



SEMICONDUCTORS – DRIVING INNOVATION, MEETING AMERICA'S GREATEST CHALLENGES

U.S. Innovation Leadership Key to Meeting Challenges

Semiconductors, the computational brains of every computer and electronic device, will help America meet its greatest challenges:

- **Economic Recovery and Growth:** Semiconductors drive innovation, economic growth and high-wage jobs creation and are America's second largest export. The U.S. high tech economy employs nearly 6 million Americans and pays wages that are *87 percent higher* than average private-sector wages.
- **Energy Security and Climate Change:** Whether it is in reducing the energy demand of the world's largest data centers or making everything from cars to refrigerators more efficient, semiconductors help in today's energy conservation efforts. Semiconductors also enable many renewable energy sources, such as solar panels.
- **Homeland and National Security:** From foreign intelligence gathering to border security to emergency response, semiconductors enable the technology that keeps Americans safe.
- **Health Care:** Semiconductors can transform health care. The Rand Corporation estimates that using information technology in the health care sector could result in annual savings of *\$77 billion or more* from efficiency alone.
- **Education:** Semiconductors are the backbone of information technology that helps students to learn, teachers to teach and schools to better serve students' individual learning needs.

SIA's Innovation Agenda for Economic Growth

Congress can strengthen U.S. innovation leadership by:

- Significantly increasing federal research investments by fully funding the America COMPETES Act;
- Reforming H-1B visa and EB green card policies to allow foreign students graduating from U.S. universities to stay and contribute to the U.S. economy;
- Permanently extending a strengthened R&D tax credit before the credit expires at the end of 2009; and
- Investing in energy efficiency, renewable energy, and Smart Grid technologies.

KEY FACTS

- Semiconductors are America's second largest export.
- High-tech wages are 87% higher than the average private-sector wage.
- America ranks 7th among OECD countries in terms of the percentage of GDP devoted to research.
- Federal funding of university basic research declined, in real terms, between 2004 and 2007, the first multi-year decline since 1982.
- 97 percent of semiconductor company H-1B holders apply for green cards and are subject to long waiting periods – 500 have been waiting 4 or more years.
- Foreign-born students earned 50% of master's and 71% of Ph.D.s in electrical engineering from U.S. universities in 2007.
- In the late 1980s, America provided the most robust R&D tax credit among developed nations, but by 2004, the United States had fallen to 17th place.