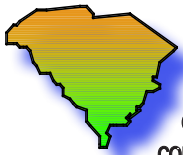


# South Carolina R&D 2008

## Meeting the Global Challenge for Innovation

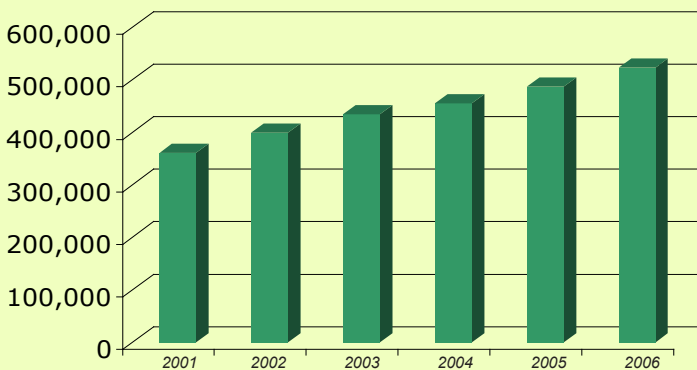


America's innovation future requires more federal investment in basic scientific research. Overall scientific research and development (R&D) promotes economic development, job growth, national security, competitiveness and global leadership. America's innovation future requires more federal investment in basic scientific research. U.S. leadership continues to narrow across a broad range of indicators when compared to the rest of the world.

An estimated 73% of all patents granted in the U.S. are attributable to scientific research initially funded by taxpayers through the federal government, especially university research operations.

South Carolina contractors earned \$70 million in federal R&D contract expenditures in FY 2007, with approximately 112 prime contractors involved. This amount *does not include federal grants and loans for R&D activities*. Information and charts on this page demonstrate the importance of federal investment in R&D to South Carolina's economy, and its future in the global marketplace.

### Federal R&D Funding to South Carolina Colleges & Universities FY 2001-2006 (\$ thousands)



SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2006.

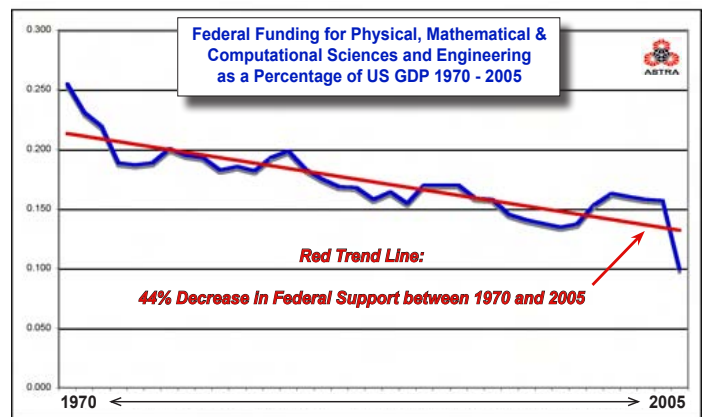
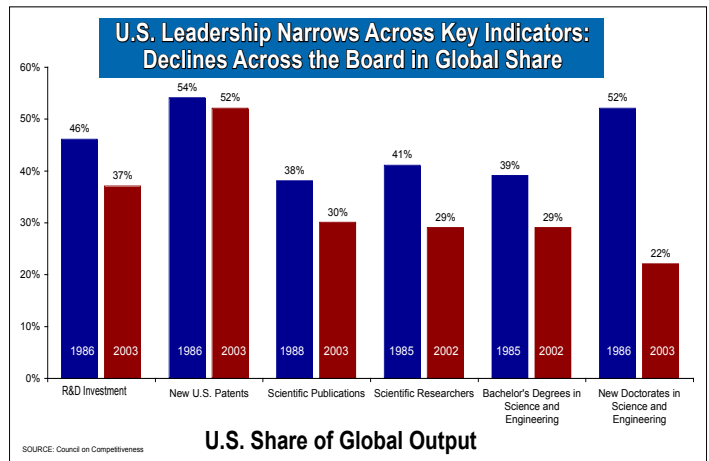
For more information and explanations of the summary data sets presented on this page, ASTRA Members can contact ASTRA with specific requests. Contact [boege@comcast.net](mailto:boege@comcast.net) for details.

### Top 5 Known South Carolina Congressional Districts Where Federal R&D Contracts Performed FY 2007\*

South Carolina 1 (Henry E. Brown Jr.)	\$38,015,305
South Carolina 6 (James E. Clyburn)	\$12,681,598
South Carolina 3 (J. Gresham Barrett)	\$11,324,268
South Carolina 2 (Joe Wilson)	\$3,265,003
South Carolina 4 (Bob Inglis)	\$1,465,276

### Key Reports and On-line Resources:

- **ASTRA's *Riding the Rising Tide*** is a 14-Point Policy Framework for regaining America's scientific & technology lead. A comprehensive set of analytical tools and reports on innovation and R&D policy are also found at [www.usinnovation.org](http://www.usinnovation.org) and [www.aboutastra.org](http://www.aboutastra.org), the two ASTRA Web Sites.
- The **Science-Engineering-Technology Working Group (SETWG)** sponsors the annual Congressional Visits Day Program. See [www.setcvd.org/cvd2008/](http://www.setcvd.org/cvd2008/)
- The **American Chemical Society's Science Policy** resource Site is [www.acs.org](http://www.acs.org)
- **Science & Engineering Indicators 2008**, published by the National Science Board, provides a broad base of quantitative information on the U.S. and international science and engineering enterprise. See [www.nsf.gov/statistics/seind08/](http://www.nsf.gov/statistics/seind08/)



Sources: Compiled by ASTRA from National Science Foundation, *Federal Funds for Research and Development* series; GDP data from the Bureau of Economic Statistics, U.S. Dept. of Commerce. R&D Figures are for Basic and Applied Research only. Development and R&D facilities are not classified by discipline. © 2007 ASTRA, The Alliance for Science & Technology Research in America.

### Top 10 Recipients of Federal R&D Contracts<sup>1</sup> Performed in South Carolina FY 2007\*

ADVANCED TECHNOLOGY INSTITUTE	\$21,917,991
SOUTH CAROLINA RESEARCH AUTHORITY	\$16,016,923
M.B. KAHN CONSTRUCTION CO.	\$7,034,621
STATE OF SOUTH CAROLINA	\$3,312,582
THOR TREATMENT TECHNOLOGIES	\$2,748,043
ALPHA GENESIS, INC.	\$2,039,568
COLLEGE OF CHARLESTON	\$1,959,118
COMMISSARIAT A L'ENERGIE ATOMIQUE	\$1,955,987
BLUE CROSS & BLUE SHIELD OF SOUTH CAROLINA	\$1,855,422
CLEMSON UNIVERSITY	\$1,785,664

1. R&D contract amounts do not include all management fees for Government-Owned, Contractor-Operated (GOCO) facilities under OMB definitions.

### Top 5 Federally-Funded R&D Products or Services Sold in South Carolina FY 2007\*

Undisclosed Code	\$17,292,878
Construction — Basic Research (R&D)	\$7,872,080
Manufacturing Technology — Advanced Development (R&D)	\$6,873,000
Product or Service Improvement — Engineering Development (R&D)	\$6,319,722
Weapons — Applied Research and Exploratory Development (R&D)	\$5,027,888

\* Sources: The sources of this data include a variety of federal government agencies, including the U.S. Office of Management & Budget and the National Science Foundation.



# How South Carolina Ranks 2008

Rank	General Demographic & Economic Indicators	South Carolina	Total U.S.
24	Population as of July 1, 2007	4,407,709	302,045,000
24	Civilian labor force, 2005 (thousands)	2,081	150,717
45	Personal income <i>per capita</i> , 2005 (\$)	\$28,212	\$34,495
30	High Tech Employment, 2005	42,540	5,627,326
39	High Tech Wages, 2005 (\$)	\$55,571	\$75,501
27	High Tech Establishments, 2005	3,430	332,976
27	Gross Domestic Product, 2006 (\$ billions)	\$149	\$13,149
39	R&D <i>per capita</i> , 2004 (\$)	\$381	\$980
22	High Tech Jobs Gained/Lost in State 2000 - 2005	— 5,115	— 955,703
48	Unemployment Rate, 2006 (percent)	6.5%	4.6%
Rank	Academic Indicators & Degree Production		
33	S&E Doctorates Awarded, 2005	227	27,974
36	S&E and Health Graduate Students, 2005	3,487	527,767
28	Federal R&D Expenditures at Universities & Colleges, all sources, FY 2006 (\$ thousands)	\$260,269	\$30,033,156
28	State & Local Govt. R&D Expenditures at Universities & Colleges, FY 2006 (\$ thousands)	\$34,467	\$3,016,240
22	Industry R&D Expenditures at Universities & Colleges, FY 2006 (\$ thousands)	\$27,447	\$2,427,627
17	Institutional R&D Expenditures at Universities & Colleges, FY 2006 (\$ thousands)	\$185,371	\$9,062,058
38	Expenditures per pupil for elementary and secondary public schools (\$)	\$7,549	\$8,701
Rank	Workforce Indicators		
9	Industrial Diversity 2004 (Herfindahl Index, indicating degree of diversity within State's traded sector)	.043	—
44	High Tech Workers <i>per</i> 1,000 Private Sector Workers, 2005 (Employment Concentration)	28.35	50.86
20	High Tech Employment Change, 2004-2005 (percent)	2.19%	1.58%
31	High Tech Payroll, 2005 (\$ millions)	\$2,364	\$424,869
Rank	R&D Spending by Source, R&D Indicators, Awards, & Patents		
33	Private R&D <i>per</i> Worker 2003 (\$)	\$487	—
32	SBIR Grants Awarded, 2000-2005	131	33,289
33	Gross License Income <i>per</i> Worker 2003 (\$)	\$1.46	—
32	Industry R&D, 2004 (\$ millions)	\$961	\$201,131
28	Academic R&D, 2005 (\$ millions)	\$486	\$45,725
37	Broadband Access (Residential high-speed lines <i>per capita</i> within State)	0.10	—
29	Patents issued to state residents <i>per</i> million workers, 2005	460	89,795
42	Businesses Created from University R&D (# of spin-outs <i>per</i> \$1 billion spent) 2001-2003	4.35	—
Rank	Venture Capital & Entrepreneurial Indicators		
44	Percent Change in Venture Capital Investments, 2000 - 2005 (percent)	— 98%	— 76%
39	Venture Capital Investments in 2006 (millions of 2006 \$)	\$9.7	\$25,505
21	Venture Capital Numeric Change 2005 - 2006 (millions of 2006 \$)	\$6.7	\$2,790
44	<i>Economic Dynamism - 2007 State New Economy Index</i> (measures 6 aspects of dynamism)	6.13	10.0
39	Overall <i>State New Economy Index Score 2007</i>	51.5	62.1

**Sources:** U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, Census Bureau; National Science Foundation/Science Resources Study Division; U.S. Bureau of Labor Statistics; National Venture Capital Association [www.nvca.org](http://www.nvca.org); U.S. Patent & Trademark Office; U.S. Office of Management & Budget; U.S. Small Business Administration; Association of University Technology Managers, Inc., *AUTM Licensing Survey: Fiscal Years 2001-2003*; Ewing Marion Kauffman Foundation [www.kauffman.org](http://www.kauffman.org); Information Technology & Innovation Foundation [www.itif.org](http://www.itif.org).

