

GAO Highlights

Highlights of [GAO-17-261](#), a report to congressional requesters

Why GAO Did This Study

In fiscal year 2015, five DOE program offices and ARPA-E invested \$7.36 billion for civilian R&D in DOE national laboratories as well as in universities, industry, and other entities. These civilian R&D investments (investments not related to nuclear security) supported diverse science and energy research areas, including energy efficiency, renewable energy, and nuclear energy. The five program offices and ARPA-E also obligated funds for staff to oversee these R&D investments—referred to as staff costs in this report—and include federal staff salaries and benefits, travel, support services, and other costs.

GAO was asked to review DOE's oversight of its civilian R&D investments. This report discusses (1) the activities selected DOE offices use to oversee investments in civilian R&D, and (2) staffing levels and costs associated with DOE oversight of civilian R&D.

GAO obtained staffing and obligations data from the five DOE program offices and ARPA-E that funded civilian R&D for fiscal years 2011-2015, the most recent years for which data was available; examined DOE policies, plans, and guidance; and interviewed DOE officials. GAO selected three of the five program offices for detailed review because they oversee nearly 90 percent of DOE's civilian R&D investments and 12 of the 13 national laboratories that primarily conduct civilian R&D. GAO used a broad definition of oversight, including any activity that directly or indirectly supported DOE's R&D mission. In commenting on a draft of this report, DOE generally agreed with GAO's findings.

View [GAO-17-261](#). For more information, contact John Neumann at (202) 512-3841 or neumannj@gao.gov.

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RESEARCH AND DEVELOPMENT

DOE Activities and Costs to Oversee Investments

What GAO Found

Three Department of Energy (DOE) program offices that GAO selected for detailed review—the offices of Energy Efficiency and Renewable Energy, Nuclear Energy, and Science—use various activities to oversee civilian research and development (R&D) investments.

- **Activities to identify research priorities.** The program offices obtain input from multiple sources to help determine the areas in which DOE invests in research at its national laboratories, as well as in universities and industry. For example, the Office of Nuclear Energy sponsored workshops in 2015 that sought to identify ideas for advancing nuclear energy technologies.
- **Activities to oversee investments at national laboratories.** The program offices require that the laboratories they oversee develop strategic plans to help ensure DOE investments in these laboratories support national R&D priorities. They also monitor and review individual laboratory R&D projects. For example, in fiscal year 2015, the Office of Science oversaw over 1,600 new or ongoing laboratory projects that received \$3.67 billion in obligations. Finally, the program offices annually assess each laboratory contractor's scientific, technological, managerial, and operational performance.
- **Activities to oversee investments in universities, industry, and other entities.** To help determine where DOE invests in civilian R&D, the program offices review R&D proposals from universities, industry, and other entities. According to data provided by DOE, in fiscal year 2015 the three program offices conducted or managed more than 5,600 proposal reviews—with each review including as many as 3 to 4 individual reviewers—and selected 1,490 proposals for new financial assistance awards. The program offices then monitored and periodically reviewed the awarded proposals.

Staffing levels for oversight of civilian R&D decreased by 11.0 percent from fiscal year 2011 to fiscal year 2015 in five DOE program offices—those noted above, plus two others that oversee a smaller percentage of DOE's civilian R&D investments—and in the Advanced Research Projects Agency-Energy (ARPA-E). At the same time, obligations for staff costs and civilian R&D investments increased by 2.4 percent and 3.8 percent, respectively, without adjusting for inflation (obligations declined slightly when adjusted for inflation). Staffing levels and costs changed to varying degrees among the offices and ARPA-E. For example, staff costs increased in three of the offices and ARPA-E but decreased in the other two offices. Obligations for staff costs made up 7.6 percent of total obligations (R&D and non-R&D obligations) in fiscal year 2015; they also varied among program offices and ARPA-E, ranging from 3.6 percent to 21.4 percent.

DOE Staffing Levels and Obligations for Staff Costs and Civilian R&D, Fiscal Years 2011 and 2015 (Obligations are not adjusted for inflation)

	Fiscal Year 2011	Fiscal Year 2015	Percentage Change
Full-time equivalent staff	2,937	2,613	▼ 11.0 percent
Obligations for staff costs	\$632.9 million	\$647.9 million	▲ 2.4 percent
Obligations for civilian R&D	\$7.09 billion	\$7.36 billion	▲ 3.8 percent

Source: GAO analysis of Department of Energy (DOE) data. | GAO-17-261