

Highlights

In a time of great uncertainty, with imminent military action against Iraq, a shaky U.S. economy, the return of budget deficits, the loss of the space shuttle and seven astronauts, and a federal budget for fiscal year (FY) 2003 that was still unfinished at that time, President Bush's FY 2004 budget proposal calls for overall increases for the federal investment in R&D, especially for the priorities of defense development and homeland security R&D, with a mixture of flat funding, cuts, and at-best modest increases for other R&D programs. In a budget that proposes record deficits in the coming years, an additional \$1.5 trillion package of tax cuts over the next decade, and continuing increases in defense and entitlement spending, the proposal calls for only modest increases in domestic programs not related to homeland security, with the consequences of reduced expectations for many R&D programs.

- The request for **total federal R&D in FY 2004 is another record at \$122.5 billion, or 4.4 percent more than FY 2003** (see Table II-1). Most of the increase would go to defense development of weapons systems, leaving smaller percentage increases for other categories of spending (see Table II-1 and Chapters 1 and 2).
- Two agencies may have to adjust to diminished expectations after years of favored treatment. After an almost-completed five-year doubling campaign involving 15 percent increases for each of the past five years, growth in the **National Institutes of Health (NIH)** budget would slow to just 2.7 percent in FY 2004 (see Chapter 8). Although President Bush signed a National Science Foundation (NSF) authorization bill in December that called for its budget to double over five years, the **NSF total budget request of \$5.5 billion** in FY 2004 would fall far short of the \$6.4 billion authorized level (see Chapter 10).
- The **Department of Homeland Security (DHS)**, officially created just this year, would become a major R&D funding source with an R&D budget of \$1.0 billion, a dramatic increase of 49.6 percent from the estimated FY 2003 level for comparable programs (see Table II-20 and Chapter 12).

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- Nondefense R&D would increase by just 1.2 percent to \$55.0 billion. Excluding the modest growth in the NIH budget, however, **nondefense R&D excluding NIH would fall by 0.1 percent to \$28.0 billion** (see Table II-1 and Chapter 3).
- Outside of DOD and DHS, the federal R&D portfolio is a mix of flat funding and cuts from last year, with some modest increases (see agency chapters).
- **Defense R&D** would total 55 percent of the federal R&D portfolio in FY 2004 at \$67.5 billion, up 7.2 percent from the FY 2003 level, from near-parity with nondefense a few years ago (see Table I-4). Department of Defense (DOD) R&D would surpass Cold War funding levels at \$62.8 billion (up 7.2 percent), with the entire increase for the development costs of new weapons and missile defense systems; DOD basic and applied research would both decline (see Table II-2 and Chapter 6). Department of Energy (DOE) defense R&D would rise 8.6 percent to \$4.2 billion (see Table II-11 and Chapter 9). The new DHS would also fund defense-related R&D (see Chapter 12).
- The federal investment in **research** (basic and applied) would grow by just 1.5 percent to \$53.7 billion, reflecting greater emphasis on defense development (see Table II-1 and Chapter 3). Excluding a 7.0 percent increase for NIH research, **total research excluding NIH would fall 3.4 percent** to \$26.9 billion.
- The AAAS analysis of the **outyear projections** in the FY 2004 budget shows that total R&D would increase to \$134.4 billion in FY 2008 under Bush Administration long-term budget plans, a 4.7 percent gain after adjusting for expected inflation (see Table I-8 and Chapter 3).
- **Nanotechnology** (see Chapter 25) and **information technology** R&D (see Chapter 24) would be high priorities in the federal R&D portfolio among multi-agency initiatives agencies (see Table I-10). But the ongoing **Climate Change Science Program** would see a new organizational structure but flat funding (see Chapter 16).