



**Public Policy  
Colloquium  
2012**

**Legislative Update**

# Divide on Spending

- **Obama Administration Policy:** Cut and Invest. President sought major increases in non-defense research.
- **Congress** cut his request but ended up providing more for R&D than many expected.

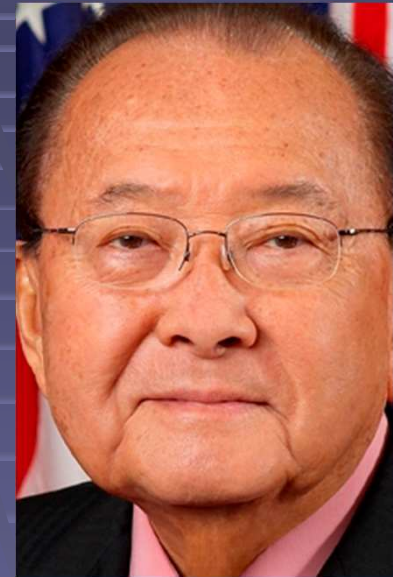


# FY 2012 Non-defense R&D Congressional Action

- Up 0.4 percent in FY 2012 over 2011 (but 7.6 percent below what administration wanted.)
- National Institutes of Health – 0.2 percent
- DOE Office of Science + 4.9 percent
- NASA – 6.6 percent
- NSF + 3.1 percent
- NOAA + 0.6 percent
- NIST + 28.1 percent

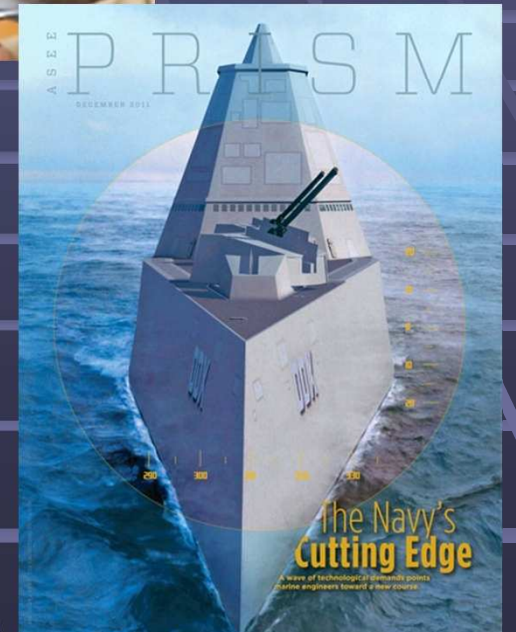
# Second Year of Earmark Ban

- Endorsed by President and House Republicans.
- Senators follow suit, some reluctantly.
- Watchdog groups say ways are being found to accomplish the same ends as earmarks without specifically naming beneficiaries.



# Defense Budget

- Defense Secretary Leon Panetta plans to cut \$489 billion over the next decade. \$263 billion in cuts will come in the next five years.
- A sequester would impose an additional \$500 billion in cuts in the period 2013-23.
- For FY 2012, Congress cut 4 percent from FY 2011 R&D but increased basic research (6.1-6.3) by \$82 million.



# DARPA and NDEP

- Congress cut \$160 million from DARPA. The agency has been tagged as seeking more money than it can spend.
- The National Defense Education Program received \$15 million less than the administration sought. Bill language protects SMART scholarships.





# Science Space and Technology Committee

## Chairman Ralph Hall (R, Tex.)

The committee and its subcommittees have concentrated on oversight of administration performance, holding hearings on:

- Transparency and results of ARRA (Stimulus) spending.
- Challenges in completing the James Webb Space Telescope on time.
- “Significant concerns” about EPA science.
- Government vs. private role in STEM education.

- Obama administration energy initiatives, including ARPA-e.
- Hall is a member of the **Tea Party** caucus and a space exploration enthusiast.



# Science, Space, and Technology

## Key Subcommittees

- **Oversight and Investigations**

Rep. Paul Broun (R-Ga.) chair.  
Physician, critic of administration's commitment to scientific integrity.



- **Research and Science Education**

Rep. Mo Brooks (R-AL), Chair.  
Freshman, former prosecutor





# Science, Space, and Technology

## Key Subcommittees

- Energy and Environment – Chair, Rep. Andy Harris, R, Md.
- Technology and Innovation – Chair, Rep. Ben Quayle, R, Ariz.



# Key Players in Education - House

- **John Kline** (R, Minn.) Chair, Education and Workforce Committee. According to the Triangle Coalition: “Kline has expressed that his priorities will focus on certainty and simplicity in federal regulations, and promoting innovation in schools and workplaces.”
- **Virginia Foxx** (R, NC), Chair of House Higher Education Subcommittee, says, "A major problem facing institutions of higher education is the delay in fully grasping the magnitude of the fiscal problems facing our country."



# Key Players in Education Senate

- Tom Harkin, D-Iowa. Leading critic of for-profit colleges.
- Lamar Alexander, R-Tenn. A key supporter of COMPETES; also helped initiate National Academies review of research universities.



# Elementary and Secondary Education Act

- Senate Committee writing legislation to reauthorize ESEA.
- House Committees reluctant to produce a comprehensive bill. Instead, they favor taking up the legislation in pieces.
- In the current vacuum, U.S. Education Department has begun granting waivers to schools districts that fall below standards set in No Child Left Behind.

# COMPETES Act: Key Provisions

## **R&D and Manufacturing**

- Prizes to stimulate innovation.
- Help for small- and medium-sized manufacturers in reducing greenhouse emissions, accelerating commercialization of new products and identifying markets.
- Green manufacturing and construction initiatives; Enhanced Manufacturing Extension Partnerships.
- A push for Advanced Manufacturing through NSF-funded research and education programs and ARPA-E.
- National clearinghouse for international and national research and engineering statistics.

# Where EDC Stands

- We support robust and sustained funding for NSF, NIH, DOE's Office of Science and ARPA-E, and NIST. Recognizing budget constraints, we urge Congress to view research sponsored by these agencies as investments in future innovation and economic growth.
- The EDC urges Congress and the White House to continue to recognize the value of Pentagon-funded university research.



# Where EDC Stands

- The EDC urges Congress to keep in mind the importance of universities and NASA to each other in conducting breakthrough research and increasing the supply of talented scientists and engineers.
- It is critical that NIH continue to receive high priority for funding in FY 2013 and beyond. Without strong continued support, important research already begun may not achieve desired results.

# Where EDC Stands

- The EDC welcomes complementary Math and Science Partnerships Initiatives (MSP) at the National Science Foundation and the Department of Education. We encourage Congress to fund both at levels high enough to secure their effectiveness.

# COMPETES ACT: Key Provisions

## Education

- Coordination of federal STEM education programs through the Office of Science and Technology Policy.
- For several agencies, a stress on improving STEM education.
- Promote participation by underrepresented minorities in STEM fields. Continuation of NSF's minority education programs.
- NSF to examine effectiveness of K-12 engineering education.
- Link community colleges with job needs by industry.
- Undergraduate and high school students' participation in NSF-funded research.
- Cyber-enabled learning.
- Replicate programs like U. of Texas' UTeach to train knowledgeable STEM teachers.

# Inventory of Federal STEM Programs

- Called for in COMPETES Act.
- Released by White House in November, 2011.
- Found: 252 distinct programs; total cost \$3.4 billion.
- A strategic plan for consolidation will be released in early 2012.

# BILLS TO WATCH



- ENGINEERING EDUCATION FOR INNOVATION (E-2)
- TAX TREATMENT OF EMPLOYER -PROVIDED EDUCATION SUPPORT.
- EASING OF WORK VISAS FOR HIGH-SKILLED IMMIGRANTS.
- DOMESTIC MANUFACTURING.
- WOMEN AND MINORITIES IN SCIENCE AND ENGINEERING.

# BILLS TO WATCH



## H.R. 3433 Grant Reform and New Transparency Act of 2011 (GRANT ACT)

- Would require a public explanation of the basis for grant decisions, disclosure of the names of reviewers, and a posting of the full grant proposal within three years.

## H.R. 3699 Research Works Act

- Would bar federal agencies from disseminating any private-sector research work without prior consent of the publisher.



# Employer-provided Educational Assistance

- **CURRENT LAW:** Section 127 of the tax code enables employees to receive up to \$5,250 in educational benefits each year from their employer tax-free.
- Extended through 2012.
- Education, business and labor groups seek to make it permanent.



# Engineering Education for Innovation (E-2)

- Initiated by the Museum of Science, Boston.
- Introduced in last Congress and expected to be reintroduced soon.
- Provides planning, implementation, and evaluation grants for state partnerships and school consortia to integrate engineering curricula and content into classrooms across the country

# (Original) COMPETES Act

Agency	Examples of Implemented Recommendations
<b>NIST</b>	<ul style="list-style-type: none"><li>• TIP grants to small business and joint ventures</li><li>• Double number of fellows included in the postdoc fellowship program</li></ul>
<b>NSF</b>	<ul style="list-style-type: none"><li>• Grant program for associate degree-awarding IHEs to recruit and train STEM mentors for underrepresented students</li><li>• Grant applications to include plan for training in ethical research and description of mentoring activities for postdocs</li></ul>
<b>OSTP</b>	<ul style="list-style-type: none"><li>• National Science and Technology Summit</li></ul>
<b>DOE</b>	<ul style="list-style-type: none"><li>• Summer internship program at National Labs</li><li>• National Labs program for STEM teachers training related to DOE mission</li><li>• Establishment of ARPA-E (\$451M in FY09)</li></ul>
<b>DOEd</b>	<ul style="list-style-type: none"><li>• Expert panel on K-12 STEM education (NAS)</li><li>• Grants to start programs in STEM or foreign languages that lead to degree with teacher certification (\$1M in FY08 and \$1.1M in FY09)</li></ul>

# Reauthorized COMPETES Act

Agency	Examples of Implemented Recommendations
<b>NSF</b>	<ul style="list-style-type: none"><li>• Establishment of The National Center for Science and Engineering Statistics (NCSES)</li><li>• Merit review principles and criteria--including goals to achieve increased U.S. economic competitiveness, development of a globally competitive STEM workforce, and increased national security</li></ul>
<b>OSTP</b>	<ul style="list-style-type: none"><li>• Federal STEM Portfolio (programs inventory)</li><li>• RFI soliciting public input on long term preservation of and public access to the results of federally funded research</li></ul>
<b>DOC</b>	<ul style="list-style-type: none"><li>• Report on the economic competitiveness and innovative capacity of the United States</li></ul>

# Research Funding

