



AMERICAN PHYSICAL SOCIETY

Washington Office

The Department of Energy Office of Science

Providing Ideas, Scientists & Engineers, and Facilities

DOE's Office of Science funds basic research in support of DOE missions, including scientific and technological innovation, a reliable and environmentally sound energy supply and environmental clean-up. It constructs and operates large-scale, world-class scientific tools for the use of scientists, it funds large portions of many science fields, and it plays a vital role in science and engineering workforce development.

- **Office of Science is vital to U.S. Science**

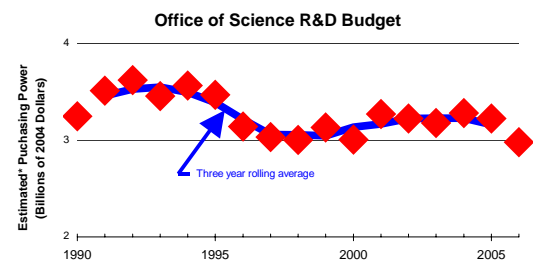
- Largest source of federal funds for the physical sciences, and among the largest for the life and environmental sciences, engineering, mathematics and computing*
 - Physical sciences (overall) – 43%
 - Nanoscale science research – 25%
 - Plasma science – 100%
 - Catalysis – 60%
 - Materials and metallurgy – 49%
 - Physics – 69%
- Hosts 18,000 researchers funded by NSF, NASA, NIH, NIST, DOD, DOE and industry at its facilities annually
- Initiated the Human Genome Project, is developing the next generation supercomputer, and does advanced climate modeling
- Has funded the work of 75 Nobel Laureates
- Roughly 11,000 scientists and engineers trained each year

- **Office of Science pivotal to U.S. Competitiveness**

- Makes investments to ensure U.S. remains at the forefront of all science fields
- Pursues long-term research funding not feasible for companies driven by short-term demands of Wall Street
- 1000 industry scientists use the facilities annually
 - Advanced computing resources to cut time from design to production by factors of ten or more
 - X-ray microscopes allow development of nanoscale devices
 - Semiconductor devices can now be analyzed for trace impurities that can limit their performance.
 - Pharmaceutical companies use the light sources to develop new drugs
- Funds high-risk, high-payoff research that fuels American innovation
- Ensures that U.S. scientists have access to the most cutting-edge instruments

- **The Office of Science level of effort decreased by the inflation rate, resulting in:**

- Increased challenges to U.S. leadership in many fields
- Fewer Americans pursuing degrees in physical sciences.
- Underutilization of its facilities and lab infrastructure degradation
- A decrease in the PhD staffing at many of the labs;
- A proposal funding rate one third that of NIH and NSF.



Source: AAAS. Compiled by APS Office of Public Affairs. SSC construction costs subtracted out (1990-1993). *Purchasing Power is estimated as the GDP Deflator plus 1.4%.

*Office of Science Strategic Plan, February 2004.