

## Highlights

President Obama's proposed budget for fiscal year (FY) 2013 makes major investments in advanced manufacturing and clean energy, continues to propose increases for the three physical science agencies in the President's Plan for Science and Innovation and America COMPETES, and seeks general increases in basic and applied nondefense research. In addition, the budget advances an initiative to train 100,000 new STEM educators in the next 10 years and would establish a Wireless Innovation Fund to develop advanced public safety communications technology. Overall federal investment in research and development (R&D) would increase slightly from FY 2012, in spite of the spending caps established in the Budget Control Act.

– **The proposed federal R&D portfolio in FY 2013 is \$142.2 billion, an increase of 1.2 percent or \$1.7 billion over FY 2012 levels** (see Chapter 1 and Table II-1). Defense R&D spending would decrease by \$1.5 billion (1.9 percent), but this would be offset by a \$3.1 billion (5.1 percent) increase in nondefense R&D spending. In total dollars, agencies with the biggest increases in R&D investment include the Department of Energy (DOE; \$884 million increase to \$11.9 billion), the National Science Foundation (NSF; \$258 million to \$5.9 billion); NASA (\$203 million to \$9.6 billion); the Department of Homeland Security (DHS; \$196 million to \$813 million); and the Department of Transportation (\$161 million). The Department of Commerce would receive an enormous increase of \$1.4 billion to \$2.7 billion total; however, \$1.2 billion of this proposal consists of one-time mandatory funding for advanced manufacturing and technology initiatives at the National Institute for Standards and Technology (NIST). Even without these mandatory proposals, Commerce would still receive a large increase of \$179 million. The National Nanotechnology Initiative and the U.S. Global Change Research Program would also receive boosts (Table I-8).

– **Total federal support of research (basic and applied) would increase 2.7 percent to \$65.3 billion** (see Table II-1). In real terms, this would be the fourth largest level of federal research investment in history, and the highest since 2005 (see Chapter 2).

- **Federal development spending, however, would decrease 1.7 percent to \$74.1 billion** (see Table II-1). This decrease is largely due to cuts to weapons development activities at the Department of Defense (DOD), which would decline by \$1.9 billion or 2.8 percent. Nondefense development would increase by \$690 million, or 9.8 percent.
- **The three President’s Plan for Science and Innovation agencies would receive increases, but would fall well short of the doubling pace established in the America COMPETES Act.** NSF would receive a total budget increase of 4.8 percent to \$7.4 billion (see Table II-7 and Chapter 6), NIST laboratories would see a total budget increase of 14.9 percent to \$574 million (see Table II-14 and Chapter 12), and DOE’s Office of Science budget would increase 2.5 percent to \$5 billion (see Table II-11 and Chapter 8).
- **Clean energy is a clear R&D priority in the FY 2013 budget.** DOE’s energy programs would receive a 16.2 percent increase in R&D funding (\$369 million) to a total of \$2.6 billion, primarily due to gains in efficiency and renewables, and at the Advanced Research Projects Agency-Energy (ARPA-E).
- **The National Institutes of Health (NIH) would receive a flat R&D budget after a very modest increase last year** (Table II-9 and Chapter 7). NIH flat budget of \$30.1 billion would represent a more than 2 percent decline when factoring in inflation.
- **DOD would receive flat funding for basic research, while virtually all other R&D accounts would decline** (see Table II-2 and Chapter 5). Basic research would remain at \$2.1 billion, while applied research would be cut by 5.5 percent or \$261 million. Basic research at DARPA would increase by 6.3 percent to \$309 million, but DARPA’s overall R&D budget would remain flat.
- **The U.S. Department of Agriculture’s (USDA) R&D investment would decrease by 1.5%** (see Table II-13 and Chapter 10). However, this is largely due to the end of a biomass R&D initiative that may still be reauthorized in the 2012 Farm Bill. The Agriculture and Food Research Initiative (AFRI), the leading research program at USDA, would see its budget increase by 22.9 percent to \$325 million, after receiving flat funding last year.