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MEMORANDUM

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**TO:** CORY KENNEDY, RICE UNIVERSITY  
**FROM:** SUSAN SWEAT, CORNERSTONE GOVERNMENT AFFAIRS  
**CC:** TONY ESSALIH, CORNERSTONE GOVERNMENT AFFAIRS  
**SUBJECT:** OVERVIEW OF PRESIDENT'S FY2013 BUDGET REQUEST  
**DATE:** FEBRUARY 16, 2012

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This memorandum provides a preliminary analysis of President Obama's FY 2013 budget request and attempts to highlight the potential implications for Rice University

*I. Overview*

Monday the President released his FY2013 Budget Request. Under the President's plan, the federal government would spend \$3.8 trillion in FY2013, up from \$3.79 trillion in FY2012. The request adheres to the discretionary spending caps established by the Budget Control Act and projects a deficit of \$901 billion, or 5.5 percent of GDP, in 2013, and a 10-year low of \$575 billion, or 2.7 percent of GDP, in 2018. The request assumes \$4 trillion in deficit reduction—\$3 trillion in new proposals on top of the \$1 trillion assumed from the discretionary spending caps. Half of the \$3 trillion in deficit reduction would come in the form of a tax reform package that assumes the expiration of the upper income Bush tax cuts.

As always, please remember this request is simply the first salvo in the year-long FY2013 appropriations process. While some of the President's proposals may be incorporated into the final appropriations bills, the GOP-controlled House (or the Democrat-controlled Senate, for that matter) will not pass the President's request verbatim—especially in an election year. Republicans have already come out against the President's budget, calling it a "charade" and a "campaign document." We should know more about the fate of FY2013 spending when the House unveils its own budget.

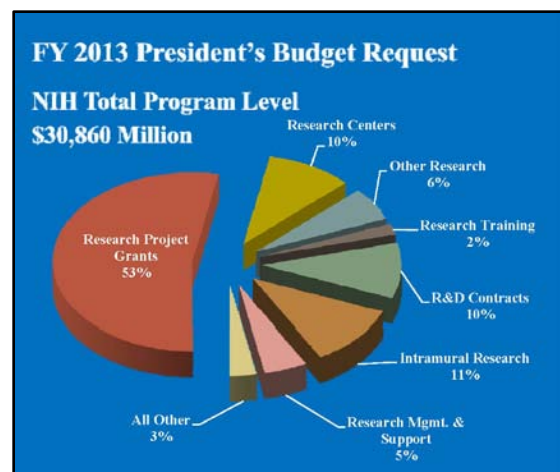
With regard to research funding (\$140.8 billion overall), budgets for NSF, NIST laboratories and the Department of Energy's Office of Science would all see increases. The President's request increases the level of investment in non-defense R&D by 5 percent from FY2011 and 2012 levels. At the levels proposed, the President's budget would maintain but delay the NSF, NIST and DOE Office of Science budget doubling, which President Bush called for in his 2006 State of the Union address. To achieve the 10 year doubling goal, annual increases would have to be about 7 percent. NIST is the biggest science winner in the FY2013 budget request with a 14 percent increase. If enacted, the President's budget request would at least keep that agency on target double its budget by 2016.

Selected Funding Priorities ( <i>in millions of dollars</i> )	FY10 Final	FY11 Final	FY12 Estimate	FY13 Request
<b>National Institutes of Health</b>	\$31,243	\$30,406	\$30,702	\$30,702
<b>National Institute for Standards and Technologies</b>	\$857	\$750	\$751	\$857
<b>National Science Foundation</b>	\$6,873	\$6,807	\$7,033	\$7,373
<b>NASA</b>	\$18,724	\$18,485	\$17,800	\$17,711
<b>Department of Energy Office of Science</b>	\$4,964	\$4,868	\$4,874	\$4,992
<b>Department of Defense 6.1 Basic Research</b>	\$1,815	\$1,947	\$2,112	\$2,117
<b>Department of Education</b>				
Pell Grant				
Maximum Grant (\$ in thousands)	\$5,550	\$5,550	\$5,550	\$5,635
Discretionary Funding	\$17,495	\$22,956	\$22,824	\$22,800
Student Aid Programs	\$3,034	\$2,844	\$2,855	\$3,003
Graduate Education Programs	\$41	\$39	\$31	\$31
International Education Programs	\$126	\$76	\$74	\$76

## II. *National Institutes of Health (NIH)*

The President's FY2013 budget provides flat funding for the National Institutes of Health (NIH) at a level of \$30.7 billion. (There is an annual \$150 million in mandatory funding for Type 1 diabetes research that inflates the actual number a bit to \$30.86 billion.) The newly formed National Center for Advancing Translational Sciences (NCATS) is funded at \$639 million. The funding break-down for all institutes is detailed below.

In order to maximize resources in FY 2013 for investigator-initiated grants, and to continue to focus on resources for young, first-time researchers, NIH proposes to reduce non-competing RPGs by one percent from the FY 2012 level, and to negotiate the budgets of competing RPGs to avoid growth in the average award size. NIH will continue the 2012 salary cap/limitation at \$179,700 (Executive Level II). The FY 2013 Budget assumes a policy of eliminating inflationary increases in the out year budgets of both competing and non-competing RPGs. In addition, to continue the current policy to equalize success rates of new investigators to those of established investigators, applications from principal investigators (PIs) who already receive in excess of \$1.5 million per year in total costs would be reviewed by the Advisory Council of the Institute or Center. While this policy will not change the total number of awards, it will likely increase the total number of PIs supported by NIH. Finally, NIH will continue its policy of funding applications from early stage investigators at the same success rate as established investigators for new R01 equivalent applications.





Research project grants (RPGs) are the primary mechanism for funding of investigator-initiated biomedical research; therefore, support for RPGs remains a high priority in the FY 2013 President’s Budget. With the moves detailed above, as well as with small shifts in funding from centers, training and R&D contracts to the research project grants (RPG) program, and a decline in the amount required for continuation awards, NIH estimates that it will be able to fund 9,415 new awards, about 700 more than in 2011 and 2012. This should allow for a success rate in the high teens, roughly similar to FY 2011 and 2012. The total number of RPGs is expected to be 35,888. NIH-wide, the average cost of a new and competing RPG in FY 2013 is estimated to be about \$431,000.

While currently engaged in a major project to assess workforce needs, NIH plans to fund Research Training in FY 2012 at \$775.318 million, or 0.3 percent below the FY 2012 Enacted level. Continuing efforts to provide NRSA trainees with sufficient financial support, and to improve NIH’s ability to attract talented investigators to the field of biomedical research, a two percent stipend increase is proposed for FY 2013. NRSA trainees currently receive stipends of about \$40,000 per year, far below the pay they could receive in alternative fields. However, in order to partially accommodate budgetary constraints, the number of Full-Time Training Positions (FTTPs) that NIH funds would decline by about 309 positions, or 1.9 percent below the number of FTTP supported at the FY 2012 Enacted level.

**NATIONAL INSTITUTES OF HEALTH  
Budget Request by Institute/Center  
FY 2013 President's Budget  
(Dollars in Thousands)**

Institute/Center	FY 2011 Actual	FY 2012 Enacted	FY 2013 President's Budget	FY 2013 +/- FY 2012
NCI.....	\$5,050,073	\$5,066,147	\$5,068,864	\$2,717.46
NHLBI.....	\$3,065,254	\$3,075,358	\$3,076,067	\$709.15
NIDCR.....	\$408,920	\$410,222	\$408,212	(\$2,009.74)
NIDDK .....	\$1,939,210	\$1,944,905	\$1,942,107	(\$2,798.31)
NINDS.....	\$1,619,276	\$1,624,429	\$1,624,707	\$277.65
NIAID:.....	\$4,768,181	\$4,485,097	\$4,495,307	\$10,209.79
NIGMS.....	\$2,368,492	\$2,427,189	\$2,378,835	(\$48,354.11)
NICHD.....	\$1,315,638	\$1,319,825	\$1,320,600	\$774.70
NEI.....	\$699,650	\$701,876	\$693,015	(\$8,861.13)
NIEHS.....	\$682,582	\$684,755	\$684,030	(\$725.00)
NIA .....	\$1,098,631	\$1,102,128	\$1,102,650	\$521.82
NIAMS.....	\$533,450	\$535,148	\$535,610	\$462.12
NIDCD.....	\$414,458	\$415,778	\$417,297	\$1,519.13
NIMH.....	\$1,474,809	\$1,478,503	\$1,479,204	\$700.81
NIDA.....	\$1,048,776	\$1,052,114	\$1,054,001	\$1,887.08
NIAAA.....	\$457,516	\$458,972	\$457,104	(\$1,868.41)



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NINR.....	\$144,138	\$144,597	\$144,153	(\$443.60)
NHGRI.....	\$510,637	\$512,263	\$511,370	(\$892.56)
NIBIB.....	\$345,175	\$337,954	\$336,896	(\$1,058.09)
NIMHD.....	\$276,335	\$276,111	\$279,389	\$3,277.72
NCRR.....	\$0	\$0	\$0	\$0.00
NCCAM.....	\$127,498	\$127,904	\$127,930	\$25.83
NCATS.....	\$553,592	\$574,713	\$639,033	\$64,320.42
FIC.....	\$69,318	\$69,539	\$69,758	\$219.30
NLM.....	\$362,456	\$365,043	\$372,651	\$7,608.19
OD.....	\$1,454,323	\$1,457,381	\$1,429,161	(\$28,220.00)
B&F	\$49,900	\$125,308	\$125,308	\$0.00
Type 1 Diabetes	-\$150,000	-\$150,000	-\$150,000	\$0.00
<b>Subtotal, Labor/HHS Discretionary Budget Authority</b>	<b>\$30,688,288</b>	<b>\$30,623,259</b>	<b>\$30,623,259</b>	<b>\$0.21</b>
Superfund (Interior).....	\$79,054	\$78,928	\$78,928	\$0.00
<b>Total, Discretionary Budget Authority.</b>	<b>\$30,767,342</b>	<b>\$30,702,187</b>	<b>\$30,702,187</b>	<b>\$0.21</b>
Type 1 Diabetes.....	\$150,000	\$150,000	\$150,000	\$0.00
<b>Total, Budget Authority.....</b>	<b>\$30,917,342</b>	<b>\$30,852,187</b>	<b>\$30,852,187</b>	<b>\$0.21</b>
NLM Program Evaluation.....	\$8,200	\$8,200	\$8,200	\$0.00
<b>Total, Program Level.....</b>	<b>\$30,925,542</b>	<b>\$30,860,387</b>	<b>\$30,860,387</b>	<b>\$0.21</b>

The NIH Congressional Budget Justification for FY2013 can be found here:  
[http://officeofbudget.od.nih.gov/pdfs/FY13/FY2013\\_Overview.pdf](http://officeofbudget.od.nih.gov/pdfs/FY13/FY2013_Overview.pdf)

### III. National Science Foundation (NSF)

The National Science Foundation (NSF) “fared very well,” according to Director Subra Suresh, garnering an increase in the President’s plan of \$340 million or nearly 5 percent compared to FY 12 final levels. The total fiscal year 2013 budget request for NSF is \$7.373 billion, or 4.8 percent over the FY12 estimate of \$7 billion. The Administration has requested \$5.9 billion for the Research and Related Activities Directorate. This is an increase of \$294 million, or 5.2 percent, over the FY12 estimate of \$5.6 billion.

Within the R&RA Directorate, the following amounts are proposed for FY13:

- **Biological Sciences:** \$733.8 million (\$21.4 M/ 3% above FY12)
- **Computer and Information Science and Engineering:** \$709.7 million (\$56M/ 8.6% above FY12)
- **Engineering** (including SBIR and STTR): \$876.3 million (\$50 M/ 6.1% above FY12)
- **Geosciences:** \$906 million (\$21 M/ 2.4% above FY12)
- **Mathematical and Physical Sciences:** \$1.345 billion (\$36 M/2.8% above FY12)
- **Social, Behavioral, and Economic Sciences:** \$259.5 million (\$5M/2.1% above FY12)
- **Office of Cyberinfrastructure:** \$218 million (\$6.6M/3.1% above FY12)



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- **Office of International Science and Engineering:** \$51 million (\$1.4M/ 2.9% above FY12)
- **Office of Polar Programs:** \$449.7 million (\$13.8 M/ 3.2% above FY12)
- **Integrative Activities:** \$431.5 million (\$81.9M/23.4% above FY 12 level)

The budget also includes \$121.4 million for Graduate Research Fellowships (GRF), an increase of over 22%, which will allow for 2,000 new fellowships and support a stipend increase from \$30,000 to \$32,000. The Division of Undergraduate Education (DUE) would see \$246.6 million (a 4.7% increase). Major Research Equipment and Facilities Construction (MREFC) would be reduced by 0.5% (about \$900,000) to \$196 million.

In its budget, NSF chose to highlight investments advanced manufacturing specifically through nanotechnology activities such as Nanoscale Science and Engineering Centers (NSECs) and the National Nanotechnology Initiative (NNI). However the budget reduces support for the program by \$5 million “because the state of the research in this area has matured significantly and the research should advance more rapidly in a different, more use-inspired research center program.” The budget states that several NSEC grants may transition to the Nanosystems Engineering Research Centers (NERCs) as the nano-devices and processes created at graduating NSECs move to the systems level and potential commercialization. NSF plans to continue to support eleven continuing NSECs in FY 2013.

NSF also has set a priority goal to increase the number of entrepreneurs emerging from university laboratories. In the FY2013 budget, NSF reiterates its commitment to utilize the Innovation Corps (I-Corps) program to accelerate the development of new technologies, products, and processes that arise from fundamental research NSF will track achievement of this goal by measuring the percent of I-Corps teams that have tested the commercial viability of the product or service. The FY 2013 goal is to achieve 80 percent.

The NSF Congressional Budget Justification for FY2013 can be found here:  
[http://www.nsf.gov/about/budget/fy2013/Print%20By%20Tab%20PDFs/01-Overview\\_fy2013.pdf](http://www.nsf.gov/about/budget/fy2013/Print%20By%20Tab%20PDFs/01-Overview_fy2013.pdf)

#### ***IV. National Institute for Standards and Technologies (NIST)***

The FY2013 budget for the Department of Commerce’s National Institute of Standards and Technology (NIST) submitted to Congress proposes an appropriations funding level of \$857 million, an increase of \$106.2 million (or 14 percent) above the FY2012. More than half of the proposed increased funding would be focused on advanced manufacturing research both at NIST laboratories and through a new industry-led consortia program.

The Scientific and Technical Research and Services (STRS) budget, which includes funding for NIST research laboratories, facilities, and services programs, would receive \$648 million, an \$81 million increase. Within the STRS account, the Laboratory Programs would be funded at \$572.6 million. This includes funding for the NIST centers for Neutron Research and Nanoscale Science and Technology (CNST) and the laboratories for Physical Measurement, Material Measurement, Engineering and Information Technology. It also includes the





Strategic and Emerging Research Initiative (SERI), Innovations in Measurement Science (IMS), and the Postdoctoral Research Associateship Program.

Within CNST, NIST lists the following priorities:

- Metrology for Process Control
- Nanoscale Material Characterization
- New Microscopies for Nanoscale Characterization and Fabrication
- Technology for On-Chip Optical Data Processing
- Electronic Devices for Data Processing and Storage
- Solar Energy/Photovoltaics (PV)
- Battery technology
- Efficiency of energy usage
- New Capabilities in the NanoFab
- New Generation of Nanotechnologists

The NIST Congressional Budget Justification for FY2013 can be found here:

[http://www.osec.doc.gov/bmi/budget/fy13cbj/NIST-NTIS\\_FY2013\\_cbj\\_FINAL.pdf](http://www.osec.doc.gov/bmi/budget/fy13cbj/NIST-NTIS_FY2013_cbj_FINAL.pdf)

## ***V. Department of Defense (DoD) – University Research Programs***

The President's FY13 budget of \$69.65 billion for Defense RDT&E is \$4.9 B/6.0% less than the FY12 level. The budget would provide \$113.7 million Navy University Research Initiatives, which is a \$500,000 increase over the FY12 request. Congressional adds, which many times are directed toward specific programs or platforms and can sometimes be similar to earmarks (though they do not operate as such in these accounts since all are competitively awarded) accounted for \$20 million of the FY12 enacted level. A similar situation occurred with the Air Force's University Research Initiatives, where, but for a \$12 million Congressional add for cybersecurity research, the FY13 and FY12 requests would be almost equal at \$141 million. Congress did not include any large adds in FY12 in the Army's University Research Initiatives, which has a requested funding level of \$81 million for FY13.

Within the Navy University Research Initiatives \$114 million budget, MURI (Multidisciplinary University Research Initiative) would receive \$88.1 million (a \$1 million increase), DURIP (Defense University Research Instrumentation Program) would receive a \$500,000 increase to \$19.4 million, and PECASE (Presidential Early Career Awards) would be cut by \$1 million down to \$6 million.

Within the Army University Research Initiatives \$81 million budget, MURI would receive \$59.4 million (a \$200,000 cut), DURIP would receive a \$200,000 increase to \$13.7 million, and PECASE would be increased by \$200,000 to \$4.6 million. The Army's Minerva Research Initiative (MRI) would essentially be level funded at \$3.3 million.

Within the Air Force University Research Initiatives \$141 million budget, Major Thrust I (PECASE and similar initiatives), Major Thrust 2 (NDSEG fellowships and the ASSURE program), and Major Thrust 3 (DURIP and similar initiatives) would all be level funded.

<b>FY2013 Department of Defense Research Funding</b>	<b>FY11 Actual</b>	<b>FY12 Estimate</b>	<b>FY13 Request</b>	<b>FY13 Request vs FY12 Estimate (Percentage Change)</b>
<b>Research, Development, Test &amp; Evaluation Science &amp; Technology (6.1,6.2,6.3)</b>	\$76,134.70	\$72,836.80	\$69,653.30	-9.50%
6.1 Basic Research	\$1,876.80	\$2,112.40	\$2,116.90	1.80%
6.2 Applied Research	\$4,328.50	\$4,739.30	\$4,478.00	-4.50%
6.3 Advanced Technology Development	\$5,339.70	\$5,411.30	\$5,266.30	-3.90%
<b>Army RDT&amp;E</b>	\$9,760.40	\$8,760.20	\$8,949.30	-7.70%
University Research Initiatives	\$84.50	\$80.90	\$81.00	0.00%
<b>Navy RDT&amp;E</b>	\$17,865.50	\$17,793.50	\$16,943.00	-5.90%
University Research Initiatives	\$104.10	\$133.20	\$113.70	0.40%
<b>Air Force RDT&amp;E</b>	\$27,421.40	\$26,739.80	\$25,481.20	-8.60%
University Research Initiatives	\$127.70	\$152.30	\$141.20	0.60%
<b>DARPA</b>	\$2,835.10	\$2,815.80	\$2,817.20	-5.60%

The DoD Congressional Budget Justification for FY2013 can be found here:  
[http://comptroller.defense.gov/defbudget/fy2013/fy2013\\_r1.pdf](http://comptroller.defense.gov/defbudget/fy2013/fy2013_r1.pdf)

## **VI. National Aeronautic and Space Administration (NASA)**

The FY13 budget NASA budget was cut \$59 million below the FY12 level to \$17.71 billion. The budget cuts education programs from \$136 million to \$100 million and includes \$4.9 billion for the NASA Science portfolio. The Science mission directorate received a \$162M/3.2% decrease and includes:

- Earth Science – \$1.784 Billion (\$19M increase)
- Planetary Science – \$1.2 billion (\$300M/20% decrease)
- Astrophysics – \$659.4 million (\$12.6M decrease)
- James Webb Space Telescope - \$627.6 million (\$109M/19% increase)
- Heliophysics – \$647 million (\$25M increase)

The Administration has requested \$100 million for NASA's education programs. This is a reduction of \$36 million, or 26.5 percent, below the FY12 level of \$136 million. The FY13 budget



request includes \$24 million for the Space Grant program, which is a reduction of almost \$15 million, or 38.8 percent, below the FY12 level of \$38.9 million.

- **Johnson Space Center (JSC)**

In FY 2013 NASA continues to consolidate facilities, notably combining arc jet testing activities from Ames Research Center and JSC into one complete facility at Ames. Project management of ISS Systems Operations and Maintenance is led by JSC and receives a \$75 million increase in the President's request. JSC's construction and facilities budget will receive \$13 million for upgrades to the fire alarm system and the central heating and cooling plant.

The NASA Congressional Budget Justification for FY2013 can be found here:  
[http://www.nasa.gov/pdf/622655main\\_FY13\\_NASA\\_Budget\\_Estimates.pdf](http://www.nasa.gov/pdf/622655main_FY13_NASA_Budget_Estimates.pdf)

## ***VII. Department of Energy (DOE) – Office of Science***

Department of Energy's total budget request of \$27.2 Billion represents a 3.2% increase over FY2012. ARPA-E would receive \$350 million, a \$75 million increase. The overall DOE budget number includes \$5 billion (a 2.4% increase) in the Office of Science budget. Within the Office of Science, basic energy sciences would receive \$1.8 billion, a 6.7% increase. This increase is to support clean energy research, including next generation materials and chemical processes and "new collaborative efforts with the Office of Energy Efficiency and Renewable Energy to help translate scientific discoveries into new energy technologies."

Nuclear energy would be level-funded and nuclear physics would see a decrease to \$526 million. All 46 energy frontier research centers should continue to receive support as should the 5 existing energy information hubs (at a level around \$25 million per hub) A new sixth hub, a smart grid hub, proposed to be funded at \$20 million.

While funding for DoE Office of Science Fellowship Program would be eliminated under the President's budget, the funding level is expected to support approximately 27,000 investigators at about 300 academic institutions and from all DOE national laboratories.

The DOE Office of Science Congressional Budget Justification for FY2013 can be found here:  
<http://www.cfo.doe.gov/budget/13budget/Content/Volume4.pdf>

## ***VIII. Higher Education***

The President requests \$2.38 billion in net budget authority for higher education programs, a slight increase (\$82 million) from FY 2012. Most programs important to colleges and universities remained level, including those under the "Assistance for Students" subsection (TRIO, GEAR UP and GAANN), SEOG and College Access Challenge Grants. Funding for international education programs saw a miniscule increase (\$1.7 million). The Pell Grants program's proposed funding is





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\$36 billion (\$22.8 billion in discretionary and \$13.3 billion in mandatory), and the budget seeks to fully fund the maximum grant level at \$5,635.

As the President hinted at in his State of the Union address and subsequent speeches, the budget request proposes to reform the formula for distributing approximately \$10 billion annually of campus-based aid (Perkins, federal work-study, etc.) to “reward colleges that act responsibly in setting tuition, providing the best value, and serving needy students well.”

In his budget request the President proposes to reform the Perkins Loan, SEOG and Federal Work-Study programs in order to target and push funding toward institutions that enroll and graduate relatively higher numbers of Pell-eligible students as well as offer lower tuition prices and fees and/or contain growth in tuition and fees.

### ➤ **Perkins Loan Program Modernization and Expansion**

The Budget proposes to expand and modernize the Perkins Loan program as a mandatory credit program. When fully implemented, the program would provide \$8.5 billion in loans annually, allocating lending authority among institutions on the basis of the financial need of students attending an institution, the extent to which institutions produce Pell-eligible graduates, and the extent to which institutions offer lower tuition prices or high amounts of non-Federal grant aid. This reform would replace the current program that is scheduled to terminate in 2014.

As part of an overall campus-based aid reform, Federal funding under Federal Perkins Loans would be allocated in a manner that promotes student interests by ensuring campus based aid is available at those institutions that enroll and graduate relatively higher numbers of Pell-eligible students; offer relatively lower tuition prices and/or restrain tuition growth; and, offer quality education and training such that graduates obtain employment and can comfortably afford to repay educational debt. Like current Perkins loans, colleges would retain flexibility in awarding loans among their students and determining student eligibility. However, instead of being serviced by the colleges, loans would be serviced by the Department of Education’s private sector servicers along with other Federal loans.

The Administration proposes a Perkins Loan interest rate consistent with Unsubsidized Stafford loans at 6.8 percent. Loan amounts for both undergraduates and graduates would remain the same as in the current Perkins program. To increase loan availability, interest on the loans would accrue while students are in school.

### ➤ **SEOG Allocation Formula Reform**

Proposed reforms to the allocation formula for SEOG will redirect funding from higher-priced and well-endowed institutions to lower-priced public and private institutions that enroll and graduate higher numbers of Pell-eligible students and restrain tuition increases. Allocations to schools that fail to maintain a commitment to meeting these standards would be redistributed to better-performing institutions.

### ➤ **Expansion and Refocus of Federal Work-Study Program**



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The Budget proposes to provide \$150 million in new funds for the Work-Study program to help students earn their way through college, directed to institutions opting to participate in an enhanced Work-Study partnership with prospective employers. To increase students' employment prospects, institutions would collaborate with employers to provide students with work-study opportunities that are meaningfully aligned with students' academic programs and career aspirations.

The Dept. of Education Congressional Budget Justification for FY2013 can be found here:

<http://www2.ed.gov/about/overview/budget/budget13/justifications/index.html>

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As always, please do not hesitate to contact us with questions or concerns.