

**OFFICE OF INTERNATIONAL SCIENCE  
AND ENGINEERING (OISE)**

**\$51,280,000  
+\$1,430,000 / 2.9%**

**OISE Funding**  
(Dollars in Millions)

	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Change Over	
				FY 2012 Estimate Amount	Percent
<b>OISE</b>	<b>\$49.03</b>	<b>\$49.85</b>	<b>\$51.28</b>	<b>\$1.43</b>	<b>2.9%</b>

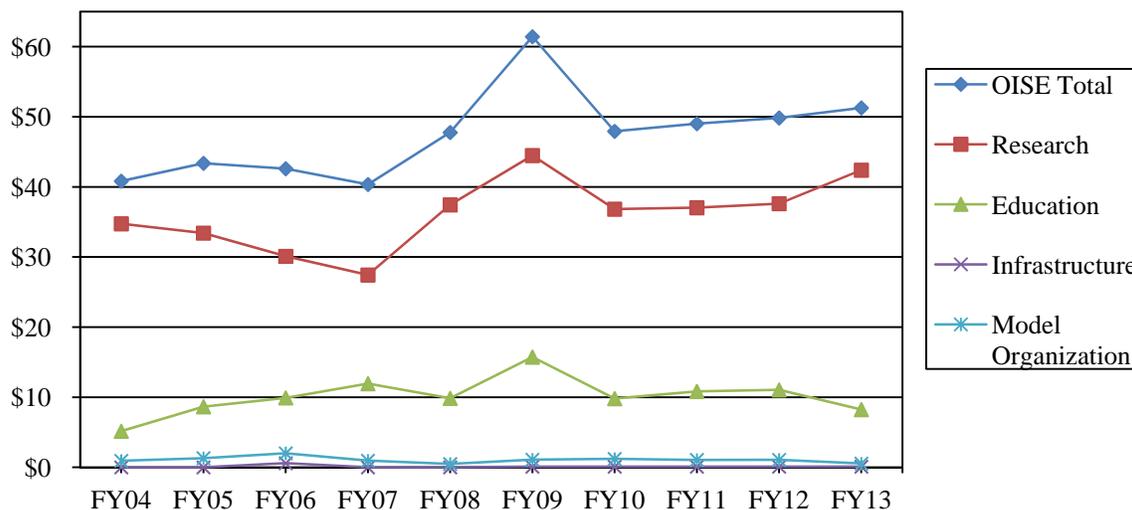
**About OISE**

The Office of International Science and Engineering (OISE) serves as the NSF focal point for international science and engineering activities. In support of the OneNSF framework, OISE’s goal is to promote an integrated, Foundation-wide international strategy and manage internationally-focused programs that are innovative, catalytic, and responsive to a broad range of NSF and national interests. In FY 2013, OISE will emphasize support of activities that augment and further integrate international engagement of research and education programs across NSF. OISE supports co-funding with NSF directorates and offices through two activities – Science Across Virtual Institutes (SAVI) and the Global Venture Fund (GVF). In addition, OISE manages and funds the Partnerships for International Research and Education (PIRE) program, the International Research Fellowship Program (IRFP), and the International Research Experience for Students (IRES), that support U.S. scientists, engineers, and students engaged in international research and education activities in all NSF-supported disciplines involving any region of the world. OISE’s programs and activities are designed to complement and enhance the Foundation’s broad research and education portfolio and to overcome barriers to international collaboration. America’s next generation of scientists and engineers must be able to work effectively in the global arena and marketplace. OISE supports programs that enable students and researchers to engage in international research and educational activities across such areas as cyberinfrastructure, complex biological systems, natural hazards prediction and mitigation, nanotechnology, water resources, climate, and energy sustainability.

In addition, OISE manages NSF’s offices in Beijing, Paris, and Tokyo that report on and analyze in-country and regional science and technology developments and policies, promote greater collaboration between U.S. and foreign researchers, liaise with foreign counterpart agencies and research institutes, and facilitate coordination and implementation of NSF research and education programs.

OISE also coordinates much of NSF’s engagement with international organizations across diverse disciplines and initiatives and coordinates NSF efforts to strengthen collaborations with Muslim Majority and developing countries, which are increasingly important partners in addressing critical global issues. NSF supports these activities by funding proposals that meet NSF’s high standards of merit review and involve true intellectual collaboration and mutually beneficial activities with researchers and educators in Muslim-Majority and developing countries. Examples of NSF and OISE managed programs that advance U.S. research interests and encourage research collaborations in both developing countries and Muslim-Majority Countries include PIRE, Advanced Studies Institutes, IRES, IRFP, and Partnerships for Enhanced Engagement in Research (PEER).

**OISE Funding**  
(Dollars in Millions)



FY 2009 funding reflects both the FY 2009 omnibus appropriation and funding provided through the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

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Research	38.10	38.70	42.93	4.23	10.9%
Education	10.84	11.05	8.25	-2.80	-25.3%
Infrastructure	0.10	0.10	0.10	-	-

Totals may not add due to rounding.

## FY 2013 Summary

### Research

OISE works closely with the other NSF directorates and offices to support and leverage international opportunities between U.S. and foreign researchers. The OISE FY 2013 request will, in part, co-fund international disciplinary and interdisciplinary activities with other NSF organizational units as driven by proposal pressure from the research community. OISE's existing funding mechanisms, together with the potential for involving new funding partners both domestic and foreign, will enable more and stronger international research collaborations.

### Education

OISE supports international research and education activities for U.S. undergraduate and graduate students and post-doctoral fellows through programs managed by OISE and through supplemental funding associated with NSF disciplinary programs.

**Infrastructure**

In FY 2013 OISE will continue support of the National Nanotechnology Infrastructure Network (NNIN) to leverage connections and collaborations with foreign institutions. For information about NNIN, please refer to the Facilities chapter.

**Major Investments**

**OISE Major Investments**

(Dollars in Millions)

Area of Investment	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Change Over FY 2012 Estimate	
				Amount	Percent
CIF21	-	-	1.00	1.00	N/A
Clean Energy Technology	2.85	13.21	13.07	-0.14	-1.1%
E <sup>2</sup>	-	-	0.50	0.50	N/A
INSPIRE	-	-	1.00	1.00	N/A
SEES	1.33	12.00	11.55	-0.45	-3.7%
PIRE	18.71	19.00	19.00	-	-
GVF	-	3.00	7.00	4.00	133.3%
SAVI	-	2.00	5.00	3.00	150.0%
International Programs for students and early career researchers	10.63	11.05	8.25	-2.80	-25.3%
U.S. participation in Global Organizations	7.76	7.76	7.76	-	-

Major investments may have funding overlap and thus should not be summed.

- OISE funding of \$1.0 million in the Cyberinfrastructure Framework for 21<sup>st</sup> Century Science and Engineering (CIF21) will support the international components of NSF programs in data, software, networking, and virtual organizations that enhance scientific collaboration and discovery.
- OISE support of \$13.07 million for clean energy technology will enhance research and innovations in such areas as solar energy technologies, biofuels and bioenergy, wind energy generation, sustainability, and renewable energy storage. The OISE Clean Energy investment includes its support of the Science, Engineering, and Education for Sustainability (SEES) activity.
- Initial funding of \$500,000 in FY 2013 will support international components of the new Expeditions in Education (E<sup>2</sup>) OneNSF investment area.
- OISE participation in Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE) will strengthen NSF’s long-standing investments in globally focused interdisciplinary, potentially transformative research. OISE’s FY 2013 Request for INSPIRE is \$1.0 million.
- OISE will support the NSF-wide SEES investment (\$11.55 million) by funding international collaborations that focus on research and technologies to mitigate and adapt to, environmental change that threatens sustainability. OISE’s greatest share of SEES support consists of its funding for the existing 2012-2016 PIRE cohort.

- Partnerships for International Research and Education (PIRE) is an NSF and OISE funding priority in FY 2013. The PIRE program makes multi-year and multi-million dollar awards to U.S. institutions that build strong international research and education partnerships. Each PIRE award supports U.S. faculty to lead projects designed to achieve research excellence through the added-value gained by international collaboration including, access to essential intellectual expertise, research facilities, and/or unique phenomena outside the U.S. In FY 2013, OISE plans to invest \$10.0 million for the second-year PIRE funding of the 2012-2016 cohort, and \$9.0 million for continuation funding of the 2010-2014 PIRE cohort. No new PIRE competition will be conducted during FY 2013 as PIRE competitions are biannual. Total FY 2013 Request funding for PIRE is \$19.0 million and is unchanged from the FY 2012 Estimate.
- The Global Venture Fund (GVF) formalizes, streamlines, and standardizes OISE's long-standing practice of co-funding new awards and supplements to existing awards that enhance research excellence through international collaboration and promote the development of globally engaged U.S. scientists and engineers. OISE will invest \$7.0 million in GVF co-funding in FY 2013.
- Science Across Virtual Institutes (SAVI) is an NSF-wide activity designed to provide a mechanism for U.S. research communities and their international partners to develop long-term collaboration in STEM, building on relationships initiated via NSF-supported teams of researchers, research institutes and universities. OISE will support SAVI projects across NSF through co-funding at \$5.0 million.
- OISE manages three programs that support students and early career researchers in international activities:
  - IRFP supports U.S. postdoctoral-level scientists and engineers for international collaborative research, with the objective of furthering their research capacity and global perspective, and forging long-term relationships with researchers abroad. In FY 2013, IRFP funding will be \$3.60 million, which is \$900,000 less than the FY 2012 Estimate in order to increase OISE support of GVF. In FY 2013, at least \$1.0 million will be provided through GVF to support disciplinary NSF postdoctoral fellows who wish to spend part of their tenure in foreign institutions.
  - East Asia and Pacific Summer Institutes (EAPSI) introduces U.S. graduate students to science and engineering research in the East Asia and Pacific region, and initiates scientific relationships that will enable future collaboration with foreign counterparts. Seven locations currently partner with NSF in the program: Australia, China, Japan, Korea, New Zealand, Singapore, and Taiwan. In FY 2013, EAPSI funding will be \$2.40 million, which is unchanged from the FY 2012 Estimate.
  - IRES supports groups of U.S. undergraduate and/or graduate students conducting research in collaboration with foreign investigators at an international site. In FY 2013, IRES funding will be \$2.25 million, which is \$900,000 less than the FY 2012 Estimate primarily to increase OISE support of SAVI in FY 2013. In addition, it is expected that at least \$1.0 million will be used to support U.S. graduate students' international research experience in European Union (EU) countries through SAVI in partnership with the EU. Approximately \$500,000 will be spent to co-fund disciplinary programs support of international research experience for students via GVF.
- In FY 2013, OISE will continue to provide \$7.76 million in support of U.S. participation in domestic and foreign organizations that facilitate international activities for U.S. researchers and educators.

**OISE Funding for Facilities**

**OISE Funding for Facilities**

(Dollars in Millions)

	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Change Over FY 2012 Estimate	
				Amount	Percent
<b>Facilities</b>	\$0.10	\$0.10	\$0.10	-	-
National Nanotechnology Infrastructure Network (NNIN)	0.10	0.10	0.10	-	-

For detailed information on individual facilities, please see the Facilities chapter.

**Facilities**

OISE will continue to provide \$100,000 in support of the National Nanotechnology Infrastructure Network (NNIN). This contribution will leverage connections and collaborations among U.S. and foreign institutions.

**Summary and Funding Profile**

The average and median award size for OISE decreases in FY 2013 from the FY 2012 Estimate since no PIRE competition will be conducted during FY 2013. PIRE competitions are biannual with multi-year and multi-million dollar awards to U.S. institutions.

**OISE Funding Profile**

	FY 2011 Actual	FY 2012 Estimate	FY 2013 Estimate
<b>Statistics for Competitive Awards:</b>			
Number of Proposals	1,215	1,235	1,270
Number of New Awards	405	410	425
Funding Rate	33%	33%	33%
<b>Statistics for Research Grants:</b>			
Number of Research Grant Proposals	897	910	940
Number of Research Grants	104	105	110
Funding Rate	12%	12%	12%
Median Annualized Award Size	\$49,542	\$70,000	\$50,000
Average Annualized Award Size	\$60,136	\$270,000	\$60,000
Average Award Duration, in years	1.9	2.4	2.0

## Program Monitoring and Assessment

The Performance chapter provides details regarding the periodic reviews of programs and portfolios of programs by external Committees of Visitors and directorate Advisory Committees. Please see that chapter for additional information.

External independent evaluations of the IRFP and EAPSI programs will be completed in FY 2012. Funding was provided in FY 2011. These evaluations will focus on four tasks: (1) a study of the IRFP and EAPSI fellows' experiences in applying for and participating in the programs; (2) a comparative data analysis of professional outcomes (educational and occupational) for IRFP and EAPSI awardees and other applicants; (3) an analysis of the impact IRFP and EAPSI have on U.S. academic institutions and on the foreign institutions that host IRFP and EAPSI fellows; and (4) the bringing together of an advisory group to ensure the quality of the evaluation process.

An evaluation of the PIRE program will be initiated during FY 2012 and is expected to be completed in FY 2014. The FY 2012 PIRE competition will be the fourth competition and an evaluation and assessment is timely and appropriate.

A review of the three overseas offices (Paris, Tokyo, and Beijing) will be conducted in FY 2012 to examine lower-cost options for NSF to maintain an effective and efficient international presence.

### Number of People Involved in OISE Activities

	FY 2011 Actual Estimate	FY 2012 Estimate	FY 2013 Estimate
Senior Researchers	1,590	1,615	1,660
Other Professionals	70	70	70
Postdoctorates	550	560	575
Graduate Students	1,800	1,830	1,880
Undergraduate Students	1,170	1,190	1,225
<b>Total Number of People</b>	<b>5,180</b>	<b>5,265</b>	<b>5,410</b>