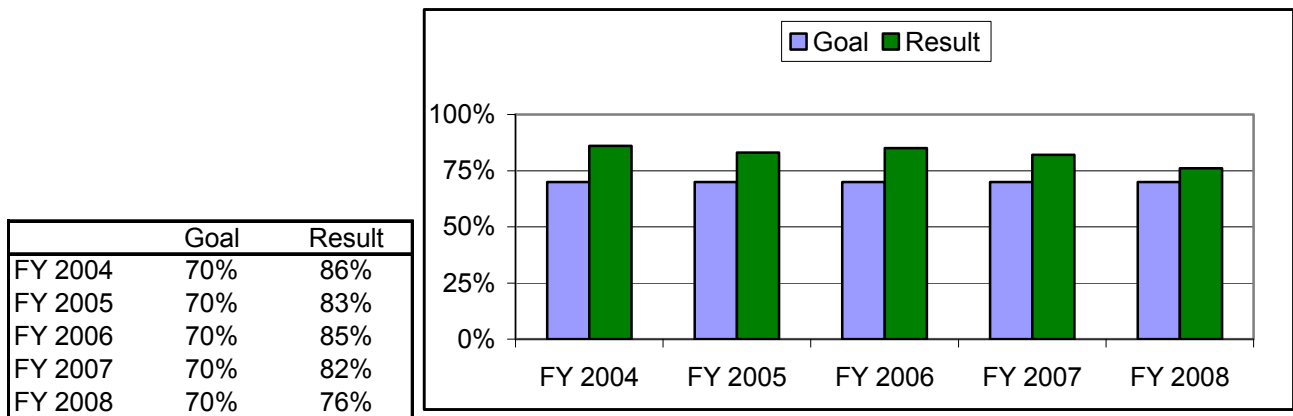
**ANNUAL PERFORMANCE GOAL 2:  
EDUCATION GRANTS: TIME-TO-DECISION**

**Goal:** For 70 percent of proposals submitted to the Directorate for Education and Human Resources (EHR), be able to inform applicants about funding decisions within six months of proposal receipt or deadline, or target date, whichever is later, while maintaining a credible and efficient merit review system.

**Program Description:** The mission of the Education and Human Resources (EHR) Directorate is to achieve excellence in U.S. science, technology, engineering, and mathematics (STEM) at all levels and in all settings (both formal and informal) in order to support the development of a diverse and well-prepared workforce. EHR Programs include opportunities for K-12 science and math education, undergraduate and graduate education, postdoctoral fellowships, and programs aimed at human resource development and at research on learning in formal and informal settings. A Directorate priority is to ensure that the STEM community is broadly representative of the nation's individuals, types of institutions, geographic regions, and STEM disciplines. Given the increasing complexity and growing numbers of proposals being submitted to NSF each year, and the increased attention throughout the Foundation to improving the quality and transparency of the merit review process, this is an ambitious goal for all program officers as they manage their proposal workload and overall portfolio of awards.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** The time-to-decision goal was achieved Foundation-wide (see Stewardship) and in three program portfolios: Research Grants, Education Grants, and the Major Research Instrumentation (MRI) Program. NSF program officers are held accountable for making recommendations on funding of proposals in a timely manner (within six months from proposal receipt), and in notifying investigators about these recommendations, while maintaining a credible and efficient merit review system. The time-to-decision goal has been achieved despite the increasing numbers and complexity of proposals submitted to NSF.

**PART Evaluation:** This goal was established during two PART evaluations conducted in FY 2004: Support for Small Research Collaborations (PART ID: 10002322), and Support for Research Institutions (PART ID: 10002324).

**ANNUAL PERFORMANCE GOAL 3:  
MRI PROGRAM: TIME-TO-DECISION**

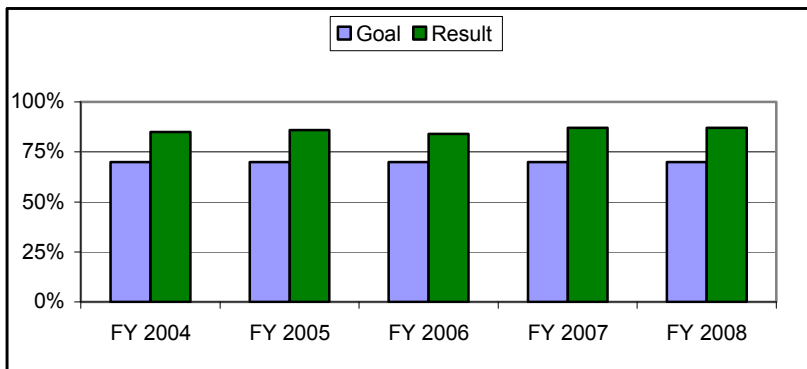
**Goal:** For 70 percent of the proposals submitted to the Major Research Instrumentation (MRI) Program, be able to inform applicants about funding decisions within six months of proposal receipt or deadline, or target date, whichever is later, while maintaining a credible and efficient merit review system.

**Program Description:** The Major Research Instrumentation Program is a Foundation-wide, cross-cutting initiative that supports the acquisition and development of instrumentation in fields such as nanotechnology, computing, physical sciences, and materials sciences and engineering. The portfolio reflects state-of-the-art instrumentation, access and training to support modern research approaches, integration of research and education, public/private partnerships, and assistance to minority-serving institutions. Timely availability of proposal decisions enables the investigators to more effectively plan activities. Given the increasing complexity and growing numbers of proposals being submitted to NSF each year, and the increased attention throughout the Foundation to improving the quality and transparency of the merit review process, this is an ambitious goal for all program officers as they manage their proposal workload and overall portfolio of awards.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	70%	85%
FY 2005	70%	86%
FY 2006	70%	84%
FY 2007	70%	87%
FY 2008	70%	87%



**Agency Efforts to Improve Performance and Efficiency:** The time-to-decision goal was achieved Foundation-wide (see Stewardship) and in three program portfolios: Research Grants, Education Grants, and the Major Research Instrumentation (MRI) Program. NSF program officers are held accountable for making recommendations on funding of proposals in a timely manner (within six months from proposal receipt), and in notifying investigators about these recommendations, while maintaining a credible and efficient merit review system. The time-to-decision goal has achieved despite the increasing numbers and complexity of proposals submitted to NSF.

**PART Evaluation:** A time to decision goal was established in the Investment in Research Infrastructure and Instrumentation PART conducted in FY 2006 (PART ID: 10004405).

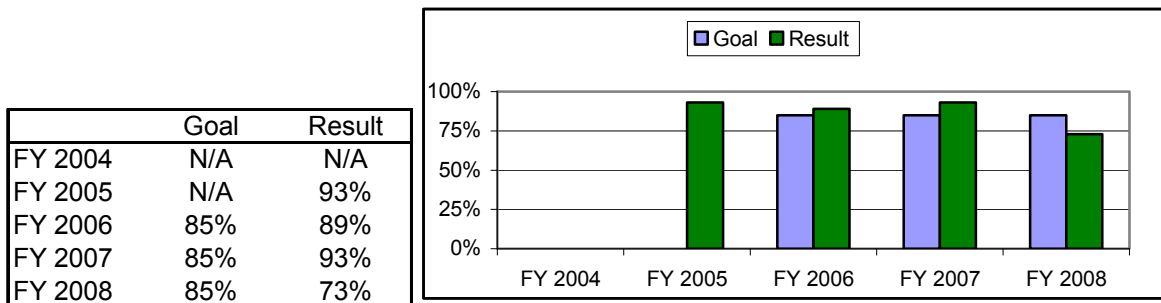
**ANNUAL PERFORMANCE GOAL 4:  
NSF SCIENCE AND ENGINEERING CENTERS: TIME TO DECISION FOR PRE-PREPOSALS**

**Goal:** For 85 percent of pre-proposals submitted to NSF Science and Engineering centers, be able to inform applicants within five months whether they will be invited to submit full proposals.

**Program Description:** NSF centers enable academic institutions, along with their non-academic partner institutions to integrate NSF's strategic goals of *Discovery, Learning, and Research Infrastructure* on scales that will significantly impact important science and engineering fields and cross-disciplinary areas through large-scale organized efforts. NSF centers exploit opportunities in science, engineering, and technology in which the complexity of the research problems, or the resources needed to solve them, require the advantages of scope, scale, change, duration, equipment, facilities, and students that can only be provided by an academic research center. Included in this category are seven Centers programs: Centers for Analysis and Synthesis, Centers for Chemical Innovation, Engineering Research Centers, Materials Research Science and Engineering Centers, Nanoscale Science and Engineering Centers, Science and Technology Centers, and Science of Learning Centers. This goal is intended to ensure that decisions on pre-proposals will be made available and conveyed to investigators so that they may have enough time to prepare full proposals if invited to do so.

**FY 2008 Result:** NSF did not achieve this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** Because not all of NSF's Centers hold competitions each year, the period of performance for this goal is two years, FY 2007-2008. During that period, four Centers competitions were held: the Centers for Analysis and Synthesis, the Centers for Chemical Innovation, the Engineering Research Centers (ERCs), and the Materials Research Science and Engineering Centers. In the four competitions, only one program, the ERCs, did not meet the goal of five months from the date of submission of a pre-proposal to notification of the PI on whether to submit a full proposal. The ERC Program's result was six months, which is the same as the Foundation-wide time to decision efficiency goal.

**PART Evaluation:** This goal was established in the Science and Engineering Centers PART Program conducted in FY 2006 (PART ID: 10004404).

**ANNUAL PERFORMANCE GOAL 5:  
RESEARCH GRANTS: PERCENTAGE OF PROPOSALS FROM OUTSIDE THE TOP 100 INSTITUTIONS**

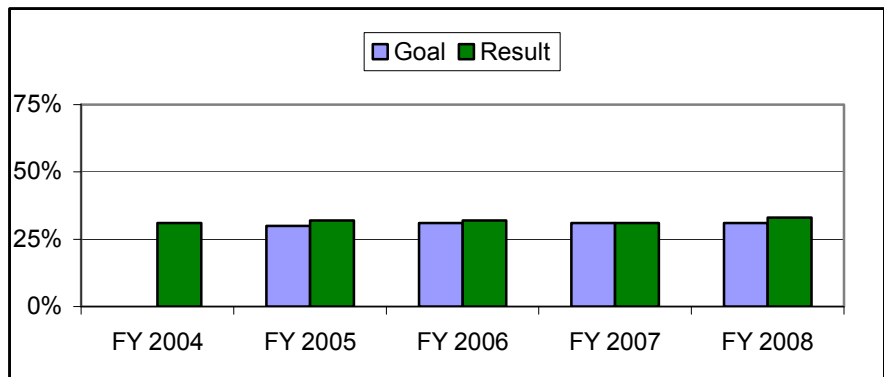
**Goal:** Increase the percentage of proposals for research grants from academic institutions not in the top 100 of NSF funding recipients.

**Program Description:** NSF’s Research Grants program is a set of proposals dealing primarily with “traditional” research projects. Excluded from this category are grants for equipment, education, postdoctoral fellowships, planning and travel grants, and symposia, as well as cooperative agreements for centers and facilities. Also excluded are most of the programs in the Education and Human Resources (EHR) Directorate and the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. This goal is intended to expand NSF’s efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in all NSF activities and programs.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	N/A	31%
FY 2005	30%	32%
FY 2006	31%	32%
FY 2007	31%	31%
FY 2008	31%	33%



**Agency Efforts to Improve Performance and Efficiency:** NSF continues to broaden participation through outreach to the institutions that are not in the top 100 of funding institutions. Examples of such activities are “NSF Days,” organized by the Office of Legislative and Public Affairs; regional grants workshops organized by the Office of Budget, Finance and Award Administration; and presentations on program opportunities by NSF staff at professional meetings throughout the country. NSF has established a Framework for Action on Broadening Participation, available on NSF’s website. <http://www.nsf.gov/od/broadeningparticipation/bp.jsp>

**PART Evaluation:** This goal was established in the Fundamental Science and Engineering (FSE) PART conducted in FY 2005 (PART ID: 10004400).

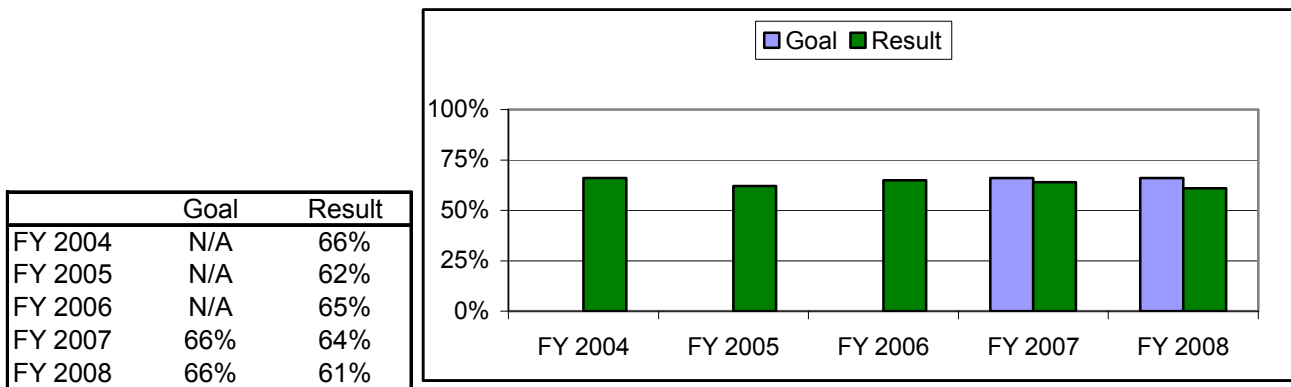
**ANNUAL PERFORMANCE GOAL 6:  
EDUCATION GRANTS: PERCENTAGE OF PROPOSALS FROM OUTSIDE THE TOP 100 INSTITUTIONS**

**Goal:** Increase the percentage of proposals submitted to the Directorate for Education and Human Resources (EHR) programs from academic institutions not in the top 100 of NSF funding recipients.

**Program Description:** The mission of the Education and Human Resources (EHR) Directorate is to achieve excellence in U.S. science, technology, engineering, and mathematics (STEM) at all levels and in all settings (both formal and informal) in order to support the development of a diverse and well-prepared workforce. EHR Programs include opportunities for K-12 science and math education, undergraduate and graduate education, postdoctoral fellowships, and programs aimed at human resource development and at research on learning in formal and informal settings. One of the Directorate's priorities is to ensure that the STEM community is broadly representative of the nation's individuals, types of institutions, geographic regions, and STEM disciplines. This goal is intended to expand NSF's efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in all NSF activities and programs.

**FY 2008 Result:** NSF did not achieve this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** NSF continues its efforts to broaden participation through outreach to the institutions that are not in the top 100 of funding institutions. Examples of such activities are “NSF Days,” organized by the Office of Legislative and Public Affairs; regional grants workshops organized by the Office of Budget, Finance and Award Administration; and presentations on program opportunities by NSF staff at professional meetings throughout the country. Such outreach activities are based on funds available for staff travel. It is important to note that NSF has established a Framework for Action on Broadening Participation, available on NSF's website. <http://www.nsf.gov/od/broadeningparticipation/bp.jsp>

**PART Evaluation:** This goal was established during two PART evaluations conducted in FY 2004: Support for Small Research Collaborations (PART ID: 10002322), and Support for Research Institutions (PART ID: 10002324).

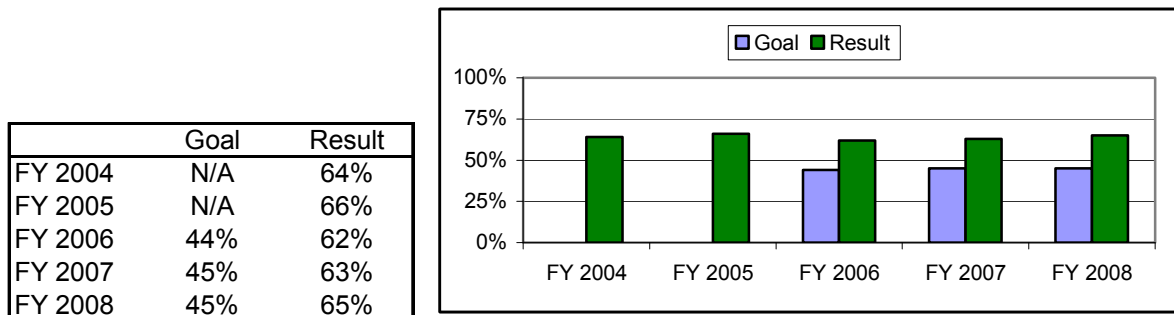
**ANNUAL PERFORMANCE GOAL 7:  
MRI PROGRAM: PERCENTAGE OF PROPOSALS FROM OUTSIDE THE TOP 100 INSTITUTIONS**

**Goal:** Maintain a high percentage of proposals submitted to the Major Research Instrumentation (MRI) Program from academic institutions not in the top 100 of NSF funding recipients.

**Program Description:** The Major Research Instrumentation Program is a Foundation-wide, cross-cutting initiative that supports the acquisition and development of instrumentation in fields such as nanotechnology, computing, physical sciences, and materials sciences and engineering. The portfolio of MRI awards reflects state-of-the-art instrumentation, access and training to support modern research approaches, integration of research and education, and public/private partnerships. To broaden participation from underrepresented groups and diverse institutions throughout the United States, the MRI Program provides extensive support to teaching-intensive and minority serving institutions, including Historically Black Colleges and Universities, Tribal Colleges, and community colleges, with a focus on research training.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**NOTE:** The goals for FY 2006-2009 shown in the charts above were established in FY 2006 during the PART evaluation on NSF’s Research Infrastructure and Instrumentation (I&I) Program, which had several disparate program components (Digital Library, Science Resources Statistics, Shared Cyberinfrastructure Tools, and the Major Research Instrumentation Program). However, under the new Strategic Plan, which covers FY 2006 -2011, the I&I Program category does not exist. Therefore, NSF is reporting results only for the MRI Program component (see PART Evaluation, below).

**Agency Efforts to Improve Performance and Efficiency:** NSF continues to broaden participation through outreach to the institutions that are not in the top 100 of funding institutions. Examples of such activities are “NSF Days,” organized by the Office of Legislative and Public Affairs; regional grants workshops organized by the Office of Budget, Finance and Award Administration; and presentations on program opportunities by NSF staff at professional meetings throughout the country. NSF has established a Framework for Action on Broadening Participation, available on NSF’s website. <http://www.nsf.gov/od/broadeningparticipation/bp.jsp>

**PART Evaluation:** This goal was established in the Investment in Research Infrastructure and Instrumentation PART conducted in FY 2006 (PART ID: 10004405). Because the Research Infrastructure and Instrumentation program category no longer exists under NSF’s new Strategic Plan, the Foundation established a related performance measure for one of its major components, the MRI Program.



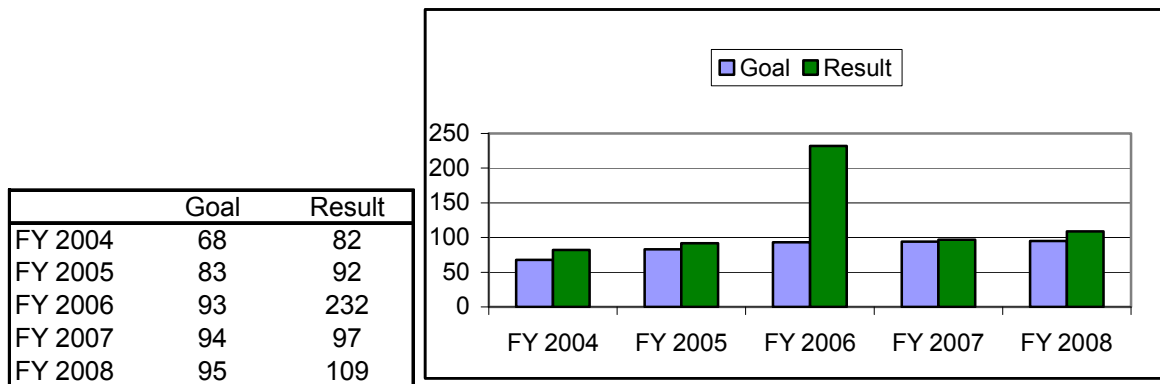
**ANNUAL PERFORMANCE GOAL 8:  
CAREER PROGRAM: NUMBER OF APPLICANTS FROM MINORITY-SERVING INSTITUTIONS**

**Goal:** Increase the number of applicants for Faculty Early Career Development (CAREER) awards from investigators at Minority-Serving Institutions.

**Program Description:** The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. NSF encourages submission of CAREER proposals from junior faculty at all eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply. This goal is intended to expand NSF's efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in all NSF activities and programs.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** The Foundation continues its efforts to broaden participation in all activities and programs from groups that are underrepresented in science and engineering. NSF has established a Framework for Action on Broadening Participation, available on NSF's website. <http://www.nsf.gov/od/broadeningparticipation/bp.jsp>

**PART Evaluation:** This goal was established in the Support for Individual Researchers PART Program conducted in FY 2003 (PART ID: 10001148).

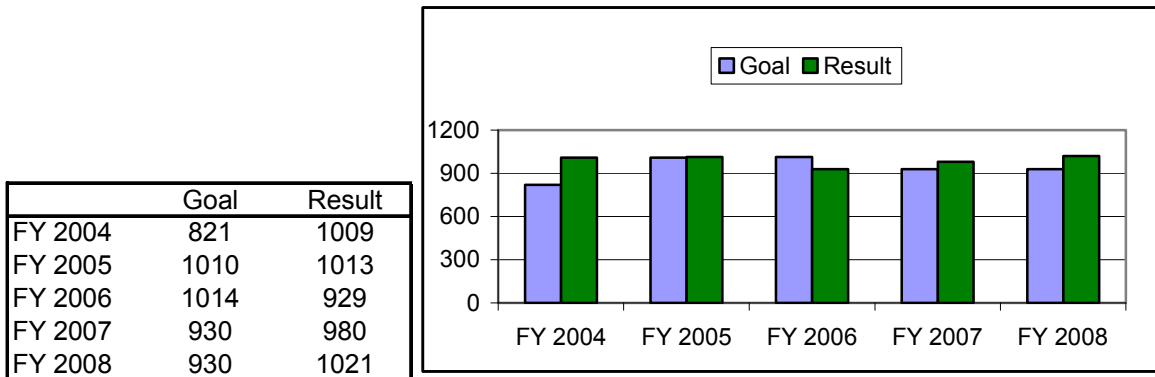
**ANNUAL PERFORMANCE GOAL 9:  
GRADUATE RESEARCH FELLOWSHIP PROGRAM:  
NUMBER OF APPLICANTS FROM UNDERREPRESENTED GROUPS**

**Goal:** Increase the number of applicants to the Graduate Research Fellowship Program (GRFP) from groups that are underrepresented in the science and engineering workforce.

**Program Description:** The National Science Foundation aims to ensure the vitality of the human resource base of science, technology, engineering, and mathematics in the United States and to reinforce its diversity by offering approximately 1,000 graduate fellowships per year in this competition. The Graduate Research Fellowship provides three years of support for graduate study leading to research-based master's or doctoral degrees and is intended for students who are at the early stages of their graduate study. The Graduate Research Fellowship Program (GRFP) invests in graduate education for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of the National Science Foundation. This goal is intended to expand NSF's efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in all NSF activities and programs.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** NSF has begun a more aggressive outreach effort that includes holding workshops and webinars for undergraduate students at Minority Serving Institutions on how to prepare competitive fellowship applications, working with local and state organizations to reach out to middle and high school students to generate interest in science and engineering, and preparing students in the Louis Stokes Alliances for Minority Participation (LSAMP) Bridge to the Doctorate Program to apply to the GRFP. NSF has established a Framework for Action on Broadening Participation, available on NSF's website. <http://www.nsf.gov/od/broadeningparticipation/bp.jsp>

**PART Evaluation:** The goal was established in the Support for Individual Researchers PART Program conducted in FY 2003 (PART ID: 10001148).

**ANNUAL PERFORMANCE GOAL 10:  
SBIR/STTR PROGRAMS: PERCENTAGE OF PHASE I AWARDS TO NEW PIs**

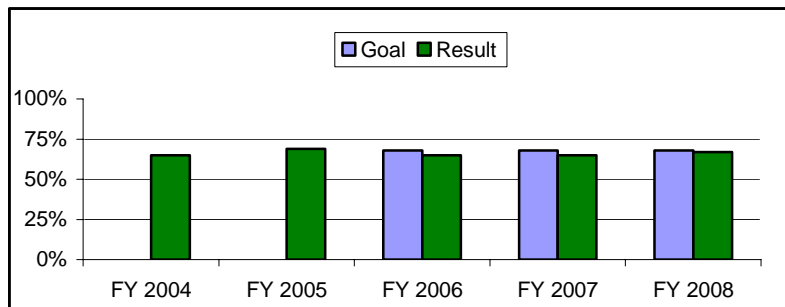
**Goal:** Maintain a high percentage of awards to new principal investigators (new companies) in Phase I of the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) Programs.

**Program Description:** The SBIR/STTR Programs stimulate technological innovation in the private sector by strengthening the role of small business concerns in meeting Federal research and development needs, increasing the commercial application of federally supported research results, and fostering and encouraging participation by socially and economically disadvantaged and women-owned small businesses. The significant difference between the SBIR and STTR programs is that STTR requires researchers at universities and other research institutions to play a significant intellectual role in the conduct of each STTR project. These university-based researchers, by joining forces with a small company, can spin off their commercially promising ideas while they remain primarily employed at the research institution. The SBIR/STTR Program is renewing efforts to attract and fund quality proposals from new principal investigators (new companies) through such means as co-funding with the EPSCoR Program; outreach at national, regional, state, and local small business events; supplementing NSF programs such as Research Experiences for Undergraduates (REU) and Research Experiences for Teachers (RET); and encouraging more participation from women and underrepresented groups.

**FY 2008 Result:** NSF did not achieve this goal. The results are lower than the target, but improved over the prior year's performance. The performance goal was set at an approximate target level, and the deviation from that level is slight (one percent). There was no effect on overall program performance.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	N/A	65%
FY 2005	N/A	69%
FY 2006	68%	65%
FY 2007	68%	65%
FY 2008	68%	67%



**Agency Efforts to Improve Performance and Efficiency:** NSF staff are exploring ways to increase the number of proposals from women and underrepresented minorities to the SBIR and STTR programs. For more information, see: <http://www.nsf.gov/eng/iip/sbir/diversity/index.jsp>. NSF is inviting supplemental proposals from SBIR/STTR Phase II grantees who have successfully taken an SBIR/STTR project through Phase I, Phase II/IIB to the market. The grantees will serve as mentors to other small businesses that have never submitted a proposal to NSF, including those from underrepresented groups within their communities. The supplements are intended to broaden participation and to increase the diversity of small businesses within the NSF SBIR/STTR program. For more information see the program: Dear Colleague Letter: [DCL](#).

**PART Evaluation:** This goal was established in the Capability Enhancement of Researchers, Institutions, and Small Businesses PART Program conducted in FY 2006 (PART ID: 10004405).

**ANNUAL PERFORMANCE GOAL 11:  
NSF SCIENCE AND ENGINEERING CENTERS:  
PERCENTAGE OF NON-ACADEMIC PARTNER INSTITUTIONS**

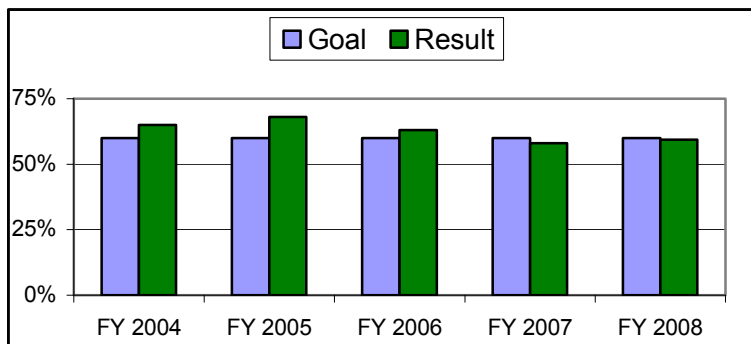
**Goal:** For all NSF centers, maintain a high percentage of partner institutions that are non-academic institutions (includes industry, state, local, and other Federal agencies).

**Program Description:** NSF centers program enable academic institutions, along with their non-academic partner institutions to integrate NSF's strategic goals of *Discovery, Learning, and Research Infrastructure* on scales that will significantly impact important science and engineering fields and cross-disciplinary areas through large-scale organized efforts. NSF centers exploit opportunities in science, engineering, and technology in which the complexity of the research problems, or the resources needed to solve them, require the advantages of scope, scale, change, duration, equipment, facilities, and students that can only be provided by an academic research center. Included in this category are seven Centers programs: Centers for Analysis and Synthesis, Centers for Chemical Innovation, Engineering Research Centers, Materials Research Science and Engineering Centers, Nanoscale Science and Engineering Centers, Science and Technology Centers, and Science of Learning Centers. This goal is intended to contribute to NSF's efforts to broaden participation in its programs by encouraging linkages with non-academic partners throughout the United States, such as national laboratories, research museums, private sector research laboratories, state and local government laboratories, and international collaborations.

**FY 2008 Result:** NSF did not achieve this goal. The results are lower than the target, but improved over the prior year's performance. The performance goal was set at an approximate target level, and the deviation from that level is slight. There was no effect on overall program performance.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	60%	65%
FY 2005	60%	68%
FY 2006	60%	63%
FY 2007	60%	58%
FY 2008	60%	59%



**Agency Efforts to Improve Performance and Efficiency:** Four of the seven Centers programs surpassed the target of 60%: Centers for Analysis & Synthesis (84%), Nanoscale Science & Engineering Centers (65%), Science and Technology Centers (79%), and Science of Learning Centers (65%). The remaining three Centers programs did not meet the target: Centers for Chemical Innovation (37%), Engineering Research Centers (51%), and Materials Research Science and Engineering Centers (50%). Renewed efforts are being made to increase the participation of non-academic institutions through outreach to the science and engineering community and international partnerships.

**PART Evaluation:** This goal was established in the Science and Engineering Centers PART Program conducted in FY 2006 (PART ID: 10004404).

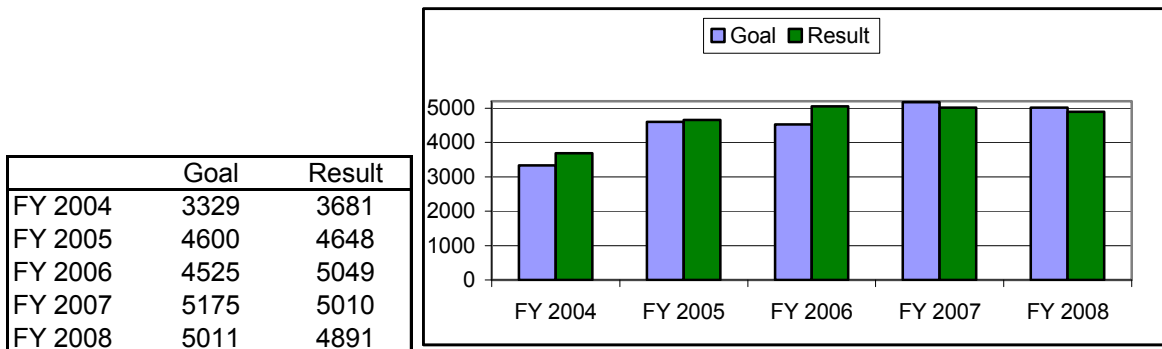
**ANNUAL PERFORMANCE GOAL 12:  
GRF, IGERT, GK-12 PROGRAMS: NUMBER OF GRADUATE STUDENTS FUNDED**

**Goal:** Increase the number of graduate students funded through fellowships or traineeships in the Graduate Research Fellowship Program (GRFP), the Integrative Graduate Education and Research Traineeships (IGERT) Program, and the Graduate Teaching Fellows in K-12 Education (GK-12) Program.

**Program Descriptions:** The **Graduate Research Fellowship Program (GRFP)** provides three years of support for graduate study leading to research-based master's or doctoral degrees and is intended for students at the early stages of their graduate study. The **Integrative Graduate Education and Research Traineeship (IGERT) program** aims to educate U.S. Ph.D. scientists and engineers who will pursue careers in research and education, with the interdisciplinary backgrounds, deep knowledge in chosen disciplines, and technical, professional, and personal skills to become, in their own careers, leaders and creative agents for change. The **Graduate Teaching Fellows in K-12 Education (GK-12) program** provides funding to graduate students in science, technology, engineering, and mathematics (STEM) disciplines to acquire additional skills to prepare them for professional and scientific careers in the 21st century.

**FY 2008 Result:** NSF did not achieve this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** This goal covers three programs that support graduate students. The IGERT program exceeded its FY 2007 result, supporting 48 more students. In the GRFP, the result reported is only a snapshot of the fellows on tenure on 9/30/08. Some fellows completed their programs early, and some new fellows had not yet started their tenure. The same holds true for the GK-12 Program, where old awards are spending down and new awardees have not yet achieved a full cohort of fellows. NSF proposes to increase the number of graduate students supported in the GRFP by 22 percent in its FY 2009 Budget Request.

**PART Evaluation:** This goal was established in the Support for Individual Researchers PART Program conducted in FY 2003 (PART ID: 10001148).

**ANNUAL PERFORMANCE GOAL 13:  
MREFC FACILITIES: CONSTRUCTION COST AND SCHEDULE**

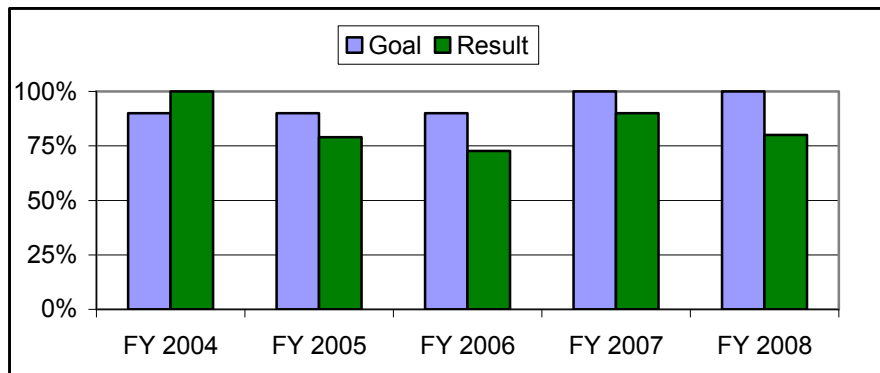
**Goal:** For all facilities in the Major Research Equipment and Facilities Construction (MREFC) account, keep negative cost and schedule variances to less than ten percent.

**Program Description:** In FY 2008, cost and schedule variances were tracked for five major facilities under construction: the Atacama Large Millimeter Array (ALMA), EarthScope, the IceCube Neutrino Observatory, the Scientific Ocean Drilling Vessel (SODV), and the South Pole Station Modernization (SPSM) project. Earned Value Management (EVM), a widely accepted project management tool for measuring progress, is used for this goal.

**FY 2008 Result:** NSF did not achieve this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance :**

	Goal	Result
FY 2004	90%	100%
FY 2005	90%	79%
FY 2006	90%	73%
FY 2007	100%	90%
FY 2008	100%	80%



**Agency Efforts to Improve Performance and Efficiency:** Only one out of the five MREFC projects, the Scientific Ocean Drilling Vessel (SODV), did not achieve the schedule variance goal. The SODV activity is paced by shipyard work to refit and upgrade the vessel. Progress by the shipyard has been slower than expected. To improve performance, a risk management plan is in place, and highest level risks are reviewed continuously by the SODV Conversion Management Team and regularly by the SODV Independent Oversight Committee.

**PART Evaluation:** This goal was established in the Construction and Operations of Research Facilities PART Program (PART ID: 10001145), conducted in FY 2003. Through FY 2006, the goal applied to as many as 11 construction projects, and the target was set at 90 percent to stay within 10 percent of the approved project plan. In FY 2007, the goal was revised to apply to only the five projects named above, and the target was set at 100 percent.

**ANNUAL PERFORMANCE GOAL 14:  
MAJOR MULTI-USER RESEARCH FACILITIES: OPERATIONS**

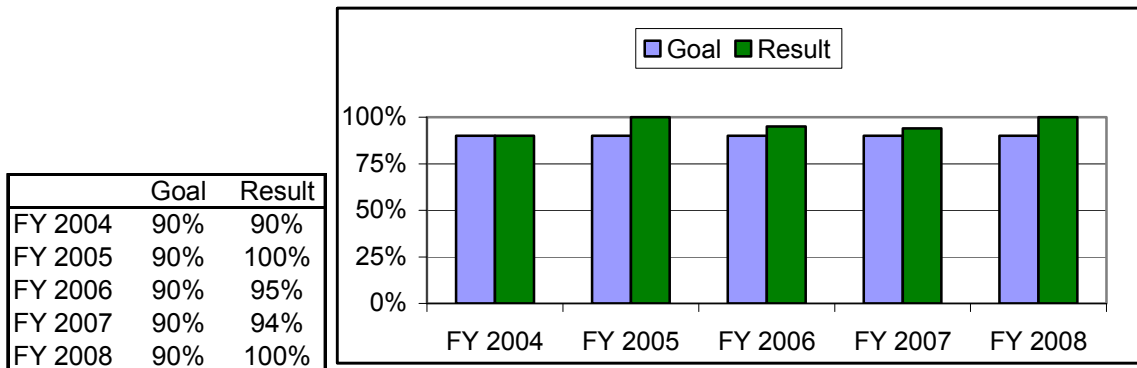
**Goal:** For 90 percent of NSF facilities in the operational phase, keep operating time lost due to unscheduled downtime to less than ten percent.

**Program Description:** NSF investments provide state-of-the-art tools for research and education, such as multi-user research facilities, distributed instrumentation networks and arrays, accelerators, telescopes, research vessels, aircraft, and earthquake simulators. In addition, investments in internet-based and distributed user facilities are increasing as a result of rapid advances in computer, information, and communication technologies. NSF's investments in large-scale facilities are coordinated with those of other organizations, agencies, and countries to ensure complementarity and integration.

This goal applies to 19 operational facilities: Academic Research Fleet, A Toroidal Large Angle Spectrometer (ATLAS), Compact Muon Solenoid (CMS), Cornell Electron Storage Ring (CESR), Gemini Observatory, IceCube, Incorporated Research Institutions for Seismology (IRIS), Laser Interferometer Gravitational Wave Observatory (LIGO), National High Magnetic Field Laboratory (NHMFL), National Nanofabrication Infrastructure Network (NNIN), National Superconducting Cyclotron Laboratory (NSC), Network for Earthquake Engineering Simulation (NEES), National Astronomy and Ionosphere Center (NAIC), National Center for Atmospheric Research (NCAR)-Earth Observing Laboratory, National Center for Atmospheric Research (NCAR)-Scientific Computing Division, National Solar Observatory (NSO), National Optical Astronomy Observatory (NOAO), National Radio Astronomy Observatory (NOAO), and U.S. Antarctic Program-Operations.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** To provide the flexibility necessary for NSF to report realistic goals for operational large facilities, the level of success is maintained at 90% of those facilities. Beginning in FY 2005, the threshold for reporting was raised to \$8M per year, to provide consistent definitions of “large facilities.”

**PART Evaluation:** This goal was established in the Construction and Operations of Research Facilities PART Program conducted in FY 2003 (PART ID: 10001145).

**ANNUAL PERFORMANCE GOAL 15:  
FFRDC OPERATIONAL FACILITIES**

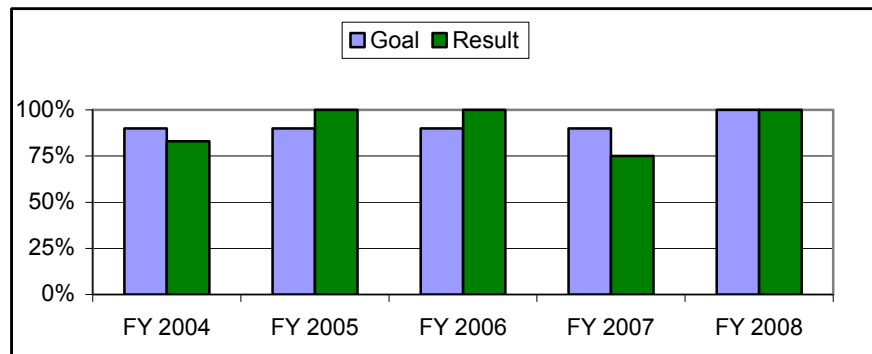
**Goal:** For 90 percent of NSF's Federally Funded Research and Development Centers (FFRDCs), keep operating time lost to less than ten percent.

**Program Description:** This goal applies to four facilities: the National Astronomy and Ionosphere Center (NAIC), National Center for Atmospheric Research (NCAR), National Optical Astronomy Observatory (NOAO), and National Radio Astronomy Observatory (NRAO).

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	90%	83%
FY 2005	90%	100%
FY 2006	90%	100%
FY 2007	90%	75%
FY 2008	100%	100%



**Agency Efforts to Improve Performance and Efficiency:** All four FFRDCs achieved this goal.

**PART Evaluation:** This goal was established in the Federally Funded Research and Development Centers PART conducted in FY 2005 (PART ID: 10004401).



**ANNUAL PERFORMANCE GOAL 16:  
NOAO OBSERVING TIME**

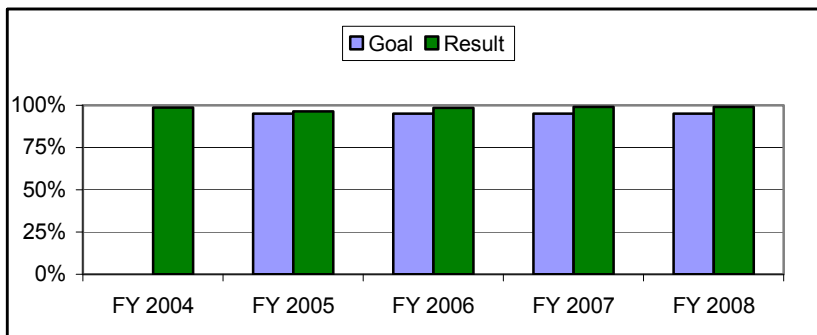
**Goal:** Award at least 95 percent of the operating time at the National Optical Astronomy Observatory (NOAO) through the NOAO allocation committee.

**Program Description:** The National Optical Astronomy Observatory supports research in ground-based, nighttime, optical, and infrared astronomy. NOAO is also the gateway for the U.S. astronomical community to the International Gemini Observatory. The percent of operating time awarded through NSF's competitive merit review system does not include engineering time, telescope time committed under international agreements, or fixed-term observing time awarded by limited competitive review through divestment of older telescopes or as a result of partnership with universities or consortia for technology development. The remaining five percent is time that the NOAO Director may award to worthy proposals, targets of opportunity, or NOAO staff after evaluation by the telescope allocation committee.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	baseline	98.6%
FY 2005	95%	96.4%
FY 2006	95%	98.5%
FY 2007	95%	99%
FY 2008	95%	99%



**Agency Efforts to Improve Performance and Efficiency:** The Foundation's merit review criteria of intellectual merit and broader impacts are applied rigorously in all programs.

**PART Evaluation:** This goal was established in the Federally Funded Research and Development Centers (FFRDC) PART conducted in FY 2005 (PART ID: 10004401).

**ANNUAL PERFORMANCE GOAL 17:  
NCAR: NUMBER OF USERS OF DATASETS**

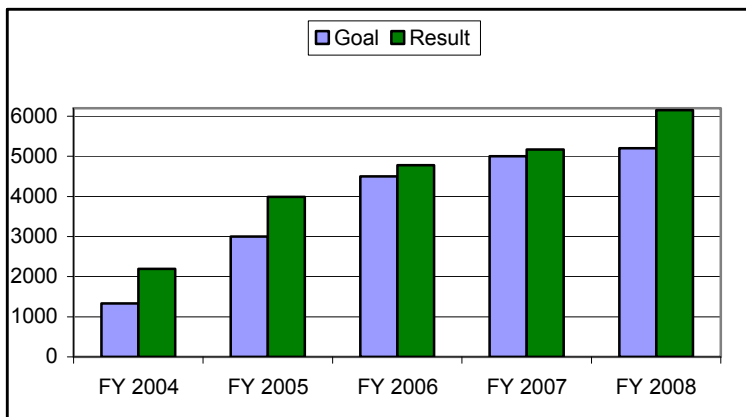
**Goal:** Increase the number of unique users of datasets at the National Center for Atmospheric Research (NCAR).

**Program Description:** The National Center for Atmospheric Research serves a broad research community in the atmospheric, environmental, and geosciences. NCAR facilities provide world-class supercomputing services for the development, validation, and execution of large computational models. NCAR is responsible for the curation, archiving, and manipulation of large datasets. This goal tracks the number of users of those datasets who have unique access addresses.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	1332	2191
FY 2005	3000	3990
FY 2006	4500	4779
FY 2007	5000	5168
FY 2008	5200	6155



**Agency Efforts to Improve Performance and Efficiency:** NCAR supports a broad range of science and education programs as well as facilities that serve the atmospheric community, specifically supercomputing and observing facilities. Further details on NCAR activities are available in NCAR's annual reports, available at [www.nar.ucar.edu](http://www.nar.ucar.edu).

**PART Evaluation:** This goal was established in the Federally Funded Research and Development Centers PART conducted in FY 2005 (PART ID: 10004401).

**ANNUAL PERFORMANCE GOAL 18:  
TERAGRID USERS**

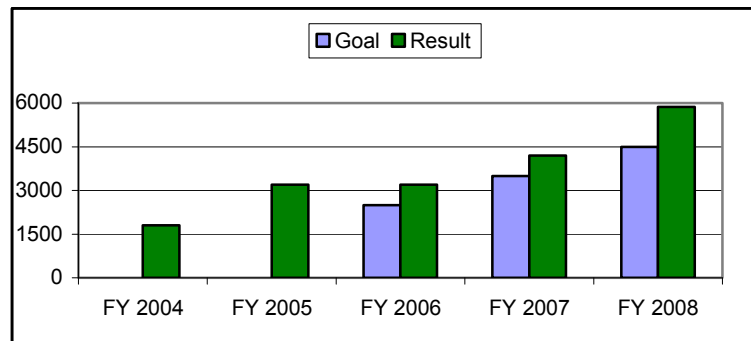
**Goal:** Increase the number of unique users of the Teragrid from among the science, engineering, and education community.

**Program Description:** The Extensible Terascale Facility, also called TeraGrid, is the world's largest, most comprehensive distributed cyberinfrastructure for open scientific research. Through high-performance network connections, TeraGrid integrates high-performance computers, data resources and tools, and high-end experimental facilities throughout the United States. TeraGrid is coordinated through the Grid Infrastructure Group (GIG) at the University of Chicago, working in partnership with the Resource Provider sites: Indiana University, the Louisiana Optical Network Initiative, the National Center for Atmospheric Research, National Center for Supercomputing Applications, the National Institute for Computational Sciences, Oak Ridge National Laboratory, Pittsburgh Supercomputing Center, Purdue University, San Diego Supercomputer Center, Texas Advanced Computing Center, and University of Chicago/Argonne National Laboratory. Access to the network is open to the science, engineering, and education community on the basis of merit-reviewed proposals. This goal tracks the number of users with unique user accounts and those who access the network through internet science gateways.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	N/A	1800
FY 2005	N/A	3200
FY 2006	2500	3200
FY 2007	3500	4195
FY 2008	4500	5865



**Agency Efforts to Improve Performance and Efficiency:** Using high-performance network connections, the TeraGrid integrates high-performance computers, data resources and tools, and high-end experimental facilities around the country. Currently, TeraGrid resources include more than 750 teraflops of computing capability and more than 30 petabytes of online and archival data storage, with rapid access and retrieval over high-performance networks. Researchers can also access more than 100 discipline-specific databases. With this combination of resources, the TeraGrid is the world's largest, most comprehensive distributed cyberinfrastructure for open scientific research.

**PART Evaluation:** This goal was established in the Investment in Research Infrastructure and Instrumentation PART conducted in FY 2006 (PART ID: 10004405).

**ANNUAL PERFORMANCE GOAL 19:  
POLAR PROGRAMS: SUPPORT FOR RESEARCH IN THE ANTARCTIC**

**Goal:** Provide the necessary research support for researchers in the Antarctic at least 90 percent of the time they are scheduled to perform research.

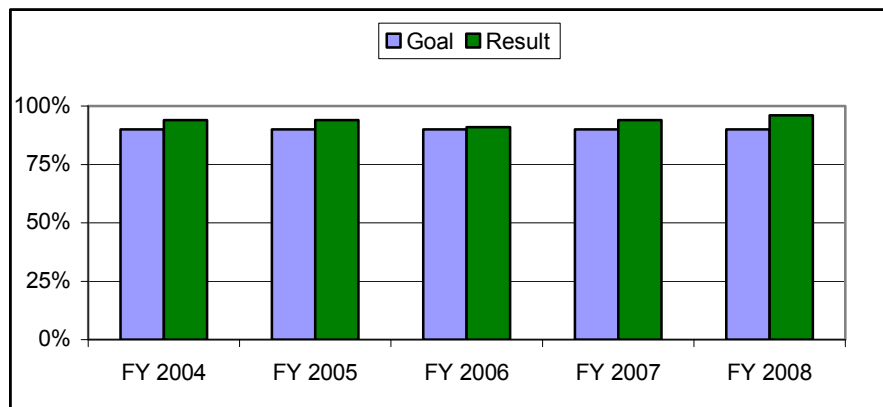
**Program Description:** NSF's Office of Polar Programs supports most of the research in polar regions funded by the National Science Foundation. The Antarctic is a premier natural laboratory whose extreme environment and geographically unique setting enable research on phenomena and processes not feasible elsewhere. Polar regions also offer unusual opportunities for environmental research, as the sensitivity of polar ecosystems to small changes in climate renders them important bellwethers for abrupt or potential future change.

This goal accounts for the number of days that investigators were able to conduct research at the South Pole Station because the necessary research support was provided. It excludes research conducted off site in preparation for deployment to the Pole and lost time due to circumstances beyond the program's control (e.g. severe weather). Research support for the approximately 165 current projects includes laboratory operations; facilities engineering, maintenance, and construction; communications operations; remote field camp support; cargo and passenger transportation; and housing management and janitorial services.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**

	Goal	Result
FY 2004	90%	94%
FY 2005	90%	94%
FY 2006	90%	91%
FY 2007	90%	94%
FY 2008	90%	96%



**Agency Efforts to Improve Performance and Efficiency:** The United States Antarctic program is managed by NSF with support from the primary support contractor, Raytheon Polar Services Company (RPSC). This goal is used to measure the research time for each PI while on location in Antarctica. It captures the number of operational onsite days successfully accomplished by each PI. After completing their research in Antarctica, principal investigators submit a web-based USAP Research Support Facilities Survey. RPSC is responsible for collecting data from the survey to compute the percentage of project days for which the program was able to provide the necessary support.

**PART Evaluation:** This goal was established in the Polar Research Tools, Facilities, and Logistics PART Program conducted in FY2004 (PART ID: 10002326).

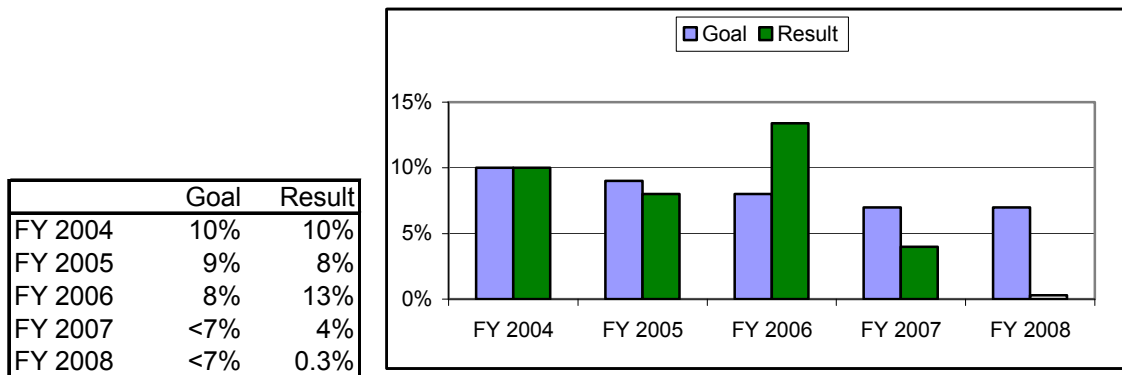
**ANNUAL PERFORMANCE GOAL 20:  
POLAR PROGRAMS: CONSTRUCTION COST AND SCHEDULE**

**Goal:** Keep the percent of cost and schedule variances for major Polar projects, as monitored by Earned Value Management, to seven percent or less.

**Program Description:** The goal applies to planned cost and schedule for construction projects with a total project cost of at least \$5 million. Three major Polar projects are in this category: the South Pole Station Modernization, the IceCube Neutrino Observatory, and the McMurdo Power Plant. The goal result is calculated by taking an average of cost and schedule variances. The result reflects the weighted average of the three projects.

**FY 2008 Result:** NSF achieved this goal.

**Comparison of Actual Performance with the Projected (Target) Levels of Performance:**



**Agency Efforts to Improve Performance and Efficiency:** NSF continues to monitor cost and schedule variances at the major Polar projects.

**PART Evaluation:** This goal was established in the Polar Research Tools, Facilities, and Logistics PART Program conducted in FY 2004 (PART ID: 10002326).

**ANNUAL PERFORMANCE GOALS 21 - 23:  
K-12 MATH AND SCIENCE EDUCATION PART MEASURES  
Established in FY 2008**

**Goals in the K-12 Math and Science Education Program**

1. Minimum number of resources (instructional programs, models, or interventions) developed by the DRK-12 (Discovery Research K-12) program whose effectiveness has been examined using rigorous methods.  
**FY 2008 Target: 8**  
**FY 2008 Result: 9**
2. Percentage of development-intensive projects in the DRK-12 program that employ appropriate methods to evaluate efficacy and apply them rigorously.  
**FY 2008 Target: 70%**  
**FY 2008 Result: 86%**
3. For MSP (Math and Science Partnership Program) projects focused on mathematics, percentage of MSP schools meeting Adequate Yearly Progress (AYP) in mathematics.  
**FY 2008 Target: 80%**  
**FY 2008 Result: 81%**

**Program Description:** NSF's K-12 Math and Science Education Program is designed to build strong foundations and foster innovations to improve teaching, learning, and evaluation in pre-college math and science. It explicitly aims to generate research-based outcomes, develop innovative resources and tools, and build human capacity to improve K-12 Science, Technology, Engineering, and Mathematics (STEM) learning. This PART evaluation focused on two major programs: the Discovery Research K-12 Program (DRK-12) and the Math and Science Partnerships (MSP) Program. Both are research grants programs, focusing on investigator-initiated proposals that undergo NSF's rigorous merit review process.

**FY 2008 Results:** NSF met the three performance targets. Because these measures were established in FY 2008, prior year results are not available.

**Projected Future Target Levels of Performance:**

Goal 1: Rigorous Examination of Effectiveness of Resources in DRK-12 Program

Year: 2012 Target: 13

Year: 2017 Target: 18

Goal 2: Rigorous Evaluation of DRK-12 Development Projects

Year: 2009 Target: 75

Year: 2011 Target: 90

Year: 2014 Target: 100

Goal 3: Math & Science Partnership Schools: Adequate Yearly Progress (AYP)

Year: 2009 Target: 83%      Year: 2012: Target: 93%

Year: 2010 Target: 86%      Year: 2013: Target: 96%

Year: 2011 Target: 90%      Year: 2014: Target: 100%

**Agency Efforts to Improve Performance and Efficiency:** NSF will initiate an independent study of the efficacy and impact of the K-12 programs, including a comparison with other relevant government and private efforts. NSF will develop and implement systems and evaluation components to ensure that all necessary information is gathered from Discovery Research K-12 awardees. NSF will engage independent evaluations of the Math and Science Partnerships program designed to demonstrate a clear causal link between this program and measured progress in student proficiency.

**PART Evaluation:** This goal was established in the K-12 Math and Science Education PART in FY 2008 (PART ID: 10009092).