

## U.S. R&D

The principal funders of U.S. R&D (~\$400 billion total in 2009) are the private (business) sector, which funds approximately 62% of all U.S. R&D, and the Federal Government, which funds 31%.<sup>1</sup> The NSB companion report, *R&D, Innovation, and the S&E Workforce*, highlights a nationwide decline in business funding for R&D from 2008 to 2009 (from \$259B in 2008 to \$247B in 2009). Federal funding from the American Recovery and Reinvestment Act (ARRA) partially compensated for this decline. Consequently, total U.S. R&D funding was flat from 2008 to 2009. The companion report noted a variety of other related trends, including a decline in venture capital funding and a shift away from early-stage, riskier venture capital investments during the period between 2007 and 2009.

## North Dakota R&D

The 50 states and the District of Columbia vary in the amount of R&D they perform. Data on the top 10 states in R&D performance<sup>2</sup> by sector and R&D intensity<sup>3</sup> for 2008 can be found in the NSB companion report in the table on page 13.<sup>4</sup> In 2008, among all U.S. states, North Dakota's estimated rank was 47 for total<sup>5</sup> R&D performance (\$511 million), and 29 for R&D intensity (1.6%).

## North Dakota Business R&D

According to the most recent data from NSF's National Center for Science and Engineering Statistics (NCSES) *Business R&D and Innovation Survey* (BRDIS), funds spent by North Dakota businesses<sup>6</sup> for R&D performed in the U.S. declined 23.8% from 2008 to 2009 (\$303 million to \$231 million). In 2009 (most current data available), North Dakota's estimated rank was 47<sup>7</sup> in funds spent by North Dakota-based businesses for R&D performed in the U.S. (California was first with \$64.9B in 2009).

## Federal R&D Funding Obligations to North Dakota

According to the NCSES *Survey of Federal Funds for Research and Development*, in 2008, \$99 million in total Federal R&D<sup>8</sup> was obligated to entities<sup>9</sup> within North Dakota. In 2009, \$103 million in total Federal R&D was obligated to North Dakota. Of the 2009 Federal R&D obligations, ARRA accounted for \$9.89 million. In 2009, North Dakota ranked number 49 in total Federal R&D dollars obligated to the state (including ARRA funds obligated in 2009<sup>10</sup>).<sup>11</sup>

**Other North Dakota-based Data:** Additional North Dakota-related data and trends can be found in [chapter 8](#) of *Science and Engineering Indicators 2012*, regularly published data updates on the NCSES [Web site](#), and in the NCSES [state profiles](#).

**Contact:** If you have any questions regarding the NSB companion report, *R&D, Innovation, and the S&E Workforce*, or the data discussed above, please contact Dr. Matthew Wilson at [mbwilson@nsf.gov](mailto:mbwilson@nsf.gov) or 703-292-4510.

<sup>1</sup> See *Science and Engineering Indicators 2012, Figure 4.3*.

<sup>2</sup> NSF tracks the R&D spending patterns of all the major performers in the overall U.S. R&D system: businesses, intramural R&D activities of Federal Agencies, federally funded R&D centers (FFRDCs), universities and colleges, and other nonprofit organizations.

<sup>3</sup> R&D intensity is the ratio of total R&D performed in a state to its GDP.

<sup>4</sup> Also, see pages 4-11 and 4-12 in *Science and Engineering Indicators 2012*, and *National Patterns of R&D Resources: 2009 Data Update*, Table 10.

<sup>5</sup> Includes in-state total R&D performance of business sector, universities and colleges, Federal Agencies, federally funded research and development centers, and federally funded nonprofit R&D.

<sup>6</sup> Data were attributed to the state where the R&D was performed.

<sup>7</sup> Out of 51 (50 states and District of Columbia)

<sup>8</sup> Total Federal R&D includes R&D and R&D plant. *R&D plant* is defined as R&D facilities and fixed equipment. Only 11 agencies are required to report data for this section of survey: Departments of Agriculture, Commerce, Defense (DOD), Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; Environmental Protection Agency; National Aeronautics and Space Administration; and National Science Foundation. Obligations of these 11 agencies represented over 98% of total Federal R&D and R&D plant obligations in FY 2009.

<sup>9</sup> These entities include intramural performers (agencies of the Federal Government) and extramural performers (industry, universities and colleges, non-profits, and state/local governments).

<sup>10</sup> This includes ARRA funds distributed to North Dakota for R&D in FY 2009. Additional ARRA funds for R&D may have been received by entities in North Dakota in subsequent years.

<sup>11</sup> See *Survey of Federal Funds for Research and Development*, Tables 82, 122, and 124.