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STATUS OF FY 2010 SCIENCE SPENDING BILLS... OVER A CLIFF IN 18 MONTHS?... PRESIDENT OBAMA'S INNOVATION AGENDA — THE 3% SOLUTION... NASA SPACE FLIGHT PANEL WARNS... COMPETES ACT AGENCIES “UP A CREEK, SOON”?... K-12 ENGINEERING STUDY RELEASED... CONGRESSIONAL VISITS DAY (CVD) 2010 DATES ANNOUNCED... IEEE-HOSTED INNOVATION METRICS EVENT OCTOBER 21... NEW TOOLS FOR POLICY ANALYSIS UNVEILED... STATE R&D SHEETS RELEASED... DR. ROBIN GASTER NAMED NEW ASTRA VP FOR RESEARCH...

FY 2010 SCIENCE BUDGETS ADVANCE: As compared to past years, Congress is ahead of itself this year in passing FY 2010 appropriations bills. The full House has passed all 12 appropriations bills. While the Senate Appropriations Committee has passed all of its 12 bills, the full Senate has only passed 5 of the measures. Conference committees to resolve differences between House and Senate versions are expected to wrangle over details well into the Holidays. Sources expect most of the funding measures to be wrapped up in an Omnibus Budget bill later this year, with the usual rancorous fight. A continuing resolution to keep the government funded is likely to be passed by October 2 in the House over Republican objections. The Senate is expected to follow suit.

WITHER SCIENCE BUDGETS FOR 2010 AND BEYOND — “BOOM & BUST” AHEAD? While science agency budgets have fared comparatively well under the new Administration — especially the *America COMPETES Act* “trio” that includes the **National Science Foundation (NSF)**, the **Office of Science at the Department of Energy (DOE)** and the **National Institute of Standards & Technology (NIST)** at the Department of Commerce — serious problems face the entire federal R&D enterprise due to massive federal deficits and the ongoing economic crisis. Many fear that the “boom and bust” cycle that typified the “doubling” initiative at the National Institutes of Health (NIH) during the past decade will repeat itself and jeopardize other agencies. ASTRA's Board has made reauthorization of the *America COMPETES Act* a top policy concern for 2010. An analysis of how *COMPETES Act* agencies will be challenged by future budget hurricanes has been completed by ASTRA's Burk Kalweit and can be found at www.usinnovation.org/files/ASTRAScienceFundingAnalysisFY10BK.pdf

PRESIDENT OBAMA'S INNOVATION INITIATIVE: President Obama delivered his second address on the importance of basic scientific research during a visit to the Troy, NY on September 21. He outlined the Administration's strategy for sustained growth and “widely shared prosperity” linked to investments in R&D by both the public *and* private sector. Describing innovation as a process comprised of “education, infrastructure and research,” he reiterated the Administration's goal of devoting more than three percent of U.S. GDP to research and development, promising that “We will not just meet, but we will exceed the level achieved at the height of the Space Race, through policies that invest in basic and applied research... promote breakthroughs in energy and medicine, and improve education in math and science. This represents the largest commitment to scientific research and innovation in American history.” For more information about the President's speech, see: www.usinnovation.org/files/Obama'sInnovationStrategySept20_2009.pdf

THE “3% SOLUTION” — IS IT POSSIBLE?: Speaking of which, ASTRA economist and VP for Development **Burk Kalweit** has analyzed where the “3%” of GDP is supposed to come from in a challenging piece posted on our Web Site. **Without significant changes to tax policy, it is doubtful that industry can come up with the estimated 2.8% of GDP that would be required to achieve the 3% goal — a level that has never been achieved in the past.** Check out Burk's math at www.usinnovation.org/files/Kalweit3PercentRDSolutionOct2009.pdf and share it with others.

AUGUSTINE / NASA COMMITTEE WARNS ON INADEQUATE FUNDING FOR MANNED SPACE OPERATIONS: Washington is aflutter as it digests the much-awaited recommendations of the 10-member blue ribbon U.S. Human Space Flight Plans Committee.” Unofficially called the “Augustine Committee” after its Chairman, retired **Lockheed Martin CEO Norm Augustine**, it delivered a sobering report on the future of the U.S. manned space flight program to Congress on September 8. In essence, the committee concludes that if the U.S. wants to continue manned spaceflight



programs, then Congress will need to fund at least \$3 billion more for NASA in FY 2010. The Agency is currently slated to receive about \$18 billion in FY 2010. Documenting the need for greater financial support for NASA, the Committee warned: "The U.S. human spaceflight program appears to be on an unsustainable trajectory. It is perpetuating the perilous practice of pursuing goals that do not match allocated resources. Space operations are among the most complex and unforgiving pursuits ever undertaken by humans. It really is rocket science." The Committee also recommends that NASA immediately begin fostering commercial space flight operations through the private sector. If not, the Panel warns that the U.S. economy will suffer the loss of potential new markets to overseas commercial space competitors... a familiar story of how American taxpayers — who funded much of the basic R&D for space exploration — get left holding the bag. For a copy of the report, see: www.usinnovation.org/files/AugustineHumanSpaceFlightReportSept.2009.pdf

K-12 ENGINEERING SYMPOSIUM HIGHLIGHTS NEW REPORT... A report issued by the **National Academy of Engineering** and the **National Research Council** on September 8 makes specific recommendations on introducing K-12 engineering education to students. "The problem solving, systems thinking, and teamwork aspects of engineering can benefit all students, whether or not they ever pursue an engineering career," said **Linda Katehi, Chancellor of the University of California, Davis**, and chair of the committee that wrote the report. Engineering education at the K-12 level should emphasize engineering design and a creative problem-solving process, the committee said. It should include relevant concepts in mathematics, science, and technology, as well as support the development of skills many believe essential for the 21st century, including systems thinking, collaboration, and communication. According to the Report, the benefits of introducing students to engineering "has the potential to improve student learning and achievement in science and mathematics, increase awareness about what engineers do and of engineering as a potential career, and boost students' technological literacy." The report, ***Engineering in K-12 Education: Understanding the Status and Improving the Prospects***, is available at through the National Academies Press. A free summary can be found at http://www.nap.edu/catalog.php?record_id=12635 To access the free summary and recommendations, please follow the instructions at the bottom of the linked page.

MARK YOUR CALENDARS TODAY FOR APRIL 28,29 2010 — THE SETWG 14th ANNUAL CONGRESSIONAL VISITS DAY: Congressional Visits Day (CVD) 2010 has been scheduled by the **Science, Engineering, Technology Working Group (SETWG)** — hosted by over 30 organizations — for Wednesday and Thursday, **April 28-29, 2010**. Two full days of orientation and advocacy events are planned. The **AAAS** is planning a new media & communications training component, and initial plans are underway to "theme" a new exhibit around the 50th Anniversary of the invention of the Laser in 1959. **Please contact your trade or professional association (s) to see if they are participating.** For more information: www.setcvd.org/cvd2010/index.html

UPCOMING INNOVATION METRICS EVENT: The IEEE-USA, an ASTRA member, is co-hosting a ***Workshop on Science, Technology, Engineering and Mathematics (STEM) Enterprise: Measures for Innovation & Competitiveness*** on Wednesday, October 21 at George Washington University in D.C. The day long program is co-sponsored by ASTRA and other organizations. For more information, see: ieeusa.org/calendar/conferences/stem/program.asp

USE US! TOOLS, DATA, AND MORE TOOLS: More than 41,000 "Friends of ASTRA" are now accessing our two Web Sites for policy research, news, and c-o-n-n-e-c-t-i-v-i-t-y to a global community of interest. We now have **Facebook** and **Twitter** feeds as well if you have interest in such networking activities. More than 70 videos related to STEM Education, Innovation Policy, and Science Funding can be found at www.usinnovation.org/video/vid_landing.asp and our **State R&D Sheets for 2009** can be found at www.usinnovation.org/state/state_rd.asp Our new Regional Innovation Index TM can be found at www.usinnovation.org/innovation_index.asp

LATEST ASTRA SBIR RESEARCH: ASTRA's new VP for Research, **Dr. Robin Gaster**, is co-author of an important study of the SBIR program along with **Dr. Charles Wessner** of the **National Academies STEP Board staff**. Dr. Gaster has published extensively in the areas of capital formation, SBIR, and innovation metrics. See: www.usinnovation.org/files/TheMythoftheMillsSBIRPerspectiveOct2009.pdf

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