

## **American Recovery and Reinvestment Act: Transforming Our Economy with Science, Technology & Innovation**

**This economic recovery package invests in science and technology – both creating jobs in the short-term and building a foundation for strong economic growth in the long-term. The recovery package includes a \$10 billion investment in scientific research, including investments at the National Science Foundation and the National Institute of Standards and Technology. Regarding new technologies, the package also includes nearly \$40 billion in investments in America’s IT network infrastructure (including broadband, health IT, and a smarter energy grid). More than 100 high-tech CEOs and business leaders have endorsed these IT investments and stated that this \$40 billion investment alone will create more than 949,000 U.S. jobs, more than half of which will be in small businesses.**

### **Investments in Scientific Research (\$10 Billion)**

#### **National Science Foundation**

- Provides \$3 billion overall for the National Science Foundation, putting the NSF budget on track to double over the next seven years, as called for under the America COMPETES Act (PL 110-69).
- Includes \$2.5 billion for NSF research and research-related activities. Sustained, targeted investment by NSF in basic research in fundamental science and engineering advances discovery and spurs innovation. Such transformational work holds promise for meeting the economic and environmental challenges facing the country, and competing in an increasingly intense global economy.
- The \$2.5 billion for research is estimated to support an additional 3,000 new NSF research awards and would immediately engage 12,750 senior personnel, post-docs, graduate students, and undergraduates.
- Also includes \$100 million for improving instruction in science, technology, engineering, and mathematics (STEM).
- Also includes \$400 million for the construction and development of major research facilities that perform cutting-edge research.

#### **Department of Energy’s Office of Science**

- Provides \$1.6 billion for DOE’s Office of Science, putting the office’s budget also on track to double over the next seven years, as called for under the America COMPETES Act (PL 110-69).
- The DOE Office of Science is the single largest supporter of basic research in the physical sciences in the United States, providing more than 40 percent of total funding for this vital area of national importance. It oversees the nation’s research programs in climate science, advanced computing, biofuels, high-energy physics, nuclear physics, and fusion energy sciences – areas crucial to our energy future.

#### **ARPA-E**

- Provides \$400 million for the Advanced Research Project Agency-Energy (ARPA-E) to support high-risk, high-payoff research into energy sources and energy efficiency in collaboration with private industry and universities.

#### **National Institute of Standards and Technology**

- Provides \$500 million overall for the Commerce Department’s National Institute of Standards and Technology (NIST), putting its budget also on track to double over the next seven years, as called for under the America COMPETES Act (PL 110-69).

- Includes \$300 million for competitive construction grants for research science buildings at colleges, universities, and other research organizations.
- Includes \$100 million to coordinate research efforts at laboratories and national research facilities by setting standards for manufacturing.
- Includes \$70 million for the Technology Innovation Program (TIP), which is designed to speed the development of high-risk, transformative research targeted to address key societal challenges, and \$30 million for the Manufacturing Extension Partnership (MEP), which is targeted at improving the productivity and competitiveness of small manufacturers.

### **Certain Other Key Investments in Scientific Research**

- \$2 billion for the National Institutes of Health (NIH), including \$1.5 billion for expanding good jobs in biomedical research to study diseases such as Alzheimer's, Parkinson's, cancer, and heart disease, and \$500 million to implement the repair and improvement plan developed by NIH for its campuses.
- \$600 million for the National Aeronautics and Space Administration (NASA), including \$400 million to put more scientists to work doing climate change research.
- \$1.5 billion for NIH to renovate university research facilities and help them compete for biomedical research grants.

### **Investments in IT Network Infrastructure (\$37 Billion)**

*More than 100 high-tech CEOs and business leaders have endorsed the bill's nearly \$40 billion in investments in IT network infrastructure, including broadband, health IT, and a smarter energy grid and estimate these investments will create more than 949,000 U.S. jobs, more than half of which will be in small businesses. They stated, "The investments in a smarter energy grid, health care IT..., and accelerating broadband deployment ... will not only stimulate the economy, but will also accelerate long-term growth."*

### **Broadband and Wireless Services**

- Provides \$6 billion for extending broadband and wireless services to underserved communities across the country, so that rural and inner-city businesses can compete with any company in the world.
- For every dollar invested in broadband, the economy sees a ten-fold return on that investment.
- The stimulative impact of this investment would be: 1) jobs to procure, produce, deliver, install, and maintain new infrastructure; and 2) jobs in sectors of the economy that rely on e-commerce, including the retail, high-tech, education, health care, and real estate sectors.

### **Smarter Energy Grid**

- Provides \$11 billion for improving the grid, including transforming the nation's electricity systems through the Smart Grid Investment Program to modernize the grid to make it more efficient and reliable. This will jumpstart smart grid demonstration projects in geographically diverse areas; increase federal matching grants for smart grid technology (to 50% from the current 20%) including "Smart Meters" that give consumers more choice in their energy consumption at home; and spur research and development. The funding will also facilitate the building of new power lines that can transmit clean, renewable energy from sources throughout the nation.

### **Health Information Technology**

- Provides \$20 billion to accelerate adoption of Health Information Technology (HIT) systems by doctors and hospitals, in order to modernize the health care system, save billions of dollars, reduce medical errors, and improve quality. Also provides significant financial incentives through the Medicare and Medicaid programs to encourage doctors and hospitals to adopt and use HIT.
- Promoting the adoption of Health Information Technology systems will create hundreds of thousands of jobs – many of them high-tech jobs.
- The nonpartisan CBO estimates that, as a result of this legislation, approximately 90 percent of doctors and 70 percent of hospitals will be using electronic medical records within the next 10 years.