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RECOVERY ACT

Status of Science-Related Funding

Statement of Frank Rusco, Director
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U.S. Government Accountability Office





Highlights of [GAO-12-279T](#), a testimony before the Subcommittee on Investigations and Oversight, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

The American Recovery and Reinvestment Act of 2009 (Recovery Act) is intended to preserve and create jobs and promote economic recovery, among other things. The Congressional Budget Office estimated in 2011 that the Recovery Act would cost \$840 billion, including more than \$40 billion in science-related activities at the Department of Energy (DOE), Department of Commerce, the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF). These activities support fundamental research, demonstrate and deploy advanced energy technologies, purchase scientific instrumentation and equipment, and construct or modernize research facilities.

The Recovery Act assigned GAO with a range of responsibilities, such as bimonthly reviews of how selected states and localities used funds, including for science-related activities.

This statement updates the status of science-related Recovery Act funding for DOE, Commerce, NASA, and NSF and provides the status of prior recommendations from GAO's Recovery Act reports. This testimony is based on prior GAO work updated with agency data as of September 30, 2011.

View [GAO-12-279T](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

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What GAO Found

As of September 30, 2011, DOE, Commerce, NSF, and NASA had obligated about 98 percent of the more than \$40 billion appropriated for science-related activities identified at those agencies. They had spent \$22 billion, or 54 percent of appropriated funds. DOE received the majority of this funding, and the four agencies vary in the amount of Recovery Act funds they have obligated and spent for their programs, as well as the challenges they have faced in implementing the Recovery Act. For example:

- **Loan Guarantee Program for Innovative Technologies.** As of September 30, 2011, DOE had obligated about 78 percent of the nearly \$2.5 billion provided for this program, which among other things guarantees loans for projects using new or significantly improved technologies as compared with commercial technologies already in use in the United States and reported spending about 15 percent of those funds. In a July 2010 report ([GAO-10-627](#)), GAO made four recommendations for DOE to improve its evaluation and implementation of the program. DOE has begun to take steps to address our recommendations but has not fully addressed them, and GAO continues to believe DOE needs to make improvements to the program.
- **Weatherization Assistance Program.** As of September 30, 2011, DOE had obligated the full \$5 billion of Recovery Act funding provided for the Weatherization Assistance Program, which enables low-income families to reduce their utility bills by making long-term energy-efficiency improvements to their homes, and reported spending about 72 percent of those funds. In a May 2010 report ([GAO-10-604](#)), GAO made eight recommendations to DOE to clarify guidance and production targets. To date, DOE has implemented two of those recommendations: (1) it issued guidance on multi-family buildings and (2) clarified the definition of income and strengthened income eligibility requirements.
- **Commerce, NASA, and NSF.** As of September 30, 2011, Commerce, NASA, and NSF each had obligated nearly all of their science-related Recovery Act funding. Commerce spent about 62 percent, NASA spent about 95 percent, and NSF spent about 46 percent of this funding. GAO has reported several times on the use of these funds and the challenges agencies faced. In a February 2010 report ([GAO-10-383](#)), GAO found that some recipients of Commerce's Recovery Act grants faced challenges complying with Recovery Act reporting and other federal requirements and had to delay or recast certain scheduled activities as a result. In a March 2009 report ([GAO-09-306SP](#)), GAO found that NASA's large-scale projects, including those that received Recovery Act funds, had experienced significant cost and schedule delays. In a March 2011 report, ([GAO-11-239SP](#)), GAO found that Recovery Act funds allowed NASA to reduce the impact of cost increases on some projects and to address problems being experienced by others. In GAO's October 2010 report ([GAO-11-127R](#)), it found that NSF's program to increase investment in science, technology, engineering, and mathematics education took steps to evaluate the long-term effectiveness of its projects and developed goals and metrics for that evaluation.

Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee:

I am pleased to be here today to discuss our oversight of science-related funding provided by the American Recovery and Reinvestment Act of 2009 (Recovery Act).¹ In response to the recent economic crisis, Congress enacted the Recovery Act to, among other things, preserve and create jobs and promote economic recovery. In 2011, the Congressional Budget Office estimated that the Recovery Act would cost approximately \$840 billion. That amount includes more than \$40 billion for science-related activities at the Department of Energy (DOE), the Department of Commerce, the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF). These activities include supporting fundamental research, demonstrating and deploying advanced energy technologies, purchasing scientific instrumentation and equipment, and constructing or modernizing research facilities.

The Recovery Act assigned GAO with a range of responsibilities, such as bimonthly reviews of how selected states and localities used funds, including for science-related activities. As we stated in our March 2009 testimony,² our prior work identified several DOE, Commerce, NASA, and NSF programs that deserve special attention from agency management and the agencies' Offices of Inspectors General to ensure that funds are put to best use. We previously reported on several DOE programs, including the Weatherization Assistance Program,³ the Loan Guarantee Program (LGP),⁴ and the Energy Efficiency and Conservation Block Grant

¹Pub. L. No. 111-5, § 3, 123 Stat. 116 (2009).

²GAO, *American Recovery and Reinvestment Act: GAO's Role in Helping to Ensure Accountability and Transparency for Science Funding*, GAO-09-515T (Washington, D.C.: Mar. 19, 2009).

³GAO, *Recovery Act: States' and Localities' Uses of Funds and Actions Needed to Address Implementation Challenges and Bolster Accountability*, [GAO-10-604](#) (Washington, D.C., May 26, 2010).

⁴GAO, *Department of Energy: New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Program Management*, [GAO-08-750](#) (Washington, D.C.: July 7, 2008). GAO, *Department of Energy: Further Actions Are Needed to Improve DOE's Ability to Evaluate and Implement the Loan Guarantee Program*, [GAO-10-627](#) (Washington, D.C.: July 12, 2010).

program (EECBG),⁵ and we are currently examining DOE's Advanced Research Projects-Energy and solar energy initiatives. Since the Recovery Act was implemented, we also assessed large-scale projects at NASA that received Recovery Act funds.⁶ Additionally, we have reported on federal requirements that have influenced project selection and starts at a variety of agencies, including DOE, Commerce, NASA, and NSF⁷ and contracting approaches and oversight at DOE and NASA.⁸

My statement today updates the status of science-related Recovery Act funding for (1) DOE, (2) Commerce, (3) NASA, and (4) NSF and our recent recommendations to these agencies regarding their spending of Recovery Act funds. This statement is based largely on our prior reviews and updates them with data from the four agencies as of September 30, 2011, on their obligations and spending of science-related Recovery Act funds. We did not verify these data. We conducted all of our work in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to produce a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our statement today. Additional information on our scope and methodology is available in each issued product. (See our list of related products at the end of this testimony.)

Summary of Science-Related Recovery Act Funding

Of the four agencies that received over \$40 billion in funding for science-related activities under the Recovery Act, DOE received the largest amount of funds. Table 1 shows Recovery Act funding, obligations, and expenditures for these agencies.

⁵GAO, *Recovery Act: Energy Efficiency and Conservation Block Grant Recipients Face Challenges Meeting Legislative and Program Goals and Requirements*, [GAO-11-379](#) (Washington, D.C., Apr. 7, 2011).

⁶GAO, *NASA: Assessments of Selected Large-Scale Projects*, [GAO-11-239SP](#) (Washington, D.C.: Mar. 3, 2011).

⁷GAO, *Recovery Act: Project Selection and Starts Are Influenced by Certain Federal Requirements and Other Factors*, [GAO-10-383](#) (Washington, D.C.: Feb. 10, 2010).

⁸GAO, *Recovery Act: Contracting Approaches and Oversight Used by Selected Federal Agencies and States*, [GAO-10-809](#) (Washington, D.C.: July 15, 2010).

Table 1: Recovery Act Appropriations, Obligations, and Expenditures (Cumulative) Reported by Selected Agencies as of September 30, 2011

(Dollars in millions)

Agency	Appropriations	Obligations	Expenditures
DOE	\$35,210	\$34,613	\$18,884
Commerce	1,442	1,418	894
NASA	1,000	1,000	948
NSF	3,000	3,000	1,379
Total	\$40,652	\$40,031	\$22,105

Source: GAO analysis of agency data

Note: The numbers in this table are rounded to the nearest million.

DOE

Of the \$35.2 billion it received under the Recovery Act for science-related projects and activities, DOE reported that it had obligated \$34.6 billion (98 percent) and spent \$18.9 billion (54 percent) as of September 30, 2011.⁹ This is an increase from March 10, 2011, when DOE reported that it had obligated \$33.1 billion and spent \$12.5 billion. Table 2 shows Recovery Act funding, obligations, and expenditures for DOE’s program offices.

⁹DOE was initially appropriated \$45.2 billion in the Recovery Act, 6 billion of which was directed to DOE’s LGP. In April and May 2009, and again in July 2010, we provided Congress with information about DOE’s management of the LGP. In August 2009, Congress authorized the transfer of \$2 billion from the program to expand the “Cash for Clunkers” program (Pub. L. No. 111-47, 123 Stat. 1972 [Aug. 7, 2009]) and in August 2010, Congress authorized the rescission of \$1.5 billion in funds from the program (Pub. L. No. 111-226, § 308, 124 Stat. 2405 [Aug. 10, 2010]). As a result, DOE’s appropriations under the Recovery Act were reduced by \$3.5 billion to \$41.7 billion.

**Table 2: Recovery Act Funding, Obligations, and Expenditures (Cumulative)
Reported by DOE by Program Office as of September 30, 2011**

(Dollars in millions)

Program office	Funding	Obligations	Percentage obligated	Expenditures	Percentage expended
Advanced Research Projects Agency - Energy	\$387	\$387	100%	\$167	43%
Departmental Administration	143	112	78%	79	55%
Energy Efficiency and Renewable Energy	16,666	16,655	100%	9,600	58%
Energy Information Administration	8	8	100%	8	100%
Environmental Management	5,989	5,988	100%	5,270	88%
Fossil Energy	3,379	3,379	100%	363	11%
Loan Programs Office	2,470	1,918	78%	380	15%
Office of Electricity Delivery and Energy Reliability	4,488	4,488	100%	1,831	41%
Office of Science	1,669	1,669	100%	1,178	71%
Western Area Power Administration	10	9	90%	7	71%
Total	\$35,210^a	\$34,613	98%	\$18,884	54%

Source: GAO analysis of DOE data

Note: Funding, obligations, and expenditures are rounded to the nearest million. Totals may not sum due to rounding.

^a This table does not include the following Recovery Act funds appropriated to DOE: (1) \$6.5 billion in borrowing authority (\$3.25 billion for the Bonneville Power Administration and \$3.25 billion for the Western Area Power Administration) and (2) \$15 million for the Office of Inspector General.

Our Recovery Act recommendations have focused primarily on the following four DOE programs and projects:

- The EECBG program, which provides grants to states, territories, tribes, and local communities for projects that improve energy efficiency, reduce energy use, and reduce fossil fuel emissions.
- The Office of Environmental Management, which cleans up contaminated sites across the country where decades of nuclear

weapons research, development, and production left a legacy of dangerously radioactive, chemical, and other hazardous wastes.

- The LGP, which guarantees loans for energy projects that (1) use either new or significantly improved technologies as compared with commercial technologies already in use in the United States and (2) avoid, reduce, or sequester emissions of air pollutants or man-made greenhouse gases.
- The Weatherization Assistance Program, which enables low-income families to reduce their utility bills by making long-term energy-efficiency improvements to their homes by, for example, installing insulation, sealing leaks, and modernizing heating or air conditioning equipment.

Table 3 shows Recovery Act funding, obligations, and expenditures for these DOE programs as of September 30, 2011.

Table 3: Recovery Act Funding, Obligations, and Expenditures (Cumulative) Reported by DOE for Select Programs and Projects as of September 30, 2011

(Dollars in Millions)

Program or Project	Program Office	Funding	Obligations	Percentage obligated	Expenditures	Percentage expended
Energy Efficiency and Conservation Block Grants	Office of Energy Efficiency and Renewable Energy	\$3,193	\$3,193	100%	\$1,657	52%
Environmental Management	Office of Environmental Management	5,989	5,988	100%	5,270	88%
Loan Guarantee Program	Loan Programs Office	2,470	1918	78%	380	15%
Weatherization Assistance Program	Office of Energy Efficiency and Renewable Energy	4,975	4,975	100%	3,570	72%

Source: GAO analysis of DOE data

Note: Funding, obligations, and expenditures are rounded to the nearest million.

Energy Efficiency and Conservation Block Grant Program

The Recovery Act provided about \$3.2 billion for DOE's EECBG, funding the program for the first time since it was authorized in the Energy Independence and Security Act (EISA) of 2007.

DOE awarded this funding as follows:

- About \$1.94 billion as formula grants to more than 2,000 local communities—including cities, counties, and tribal communities.

-
- About \$767 million as formula grants to the states, five territories, and the District of Columbia.¹⁰
 - About \$40 million for Administrative and Training/Technical Assistance.
 - About \$453 million through competitive grants to local communities.

Our April 2011 report on the EECBG program focused on the approximately \$2.7 billion awarded through formula grants.¹¹ In that report, we found that more than 65 percent of EECBG funds had been obligated for three types of activities: (1) energy-efficiency retrofits (36.8 percent), which includes activities such as grants to nonprofit organizations and governmental agencies for retrofitting their existing facilities to improve energy efficiency; (2) financial incentive programs (18.5 percent), which includes activities such as rebates, subgrants, and revolving loans to promote recipients' energy-efficiency improvements; and (3) energy-efficiency and conservation programs for buildings and facilities (9.8 percent), which includes activities such as installing storm windows or solar hot water technology.

We also found that DOE did not always collect information on the various methods that recipients use to monitor contractors and subrecipients.¹² As a result, DOE does not always know whether the monitoring activities of recipients are sufficiently rigorous to ensure compliance with federal requirements. In addition, DOE officials have experienced challenges in assessing the extent to which the EECBG program is reducing energy use and increasing energy savings. Most recipients report estimates to comply with program reporting requirements, and DOE takes steps to assess the reasonableness of these estimates but does not require recipients to report the methods or tools used to develop estimates. In addition, while DOE provides recipients with a software tool to estimate

¹⁰Funding is allocated to state recipients based on population and total energy consumption; to city and county recipients based on resident and commuter populations; and to Native American tribes based on population and climatic conditions.

¹¹[GAO-11-379](#).

¹²DOE defines subrecipients as those recipients that receive pass-through funds from recipients but are not the ultimate beneficiary of the funds, such as the vendor or contractor who provided the good or service.

energy savings, DOE does not require that recipients use the most recent version.

Based on these findings, we recommended that DOE (1) explore a means to capture information on recipients' monitoring activities and (2) solicit information on recipients' methods for estimating energy-related impact metrics¹³ and verify that recipients who use DOE's estimation tool use the most recent version. DOE generally agreed with our recommendations and has taken steps to implement them. DOE took action on our first recommendation by collecting additional information related to subrecipient monitoring, in order to help ensure that they comply with the terms and conditions of the award. These changes will help improve DOE's oversight of recipients. DOE implemented our second recommendation by making changes to the way it collects data to apply a unified methodology to the calculation of impact metrics. DOE officials also said the calculation of estimated impact metrics will now be performed centrally by DOE by applying known national standards to existing recipient-reported performance metrics.

Environmental Cleanup Projects

The Recovery Act provided about \$6 billion to expand and accelerate cleanup activities at numerous contaminated sites across the country.¹⁴ This funding substantially boosted the Office of Environmental Management's annual appropriation for cleanup, which has generally been between \$6 billion and \$7 billion. As of September 30, 2011, DOE had obligated all of the \$6 billion in Recovery Act funding. DOE officials told us that they planned to have 92 percent of the funds spent by September 30, 2011, and DOE had expended about 88 percent (nearly \$5.3 billion) by that time.

¹³DOE guidance requires that recipients report quarterly on impact metrics—which include energy savings, energy cost savings, renewable-energy generation, and emissions reductions—and verify cumulative totals when grants are closed out, but DOE does not require that these impact metrics be based on actual, as opposed to estimated, data.

¹⁴Cleanup activities include treating and permanently disposing of millions of gallons of radioactive and chemical waste stored in large underground tanks; disposing of spent nuclear fuel; removing contaminated soil; treating contaminated groundwater; packaging and shipping solid wastes infused with synthetic radioactive elements like plutonium and americium for permanent disposal to a deep geologic repository; and eliminating excess facilities, which may include decontaminating, decommissioning, deactivating, and demolishing obsolete structures or a combination of these activities. DOE has estimated that the cost of this cleanup may approach \$300 billion over the next several decades.

As of May 2011, DOE had selected 109 projects for Recovery Act funding at 17 DOE sites in 12 states. DOE designated 80 percent of this funding to speed cleanup activities at four large sites: the Hanford Site in Washington State, Idaho National Laboratory, the Oak Ridge Reservation in Tennessee, and the Savannah River Site in South Carolina. DOE generally chose to use Recovery Act funds for cleanup projects that could be started and finished quickly. The majority of the projects selected also had existing contracts, which allowed the department to update and validate new cost and schedule targets within a short time frame. DOE generally funded four types of projects: (1) decontaminating or demolishing facilities, (2) removing contamination from soil and groundwater, (3) packaging and disposing of transuranic¹⁵ and other wastes, and (4) supporting the maintenance and treatment of liquid tank wastes. According to DOE officials, as of the end of May 2011, DOE had completed 28 Recovery Act projects.

In July 2010, we reported that DOE has faced challenges in both managing Recovery Act projects and measuring how Recovery Act funding has affected cleanup and other goals.¹⁶ In that report, we found that one-third of Recovery Act-funded environmental cleanup projects did not meet cost and schedule targets, which DOE attributed to technical, regulatory, safety, and contracting issues. DOE took steps aimed at strengthening project management and oversight for Recovery Act projects, such as increasing project reporting requirements and placing tighter controls on when funds are disbursed to sites. By October 2010, DOE had made improvements in both cost and schedule performance.

In our July 2010 report, we found it has also been a challenge for DOE to provide an accurate assessment of the impact Recovery Act funding has had on job creation, environmental risk reduction, and the life-cycle costs of its cleanup program for several reasons. First, DOE used several different methodologies to assess and report jobs created, which provided

¹⁵Transuranic wastes are typically discarded rags, tools, equipment, soils, or other solid materials that have been contaminated by radioactive elements, such as plutonium or americium.

¹⁶GAO, *Recovery Act: Most DOE Cleanup Projects Appear to Be Meeting Cost and Schedule Targets, but Assessing Impact of Spending Remains a Challenge*, [GAO-10-784](#) (Washington, D.C., July 29, 2010).

very different and potentially misleading information.¹⁷ Second, DOE had not yet developed a clear means of measuring how cleanup work funded by the act would affect environmental risk or the land and facilities requiring DOE cleanup. Third, it is unclear to what extent Recovery Act funding will reduce the costs of cleaning up the DOE sites over the long term. DOE's estimate of \$4 billion in life-cycle cost savings resulting from Recovery Act funding was not calculated in accordance with Office of Management and Budget's guidance on benefit-cost analysis or DOE's guidance on life-cycle cost analysis. Our analysis indicated that those savings could be 80 percent less than DOE estimated. Without clear and consistent measures, it will be difficult to say whether or how Recovery Act funding has affected DOE's cleanup goals.

As a result, we recommended four actions for DOE to improve project management and reporting: (1) determine whether project management and oversight steps adopted for Recovery Act projects would benefit other cleanup projects; (2) clarify the methodology used to calculate any supplemental job creation figures in addition to prime contractor and subcontractor jobs created, such as head count—that is, workers who have charged any amount of time to Recovery Act projects; (3) develop clear and quantifiable measures for determining the impact of Recovery Act funding; and (4) ensure that cost savings are calculated according to federal guidance. DOE agreed with the recommendations and has taken steps to implement two of them. In response to our first recommendation, DOE implemented some of the steps it used to improve management of Recovery Act projects for the cleanup work it funds through its annual appropriations. In response to our third recommendation, DOE issued clarifying guidance to the sites on the methodology to be used for reporting footprint reduction, but the extent to which this methodology measures actual environmental risk reduction, if at all, is not clear.¹⁸ Finally, a DOE document stated that our second recommendation is no

¹⁷For example, DOE's calculation of head count is potentially misleading for two reasons. First, counting the number of people carrying out Recovery Act work, rather than the time they have actually spent in such work, implies that one person engaged in 2 hours of work per week is equivalent to one person engaged in 40 hours of work per week. The economic benefits to the worker, however, differ significantly. Second, the estimate includes a count of those people who contributed to the manufacture of materials or equipment purchased by prime contractors and subcontractors to support Recovery Act work, an estimate that is difficult to verify, according to site officials.

¹⁸DOE officials define footprint reduction as the "physical completion of activities with petition for regulatory approval to follow."

longer relevant since the Office of Management and Budget now requires contractor and subcontractor jobs to be reported online.¹⁹

Loan Guarantee Program for Innovative Technologies

In February 2009, the Recovery Act amended the LGP, authorizing DOE to also guarantee loans for some projects using commercial technologies. Projects supported by the Recovery Act must employ renewable energy systems, electric power transmission systems, or leading-edge biofuels that meet certain criteria; begin construction by the end of fiscal year 2011; and pay wages at or above market rates. The Recovery Act originally provided nearly \$6 billion to cover the credit subsidy costs for projects meeting those criteria.²⁰ Congress subsequently authorized a reduction of \$3.5 billion of this funding to be used for other purposes. According to our analysis of DOE data, as of September 30, 2011, DOE's LGP had obligated about 78 percent of the remaining \$2.5 billion in Recovery Act funds, leaving \$552 million unobligated. The Recovery Act required that borrowers begin construction of their projects by September 30, 2011, to receive funding, and the unobligated funds expired and are no longer available to DOE.

Our July 2010 report²¹ found that DOE is implementing the program in a way that treats applicants inconsistently, lacks systematic mechanisms for applicants to appeal its decisions or for applicants to provide feedback to DOE, and risks excluding some potential applicants unnecessarily.

¹⁹On July 2, 2010, the Office of Management and Budget (OMB) issued revised guidance to Federal Acquisition Regulation (FAR) clause 52.204-11, such that both prime contractor and subcontractor jobs are now reported in FederalReporting.gov. Previously, only prime contractor jobs were reported, which understated the number of jobs created by Environmental Management's Recovery Act Program since, according to DOE, nearly 40 percent of jobs are subcontracted to encourage competition and to allow for small business participation. Before OMB's guidance was issued, DOE had been reporting the subcontractor jobs separately. As a result of OMB's change in guidance, DOE believes that our second recommendation is no longer relevant. We are currently assessing whether this addresses our recommendation.

²⁰ Recovery Act, div. A, Title IV, 123 Stat. at 140 (Feb. 17, 2009). Congress originally appropriated nearly \$6 billion to pay the credit subsidy costs of projects supported under the Recovery Act, with the limitation that funding to pay the credit subsidy costs of leading-edge biofuel projects eligible under the act would not exceed \$500 million. Credit subsidy costs are the government's estimated net long-term costs, in net present value terms, of direct or guaranteed loans over the entire period the loans are outstanding (not including administrative costs).

²¹[GAO-10-627](#).

Consequently, we reported that DOE's program management could improve its ability to evaluate and implement the LGP by implementing the following four recommendations: (1) develop relevant performance goals that reflect the full range of policy goals and activities for the program, and to the extent necessary, revise the performance measures to align with these goals; (2) revise the process for issuing loan guarantees to clearly establish what circumstances warrant disparate treatment of applicants; (3) develop an administrative appeal process for applicants who believe their applications were rejected in error and document the basis for conclusions regarding appeals; and (4) develop a mechanism to systematically obtain and address feedback from program applicants and, in so doing, ensure that applicants' anonymity can be maintained.

In response to our recommendations, DOE stated that it recognizes the need for continuous improvement to its LGP as those programs mature but neither explicitly agreed nor disagreed with our recommendations. In one instance, DOE specifically disagreed with our findings: the department maintained that applicants are treated consistently within solicitations. Nevertheless, the department stated that it is taking steps to address concerns identified in our report. For example, with regard to appeals, DOE indicated that its process for rejected applications should be made more transparent and stated that the LGP continues to implement new strategies intended to reduce the need for any kind of appeals, such as enhanced communication with applicants and allowing applicants an opportunity to provide additional data to address deficiencies DOE has identified in applications. DOE directly addressed our fourth recommendation by creating a mechanism in September 2010 for submitting feedback—including anonymous feedback—through its website. We tested the mechanism and were satisfied that it worked.

We have an ongoing mandate under the 2007 Revised Continuing Appropriations Resolution to review DOE's execution of the LGP and to report our findings to the House and Senate Committees on Appropriations. We are currently conducting ongoing work looking at the LGP, which will examine the status of the applications to the LGP's nine solicitations and will assess the extent to which has DOE adhered to its process for reviewing loan guarantees for loans to which DOE has closed or committed. We expect to issue a report on LGP in early 2012.

Weatherization Assistance Program

The Recovery Act provided \$5 billion for the Weatherization Assistance Program, which DOE is distributing to each of the states, the District of Columbia, five territories, and two Indian tribes. The \$5 billion in funding provided by the Recovery Act represents a significant increase for a program that has received about \$225 million per year in recent years.

During 2009, DOE obligated about \$4.73 billion of the \$5 billion in Recovery Act weatherization funding to recipients, while retaining the remaining funds to cover the department's expenses. Initially, DOE provided each recipient with the first 10 percent of its allocated funds, which could be used for start-up activities, such as hiring and training staff, purchasing equipment, and performing energy audits of homes. Before a recipient could receive the next 40 percent, DOE required it to submit a plan for how it would use its Recovery Act weatherization funds. By the end of 2009, DOE had approved the weatherization plans of all 58 recipients and had provided all recipients with half of their funds.

In our May 2010 report,²² we found that although weatherizing multifamily buildings can improve production numbers quickly, state and local officials have found that expertise with multifamily projects is limited and that they lack the technical expertise for weatherizing large multifamily buildings. We also found that state agencies are not consistently dividing weatherization costs for multifamily housing with landlords. In addition, we found that determination and documentation of client income eligibility varies between states and local agencies and that DOE allows applicants to self-certify their income. We also found that DOE has issued guidance requiring recipients of Recovery Act weatherization funds to implement a number of internal controls to mitigate the risk of fraud, waste, and abuse, but that the internal controls to ensure local weatherization agencies comply with program requirements are applied inconsistently.

In our May 2010 report, we made eight recommendations to DOE to clarify its weatherization guidance and production targets. DOE generally concurred with the recommendations, has fully implemented two of them and taken some steps to address a third. For example, we recommended that DOE develop and clarify weatherization program guidance that considers and addresses how the weatherization program guidance is impacted by the introduction of increased amounts of multifamily units.

²²[GAO-10-604](#).

DOE has issued several guidance documents addressing multi-family buildings that, among other things, provide guidance on conducting energy audits on multi-family units. We also recommended that DOE develop and clarify weatherization program guidance that establishes best practices for how income eligibility should be determined and documented and that does not allow the self-certification of income by applicants to be the sole method of documenting income eligibility. In response to our recommendation, DOE issued guidance that clarified the definition of income and strengthened income eligibility requirements. For example, the guidance clarified that self-certification of income would only be allowed after all other avenues of documenting income eligibility are exhausted. Additionally, for individuals to self-certify income, a notarized statement indicating the lack of other proof of income is required. Finally, DOE agreed with our recommendation that it have a best practice guide for key internal controls, but DOE officials stated that there were sufficient documents in place to require internal controls, such as the grant terms and conditions and a training module, and that because the guidance is located in on the website, a best practice guide would be redundant. Therefore, DOE officials stated that they do not intend to fully implement our recommendation. Nonetheless, DOE distributed a memorandum dated May 13, 2011, to grantees reminding them of their responsibilities to ensure compliance with internal controls and the consequences of failing to do so. We will continue to monitor DOE's progress in implementing the remaining recommendations.

We expect to issue a report on the use of Recovery Act funds for the Weatherization Assistance Program and the extent to which program recipients are meeting Recovery Act and program goals, such as job creation and energy and cost savings, as well as the status of DOE's response to our May 2010 recommendations by early 2012.

Commerce

Of the over \$1.4 billion Commerce received under the Recovery Act for science-related projects and activities, Commerce reported that it had obligated nearly all of it (98 percent) and spent \$894 million (62 percent) as of September 30, 2011. Table 6 shows Recovery Act funding, obligations, and expenditures for Commerce.

Table 6: Recovery Act Funding, Obligations, and Expenditures (Cumulative) Reported by Commerce by Program Account as of September 30, 2011

(Dollars in millions)

Program	Funding	Obligations	Percentage obligated	Expenditures	Percentage expended
National Institute of Standards and Technology	\$612	\$601	98%	\$294	48%
Scientific and Technical Research Services	252	241	95%	139	55%
Construction of Research Facilities	360	360	100%	155	43%
National Oceanic and Atmospheric Administration	\$830	\$817	98%	\$600	72%
Operations, Research, and Facilities	231	231	100%	188	81%
Procurement, Acquisition, and Construction	599	586	98%	412	69%
Total	\$1,442	\$1,418	98%	\$894	62%

Source: GAO analysis of Commerce data.

Note: Funding, obligations, and expenditures are rounded to the nearest million.

As part of our February 2010 report,²³ we found that some recipients of Recovery Act grants from Commerce’s National Institute of Standards and Technology had to delay or recast certain scheduled engineering or construction-related activities to fully understand, assess, and comply with the Recovery Act reporting and other requirements. In contrast, Commerce’s National Oceanic and Atmospheric Administration officials said federal requirements did not impact the processing of Recovery Act acquisitions.

²³GAO, *Recovery Act: Project Selection and Starts Are Influenced by Certain Federal Requirements and Other Factors*, [GAO-10-383](#) (Washington, D.C.: Feb. 10, 2010).

NASA

Of the \$1 billion NASA received under the Recovery Act for science-related projects and activities, NASA reported that it had obligated nearly \$1 billion (100 percent) and spent \$948 million (95 percent) as of September 30, 2011. Table 4 shows Recovery Act funding, obligations, and expenditures for NASA.

Table 4: Recovery Act Funding, Obligations, and Expenditures (Cumulative) Reported by NASA by Program Account as of September 30, 2011

(Dollars in millions)

Program	Funding	Obligations	Percentage obligated	Expenditures	Percentage expended
Science	\$400	\$400	100%	\$390	97%
Aeronautics	150	150	100%	128	86%
Exploration	400	400	100%	380	95%
Cross Agency Support	50	50	100%	50	100%
Total	\$1,000	\$1,000	100%	\$948	95%

Source: GAO analysis of NASA data

Notes: Funding, obligations, and expenditures are rounded to the nearest million.

In a March 2009 report,²⁴ we found that NASA large-scale projects had experienced significant cost and schedule growth, but the agency had undertaken an array of initiatives aimed at improving program management, cost estimating, and contractor oversight. However, we also noted that until these practices became integrated into NASA's culture, it was unclear whether funding would be well spent and whether the achievement of NASA's mission would be maximized. In our most recent update of that report, we found that, although cost and schedule growth remained an issue, Recovery Act funding enabled NASA to mitigate the impact of cost increases being experienced on some projects and to address problems being experienced by other projects.²⁵ In several cases, NASA took advantage of the funding to build additional knowledge about technology or design before key milestones.

²⁴GAO, *NASA: Assessments of Selected Large-Scale Projects*, [GAO-09-306SP](#) (Washington, D.C.: Mar. 2, 2009).

²⁵[GAO-11-239SP](#).

In our July 2010 report,²⁶ we reviewed NASA's, as well as other agencies', use and oversight of noncompetitive contracts awarded under the Recovery Act. We found that most of the funds that NASA had obligated under Recovery Act contract actions, about 89 percent, were obligated on existing contracts. We found that officials at several agencies said the use of existing contracts allowed them to obligate funds quickly. Of the funds NASA obligated for new actions, over 79 percent were obligated on contracts that were competed. We also found that NASA undertook efforts to provide oversight and transparency of Recovery Act-funded activities. For example, NASA issued guidance to the procurement community on the implementation of the Recovery Act, prohibited the commingling of funds, and increased reporting to senior management.

NSF

Of the \$3 billion it received under the Recovery Act for projects and activities, NSF reported that it had obligated nearly all of the \$3 billion (almost 100 percent) and spent \$1.4 billion (46 percent) as of September 30, 2011. Table 5 shows Recovery Act funding, obligations, and expenditures for NSF.

Table 5: Recovery Act Funding, Obligations, and Expenditures (Cumulative) Reported by NSF by Program Account as of September 30, 2011

Dollars in millions

Program	Funding	Obligations	Percentage obligated	Expenditures	Percentage expended
Research and Related Activities	\$2,500	\$2,500	100%	\$1,225	49%
Education and Human Resources	100	100	100%	24	24%
Major Research Equipment and Facilities Construction	400	400	100%	129	32%
Total	\$3,000	\$3,000	100%	\$1,379	46%

Source: GAO analysis of NSF data

Note: Funding, obligations, and expenditures are rounded to the nearest million.

²⁶GAO, *Recovery Act: Contracting Approaches and Oversight Used by Selected Federal Agencies and States*, [GAO-10-809](#) (Washington, D.C.: July 15, 2010).

In our October 2010 report,²⁷ we reviewed the effectiveness of new and expanded activities authorized by the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act of 2007 (America COMPETES Act).²⁸ The act authorized NSF's Science Master's Program, later funded by the Recovery Act.²⁹ This program, along with 24 new programs and 20 existing programs, was funded to increase federal investment in basic scientific research and science, technology, engineering, and mathematics (STEM) education in the United States. The Science Master's Program awarded 21 grants in fiscal year 2010, totaling \$14.6 million. We found that evaluating the effectiveness of federal basic research and STEM education programs such as those authorized by the act can be inherently difficult. We also found that NSF was taking steps to evaluate the long-term effectiveness of their funded projects. As part of its broader initiative to pilot and review new approaches to the evaluation of its programs, NSF developed goals and metrics for activities in its education portfolio to reflect its increased expectations for evaluation of its funded projects.

Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee, this completes my prepared statement. As noted, we are continuing to monitor agencies' use of Recovery Act funds and implementation of programs. I would be happy to respond to any questions you may have at this time.

Contact and Acknowledgments

For further information regarding this testimony, please contact me at (202) 512-3841. Tanya Doriss, Kim Gianopoulos, Carol Kolarik, Holly Sasso, Ben Shouse and Jeremy Williams made key contributions to this testimony.

²⁷GAO, *America COMPETES Act: It Is Too Early to Evaluate Programs Long-Term Effectiveness, but Agencies Could Improve Reporting of High-Risk, High-Reward Research Priorities*, [GAO-11-127R](#) (Washington, D.C.: Oct. 7, 2010).

²⁸Pub. L. No. 110-69, 121 Stat. 572 (Aug. 9, 2007).

²⁹This program was authorized by section 7034 of the America COMPETES Act as the "Professional Science Master's Degree Program." In addition to changing the name of the program, while the program was originally authorized to be funded through NSF's research and related activities account, NSF funded the program through its education and human resource funding beginning in fiscal year 2010, according to information from NSF.

Related GAO Products

Recovery Act Education Programs: Funding Retained Teachers, but Education Could More Consistently Communicate Stabilization Monitoring Issues. [GAO-11-804](#). Washington, D.C.: September 2011.

Recovery Act: Status of Department of Energy's Obligations and Spending. [GAO-11-483T](#). Washington, D.C.: March 17, 2011.

Recovery Act: Energy Efficiency and Conservation Block Grant Recipients Face Challenges Meeting Legislative and Program Goals and Requirements. [GAO-11-379](#). Washington, D.C.: April 2011.

NASA: Assessments of Selected Large-Scale Projects. [GAO-11-239SP](#). Washington, D.C.: March 3, 2011.

Recovery Act: Opportunities to Improve Management and Strengthen Accountability over States' and Localities' Uses of Funds. [GAO-10-999](#). Washington, D.C.: September 2010.

Recovery Act: Contracting Approaches and Oversight Used by Selected Federal Agencies and States. [GAO-10-809](#). Washington, D.C.: July 15, 2010.

Recovery Act: Most DOE Cleanup Projects Appear to Be Meeting Cost and Schedule Targets, but Assessing Impact of Spending Remains a Challenge. [GAO-10-784](#). Washington, D.C.: July 2010.

Department of Energy: Further Actions Are Needed to Improve DOE's Ability to Evaluate and Implement the Loan Guarantee Program. [GAO-10-627](#). Washington, D.C.: July 2010.

Recovery Act: States' and Localities' Uses of Funds and Actions Needed to Address Implementation Challenges and Bolster Accountability. [GAO-10-604](#). Washington, D.C.: May 2010.

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Recovery Act: Factors Affecting the Department of Energy's Program Implementation. [GAO-10-497T](#) Washington, D.C.: March 4, 2010.

Recovery Act: Project Selection and Starts Are Influenced by Certain Federal Requirements and Other Factors. [GAO-10-383](#). Washington, D.C.: February 10, 2010.

Recovery Act: GAO's Efforts to Work with the Accountability Community to Help Ensure Effective and Efficient Oversight. [GAO-09-672T](#). Washington, D.C.: May 5, 2009.

American Recovery and Reinvestment Act: GAO's Role in Helping to Ensure Accountability and Transparency for Science Funding. [GAO-09-515T](#). Washington, D.C.: March 19, 2009.

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