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Energy and Oversight, Committee on
Science, Space, and Technology, House
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DOE LOAN PROGRAMS

Information on Implementation of GAO Recommendations and Program Costs

Statement of Frank Rusco, Director, Natural Resources
and Environment

GAO Highlights

Highlights of [GAO-16-150T](#), testimony before the Subcommittees on Energy and Oversight, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

DOE's Loan Programs Office administers the LGP for certain renewable or innovative energy projects and the ATVM loan program for projects to produce more fuel-efficient vehicles and components. Both programs can expose the government to substantial financial risks if borrowers default. DOE considers these risks in calculating credit subsidy costs. The law requires that the credit subsidy costs of DOE loans and loan guarantees be paid for by appropriations, borrowers, or some combination of both.

This testimony summarizes (1) DOE's progress in addressing GAO's prior recommendations related to the implementation and oversight of its loan programs and (2) GAO's 2015 report on the credit subsidy costs of the DOE loan programs.

This statement is based on a body of work that GAO completed between February 2007 and April 2015. GAO made numerous recommendations in these reports and obtained updates from agency officials. GAO is not making any new recommendations in this testimony.

View [GAO-16-150T](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

March 3, 2016

DOE LOAN PROGRAMS

Information on Implementation of GAO Recommendations and Program Costs

What GAO Found

The Department of Energy (DOE) has made efforts to improve the implementation and oversight of its loan programs and, to date, has taken actions to address 15 of 24 of GAO's prior related recommendations. DOE's Loan Guarantee Program (LGP), authorized by Congress in 2005, was designed to encourage certain types of energy projects (e.g., nuclear, solar, and wind generation; solar manufacturing; and energy transmission) by agreeing to reimburse lenders for the guaranteed amount of loans if the borrowers default. DOE's Advanced Technology Vehicles Manufacturing (ATVM) loan program, authorized by Congress in 2007, was designed to encourage the automotive industry to invest in technologies to produce more fuel-efficient vehicles and their components. In 2007, 2008, and 2010—which covered the early stages of the LGP—GAO made 15 recommendations to address numerous concerns where DOE had moved forward with that program before key elements were in place. For example, in its February 2007 report, GAO found that DOE's actions had focused on expediting program implementation—such as soliciting preapplications for loan guarantees—rather than ensuring the department had in place the critical policies, procedures, and mechanisms needed to better ensure the program's success. DOE has implemented 11 of the 15 recommendations. In 2011, 2012, and 2014, as Congress expanded the loan programs, GAO made 9 additional recommendations to address concerns about DOE making loans and disbursing funds without having sufficient engineering expertise, sufficient and quantifiable performance measures for assessing program progress, or a fully developed loan monitoring function, among other things. Although DOE generally agreed with most of the 9 recommendations, to date it has implemented only 4 of them.

In an April 2015 report, GAO found that DOE estimated the credit subsidy costs of the loans and loan guarantees in its portfolio—that is, the total expected net cost to the government over the life of the loans—to be about \$2.2 billion as of November 2014, including about \$807 million for five loans on which borrowers had defaulted. The estimated \$2.2 billion in credit subsidy costs was a decrease from DOE's initial estimates totaling about \$4.5 billion. GAO found that changes in credit subsidy cost estimates varied by loan program and the type of technology supported by the loans and loan guarantees, among other factors. Specifically, defaults on loan guarantees for two solar manufacturing projects and one energy storage project were largely responsible for an increase in the credit subsidy cost estimate for the LGP's portfolio from \$1.33 billion when the loan guarantees were issued to \$1.81 billion as of November 2014. Borrowers also defaulted on two ATVM loans, but the credit subsidy cost estimate for the ATVM loan program's portfolio decreased from \$3.16 billion to \$404 million as of November 2014, mainly because of a significant improvement in the credit rating of one loan. In DOE's portfolio, 21 of the 30 projects had guaranteed revenue streams provided for under a long-term contract, such as a power purchase agreement, but none of the five defaulted loans supported projects with such a contract. GAO also found that administrative costs of the loan programs totaled about \$312 million from fiscal year 2008 through fiscal year 2014; these costs are not included in credit subsidy costs.

Chairmen Weber and Loudermilk, Ranking Members Grayson and Beyer, and Members of the Subcommittees:

I am pleased to be here today to discuss the Department of Energy's (DOE) loan programs. The Loan Guarantee Program (LGP), authorized by Congress in 2005,¹ was designed to encourage investment in new or significantly improved technologies in energy projects because funding for such technologies can be difficult to obtain. Similarly, the Advanced Technology Vehicles Manufacturing (ATVM) loan program, which Congress authorized in 2007,² was designed to encourage the automotive industry to invest in new technologies for more fuel-efficient passenger vehicles and their components. Congress has authorized DOE to make tens of billions of dollars in loans and guarantees under these programs. Congress has also appropriated billions of dollars to cover associated credit subsidy costs—the net present value of the difference between projected cash flows to and from the government over the life of the loans or guarantees. If borrowers default on the loans, the federal government can be exposed to substantial financial risks.

DOE provides information related to the costs of its loan programs in reports, financial statements, and budget documents. Other entities, including Congress and the public, rely on this information to weigh the benefits of these programs, but the complexity of this information can lead to confusion if users of this information are not aware of the context. For example, DOE reported in November 2014 that the loan programs had earned more than \$810 million in interest and that DOE expected to earn \$5 billion in interest payments over the life of the loans and loan guarantees.³ However, in part because this report did not include the interest that DOE pays the government to finance its lending, the information on expected interest earnings has been misinterpreted in several media accounts as projecting \$5 billion in profits for the DOE loan programs. We have examined this and other issues related to DOE's loan

¹Pub. L. No. 109-58, title XVII, 119 Stat. 594, 1117-22 (2005), *codified at* 42 U.S.C. §16511-16516.

²Pub. L. No. 110-140, §136, 121 Stat. 1492, 1514 (2007), *codified at* 42 U.S.C. §17013.

³DOE Loan Programs Office, *LPO Financial Performance* (Washington, D.C.: November 2014) accessed February 23, 2016, [http://energy.gov/sites/prod/files/2014/11/f19/DOE-LPO-Financial Performance November2014.pdf](http://energy.gov/sites/prod/files/2014/11/f19/DOE-LPO-Financial%20Performance%20November2014.pdf)

programs in a series of reports and testimonies. (See a list of related GAO products at the end of this statement.)

My testimony today draws on this body of work, in which we have reported on our concerns about DOE's implementation and oversight of the programs and recommended actions for improvement. I will focus my remarks today on (1) DOE's progress in addressing our prior recommendations related to the implementation and oversight of its loan programs and (2) our most recent report on the credit subsidy costs of the DOE loan programs.

For this statement, we relied on our reports that were issued from February 2007 through April 2015.⁴ Detailed information about the scope and methodology used to conduct our prior work can be found in each of our issued reports. Regarding the status of prior recommendations, we followed up with agency officials to determine what actions they had taken. The work on which this statement is based was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide 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 findings and conclusions based on our audit objectives.

Background

Since issuing its first loan guarantee in 2009, DOE's Loan Programs Office, which administers the LGP and ATVM program, has issued a total

⁴GAO, *DOE Loan Programs: Current Estimated Net Costs Include \$2.2 Billion in Credit Subsidy, Plus Administrative Expenses*, [GAO-15-438](#) (Washington, D.C.: Apr. 27, 2015); *DOE Loan Programs: DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness*, [GAO-14-367](#) (Washington, D.C.: May 1, 2014); *DOE Loan Guarantees: Further Actions Are Needed to Improve Tracking and Review of Applications*, [GAO-12-157](#) (Washington, D.C.: Mar. 12, 2012); *Department of Energy: Advanced Technology Vehicle Loan Program Implementation Is Under Way, but Enhanced Technical Oversight and Performance Measures Are Needed*, [GAO-11-145](#) (Washington, D.C.: Feb. 28, 2011); *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); *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); and *The Department of Energy: Key Steps Needed to Help Ensure the Success of the New Loan Guarantee Program for Innovative Technologies by Better Managing Its Financial Risk*, [GAO-07-339R](#) (Washington, D.C.: Feb. 28, 2007).

of more than \$30 billion in loans and loan guarantees. The LGP was originally designed to address a fundamental impediment to innovative and advanced energy projects: securing funding. Projects that entail risks—either that new technology will not perform as expected or that the borrower or project itself will not perform as expected—can face difficulty securing enough affordable financing to survive the period between development and commercialization of innovative technologies. Because the risks that commercial lenders must assume to support new technologies can put the cost of private financing out of reach, companies may not be able to commercialize innovative technologies without the federal government’s financial support.

To accurately account for the expected and actual costs of federal loan programs, agencies estimate the costs of a program in accordance with the Federal Credit Reform Act of 1990 by calculating credit subsidy costs for loans and loan guarantees, excluding administrative costs. DOE estimates the credit subsidy cost for each loan or loan guarantee by, among other things, projecting disbursements to the borrower as well as interest and principal repayments from the borrower, and adjusting these projected cash flows for the risk of default and other factors. Paying the credit subsidy cost is either the responsibility of the borrower or the program, depending on whether Congress has provided appropriations to cover such costs.

For the LGP, Title XVII of the Energy Policy Act of 2005 (EPAAct)—specifically section 1703—authorized DOE to guarantee loans for energy projects that (1) use new or significantly improved technologies as compared with commercial technologies already in service in the United States and (2) avoid, reduce, or sequester emissions of air pollutants or man-made greenhouse gases. Congress provided DOE \$34 billion in loan guarantee authority for section 1703 loan guarantees. Initially, Congress provided no appropriation to cover the credit subsidy costs of loan guarantees under section 1703, requiring all borrowers receiving a loan guarantee to pay to offset the credit subsidy costs of their own projects. In February 2009, Congress passed the American Recovery and Reinvestment Act of 2009 (Recovery Act),⁵ which amended Title XVII by adding section 1705, under which DOE could guarantee loans for projects

⁵Pub. L. No. 111-5, 123 Stat. 115 (2009).

using existing commercial technologies.⁶ For section 1705, the Recovery Act provided \$2.5 billion to cover credit subsidy costs, which DOE estimated would suffice to cover those costs for about \$18 billion in loan guarantees.⁷ In April 2011, Congress appropriated \$170 million to pay credit subsidy costs for a subset of projects under section 1703, specifically, energy efficiency and renewable energy projects. DOE estimated this appropriation would cover those costs for about \$848 million in loan guarantees. As table 1 shows, DOE had about \$28.7 billion remaining in loan guarantee authority under section 1703 as of November 2014. At that time, it also had three open solicitations for loan guarantee applications that accounted for much of that remaining authority. The ATVM loan program remains open to applications on a rolling basis and had about \$16 billion remaining in loan authority as of November 2014.

Table 1: Loan or Loan Guarantee Authority and Credit Subsidy Appropriations for Department of Energy Loan Programs (as of November 2014)

Credit subsidy costs are the net present value of the difference between projected cash flows to and from the government over the life of the loans or guarantees.

Program	Total authorized loan/guarantee amount	Amount appropriated to cover credit subsidy costs	Remaining loan/guarantee authority
LGP section 1703	\$34 billion	\$170 million ^a	\$28.7 billion
LGP section 1705		\$2.5 billion ^b	\$0
ATVM	\$25 billion	\$7.5 billion ^c	\$16 billion
Total	\$59 billion	\$10.2 billion	\$44.7 billion

Legend: LGP = Loan Guarantee Program; ATVM = Advanced Technology Vehicles Manufacturing

Source: DOE data. | GAO-16-150T

^aCongress appropriated these funds to pay credit subsidy costs for a subset of projects, specifically energy efficiency and renewable energy projects.

^bThe American Recovery and Reinvestment Act of 2009 provided for these funds.

^cThe fiscal year 2009 continuing resolution appropriated these funds to support the program's direct loans to manufacturers of passenger vehicles and their components by paying the credit subsidy costs of the loans.

⁶The authority to enter into loan guarantees under section 1705 expired on September 30, 2011. Projects supported by section 1705 were required to employ renewable energy systems, electric power transmission systems, or leading-edge biofuels that met certain criteria.

⁷The Recovery Act initially appropriated nearly \$6 billion to pay credit subsidy costs; however, Congress subsequently reduced this amount by transfer and rescission to fund other priorities.

DOE Has Made Efforts to Improve Loan Program Implementation and Oversight by Implementing Some but Not All Related GAO Recommendations

DOE has made efforts to improve its loan program implementation and oversight and, to date, has taken actions in response to 15 of our 24 prior recommendations. (See app. I for details on the status of each of the 24 recommendations we have made concerning the DOE loan programs). In 2007, 2008, and 2010—which covered the early stages of the LGP—we made 15 recommendations to address numerous issues where DOE had moved forward with the program before key elements were in place.⁸ DOE implemented 11 of our 15 recommendations from this period. For example:

- In our February 2007 report,⁹ we found that DOE's actions had focused on expediting program implementation—such as soliciting preapplications for loan guarantees—rather than ensuring the department had in place the critical policies, procedures, and mechanisms necessary to better ensure the program's success. We made five recommendations addressing these concerns. DOE agreed with and implemented all 5 of these recommendations by establishing key policies and procedures and issuing final program regulations, among other things.
- In contrast, in our July 2010 report,¹⁰ we found that, among other things, DOE had favored some applicants by, for example, deviating from its stated review procedures. DOE did not concur with—and has not taken actions to address—our recommendation that it take steps to ensure that its implementation of the LGP treats applicants consistently.

As Congress expanded the DOE loan programs to include 1705 projects and ATVM, we issued additional reports in 2011, 2012, and 2014 highlighting our concerns about DOE making loans and disbursing funds without having sufficient expertise and performance measures, among other things. Our reports included recommendations to address these issues from February 2011 through May 2014. To date, DOE has implemented four of the nine recommendations but has not addressed the remaining five. For example:

⁸[GAO-07-339R](#), [GAO-08-750](#), and [GAO-10-627](#).

⁹[GAO-07-339R](#).

¹⁰[GAO-10-627](#).

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- In February 2011,¹¹ we found that DOE was using ATVM staff with largely financial, and not technical, expertise to evaluate the progress of projects to produce more fuel-efficient passenger vehicles and their components. We recommended that DOE accelerate efforts to engage sufficient engineering expertise to verify that borrowers are delivering projects as required by the loan agreements. DOE implemented our recommendation by changing its budgeting practices for monitoring ATVM loans to better ensure that funds would be available to engage independent engineering expertise; DOE also changed its policy for engaging technical expertise to align with the Title XVII LGP policy.
 - Also in our February 2011 report,¹² we found that DOE did not have sufficient performance measures that would enable the department to fully assess whether the ATVM program had achieved its program goals, including protecting taxpayers' financial interests. We recommended that DOE develop sufficient and quantifiable performance measures for its program goals. DOE disagreed with this recommendation and took no steps to implement it. As a result, Congress does not have important information on whether the funds DOE has spent so far are furthering the program's goals and, consequently, whether the program warrants continued support.

DOE generally agreed with most of the additional recommendations we made in our March 2012 and May 2014 reports as the programs expanded,¹³ but it has not fully implemented them. For example, in May 2014 we found that DOE adhered to its monitoring policies inconsistently or not at all because the Loan Programs Office was still developing its organizational structure, including its staffing. We recommended that DOE fully develop its organizational structure by staffing key loan monitoring positions, among other things. DOE agreed and has taken steps to identify key staffing positions but, as of February 2016, most of these positions remain unfilled. Filling these positions would help DOE carry out activities critical to monitoring these loans.

¹¹[GAO-11-145](#).

¹²[GAO-11-145](#).

¹³[GAO-12-157](#) and [GAO-14-367](#).

Estimated Net Costs of DOE's Loan Programs Include about \$2.2 Billion in Credit Subsidy Costs, Plus Administrative Expenses

In our April 2015 report, we found that DOE estimated the credit subsidy costs of the loans and loan guarantees in its portfolio to be about \$2.2 billion as of November 2014,¹⁴ including about \$807 million for five loans on which the borrowers had defaulted. At that time, the portfolio consisted of 34 loans and loan guarantees in support of 30 projects in a diverse array of technologies. We also found that administrative costs totaled about \$312 million from fiscal year 2008 through fiscal year 2014.¹⁵ The estimated \$2.2 billion in credit subsidy costs was a decrease from initial DOE estimates totaling about \$4.5 billion,¹⁶ and we found that changes in credit subsidy cost estimates varied by loan program and the type of technology supported by the loans and loan guarantees, and by other factors, such as the availability of a steady stream of revenue for a project. Specifically, defaults on loan guarantees for two solar manufacturing projects and one energy storage project were largely responsible for an increase in the credit subsidy cost estimate for DOE's LGP portfolio from \$1.33 billion (when the loan guarantees were issued) to \$1.81 billion as of November 2014. Borrowers also defaulted on two ATVM loans, but the credit subsidy cost estimate for DOE's ATVM loan program's portfolio decreased from initial DOE estimates totaling about \$3.16 billion to \$404 million as of November 2014, mainly because of a significant improvement in the credit rating of one loan. This decrease was enough to more than offset the increases from the defaults in DOE's overall loan portfolio. See table 2 for changes in DOE's credit subsidy cost estimates.

¹⁴[GAO-15-438](#).

¹⁵[GAO-15-438](#).

¹⁶Initial credit subsidy cost estimates are based on disbursements for each loan guarantee and reflect the initial credit subsidy rates as estimated by DOE.

Table 2: Changes in Credit Subsidy Cost Estimates Since Initiation for the Department of Energy’s Loan Programs, as of November 2014

Credit subsidy costs are the net present value of the difference between projected cash flows to and from the government over the life of the loans or guarantees.

Program	Number of loans/guarantees	Number in default	Total obligated loan/guarantee amount ^a	Sum of initial estimated credit subsidy costs ^b	Sum of estimated credit subsidy costs as of November 2014 ^c
Dollars in millions					
LGP section 1705					
Solar generation	14	0	\$10,167	\$1,233	\$1,163
Wind generation	4	0	1,674	48	31
Solar manufacturing ^d	3	2	746	58	591
Geothermal	3	0	532	34	50
Other ^e	3	1	491	25	40
LGP section 1705 subtotal	27	3	13,609	1,398	1,875
LGP section 1703 – nuclear generation	2	0	6,184	(73)^f	(68)
ATVM	5	2	8,061	3,163	404
Total	34	5	\$27,854	\$4,488	\$2,211

Legend: LGP = Loan Guarantee Program; ATVM = Advanced Technology Vehicles Manufacturing

Source: GAO analysis of DOE data. | GAO-16-150T

Note: Numbers may not sum due to rounding.

^aPortions of some loan guarantees have been deobligated since the loan guarantee agreement was made.

^bInitial credit subsidy cost estimates are based on disbursements for each loan guarantee and reflect the initial credit subsidy rate estimate.

^cCurrent credit subsidy costs are based on disbursements for each loan guarantee.

^dIncludes one loan guarantee that has not yet been disbursed.

^eIncludes loan guarantees for one biomass project, one energy transmission project, and one energy storage project. These projects have been combined to prevent disclosure of credit subsidy data for individual loan guarantees.

^fThe credit subsidy cost estimate for the LGP section 1703 loans is negative, meaning the present value of projected cash flows to the government exceeds the present value of projected cash flows from the government. Borrowers for these loans were not required to pay to offset credit subsidy costs.

We found in our April 2015 report that most projects in DOE's portfolio have completed construction and are in operation—producing power or automobiles, for instance. None of the projects with loans in default had revenue streams that were provided for under long-term contracts for the sale of energy produced by the project pursuant to a power purchase agreement, offtake agreement, or similar contractual language. Power purchase agreements and offtake agreements generally guarantee a stream of revenue to the project owner for 20 or 25 years after the project begins generating electricity, effectively ensuring a buyer for the produced power. In DOE's portfolio, 21 of the 30 projects supported by the program included power purchase or offtake agreements.

Regarding administrative costs, our April 2015 report found that such costs for the programs have totaled about \$312 million from fiscal year 2008 through fiscal year 2014, including approximately \$251.6 million for LGP and \$60.6 million for the ATVM loan program.¹⁷ We also found that, for the LGP, the fees DOE has collected have not been sufficient to cover all of its administrative expenses for the program, in part because the maintenance fees on the current loan guarantees were too low to cover ongoing monitoring costs.¹⁸ As a result, some of the administrative expenses have been paid with taxpayer funds. DOE addressed the low maintenance fee levels by changing the fee structure in its new solicitations, announced from December 2013 to December 2014, to allow increased maintenance fees—up to \$500,000 per year. DOE officials told us that the new fee structure should allow DOE to cover a greater portion of LGP monitoring costs on new loan guarantees. However, the actual fee amounts will depend on the individual loan guarantees and negotiation of the loan guarantee agreements, making predictions of future fee income a challenge. It is now too early to tell whether DOE's actions will result in sufficient funds to offset LGP's future administrative costs.

Chairmen Weber and Loudermilk, Ranking Members Grayson and Beyer, and Members of the Subcommittees, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

¹⁷GAO, *DOE Loan Programs: Current Estimated Net Costs Include \$2.2 Billion in Credit Subsidy, Plus Administrative Expenses*, [GAO-15-438](#) (Washington, D.C.: Apr. 27, 2015).

¹⁸[GAO-15-438](#). ATVM administrative expenses are paid for from program appropriations.

GAO Contact and Staff Acknowledgments

If you or your staff members have any future questions about this testimony, please contact me at (202) 512-3841 or ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Key contributors to this testimony include Karla Springer, Assistant Director; Michael Krafve; Cynthia Norris; Barbara Timmerman; and Jarrod West.

Appendix I: Status of GAO Recommendations on Department of Energy Loan Programs

GAO-07-339R		
Recommendation	Status	Action taken
The Secretary of Energy should ensure that the department, before selecting eligible projects for loan guarantees, establishes policies and procedures to account for loan guarantees.	Closed - Implemented	In May 2007, the Department of Energy (DOE) implemented this recommendation when its Office of Finance and Accounting established standard operating procedures for accounting and reporting for DOE loan programs (SOP 1.4). Among other things, the procedures enable DOE to account for payments received from applicants for administrative costs, which is important because the Energy Policy Act of 2005, which established the Loan Guarantee Program (LGP), requires that borrowers be charged fees to cover DOE's costs to administer the program. DOE established the procedures before it issued the first loan guarantee in 2010, meeting the intent of our recommendation.
The Secretary of Energy should ensure that the department, before selecting eligible projects for loan guarantees, establishes policies and procedures for developing subsidy and administrative cost estimates.	Closed - Implemented	In March 2009, DOE issued a Credit Policies and Procedures Manual that lays out policies and procedures for estimating subsidy costs and defines administrative costs. In addition, according to DOE, in November 2008 the Office of Management and Budget approved the LGP's model for calculating the credit subsidy costs of loan guarantees. DOE's solicitations describe how it will charge these administrative costs to applicants. These actions meet the intent of our recommendation.
The Secretary of Energy should ensure that the department, before selecting eligible projects for loan guarantees, establishes policies and procedures for selecting lenders and loans to guarantee and for monitoring lenders and loans once the guarantees have been issued.	Closed - Implemented	DOE satisfied our recommendation to establish policies and procedures for selecting lenders and loans to guarantee and for monitoring lenders and loans once the guarantees have been issued. On October 23, 2007, and December 4, 2009, DOE issued final rules that incorporated policies and procedures for the issuance of solicitations, submission of applications, and the evaluation of loan guarantee applications. The rules also lay out the requirements for eligible lenders. In addition, on March 5, 2009, DOE issued a credit policies and procedures manual for the program that provides further detail on policies and procedures for selecting lenders and loans to guarantee. The manual also provides policies and procedures for credit monitoring of projects once loan guarantees have been issued.
The Secretary of Energy should ensure that the department, before selecting eligible projects for loan guarantees, issues final program regulations that protect the government's interests, manage risk, and ensure that borrowers are aware of program requirements.	Closed - Implemented	On October 23, 2007, and December 4, 2009, DOE issued final rules implementing its Title XVII LGP for innovative energy technologies. The rules elaborate on the program established by Title XVII by defining the technologies and types of projects covered by the program, as well as the financial structure required for projects. Issuing a rule is in keeping with the intent of our recommendation to provide greater protection of the government's interests because this rule, like other regulations, cannot be changed without public or congressional input and carries the force of law.

**Appendix I: Status of GAO Recommendations
on Department of Energy Loan Programs**

The Secretary of Energy should ensure that the department, before selecting eligible projects for loan guarantees, further defines program goals and objectives tied to outcome measures for determining program effectiveness.	Closed - Implemented	DOE has taken actions to define program goals and performance measures in order to determine program effectiveness.
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GAO-08-750

Recommendation	Status	Action taken
The Secretary of Energy should direct the Chief Financial Officer to amend application guidance to clarify the program's equity requirements to the 16 companies invited to apply for loan guarantees and in future solicitations before substantially reviewing LGP applications.	Closed - Implemented	DOE substantively addressed our recommendation with its October 2009 and August 2010 solicitations, which provided an expanded definition of equity that also addressed exclusions.
The Secretary of Energy should direct the Chief Financial Officer to amend application guidance to further develop and define performance measures and metrics to monitor and evaluate program efficiency, effectiveness, and outcomes before substantially reviewing LGP applications.	Closed - Implemented	Since our 2008 recommendation, DOE developed nine performance measures to evaluate the program's efficiency and outcomes, implementing our recommendation.
The Secretary of Energy should direct the Chief Financial Officer to amend application guidance to improve the LGP's full tracking of the program's administrative costs by developing an approach to track and estimate costs associated with offices that directly and indirectly support the program and including those costs as appropriate in the fees charged to applicants before substantially reviewing LGP applications.	Closed - Implemented	In October 2008, the Loans Programs Office (LPO) began using a DOE software system to track administrative costs within the office, including, for example, staff salaries and travel associated with reviewing the applications for various solicitations. In addition, DOE staff in the field office that was reviewing the greatest number of loan guarantee applications reached an agreement with the program concerning performance of and reimbursement for this work.
The Secretary of Energy should direct the Chief Financial Officer to amend application guidance to include more specificity on the content of independent engineering reports and on the development of project cost estimates to provide the level of detail needed to better assess overall project feasibility before substantially reviewing LGP applications.	Closed – Not Implemented	Since our 2008 recommendation, DOE increased the content guidelines for engineering reports in later solicitations, partly implementing our recommendation. However, the actions taken by DOE did not fully address the intent of our recommendation.
The Secretary of Energy should direct the Chief Financial Officer to clearly define needs for contractor expertise to facilitate timely application reviews before substantially reviewing LGP applications.	Closed – Implemented	To facilitate timely action on applications for loan guarantees, DOE developed "standing source" lists of contractors with legal, engineering, financial, and marketing expertise. Listed contractors were determined by DOE to be capable of providing specific services that DOE identified. Such contractors were available for selection, under a competitive process, to review projects under consideration for loan guarantees. Developing the standing list helped ensure that DOE would have the necessary expertise readily available during the review process.

**Appendix I: Status of GAO Recommendations
on Department of Energy Loan Programs**

The Secretary of Energy should direct the Chief Financial Officer to complete detailed internal loan selection policies and procedures that lay out roles and responsibilities and criteria and requirements for conducting and documenting analyses and decision making before substantially reviewing LGP applications.	Closed – Implemented	In March 2009, DOE issued a <i>Credit Policies and Procedures Manual</i> that established detailed internal loan selection policies and procedures, including roles and responsibilities for LGP staff, and criteria for conducting analyses and decision making, but the manual did not provide detailed guidance for documenting analyses. In October 2011, LGP revised its Credit Policies and Procedures manual to also include specific instructions to LGP staff to document their analyses and decisions in LGP’s records management system.
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GAO-10-627

Recommendation	Status	Action taken
The Secretary of Energy should direct the program management to 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.	Closed – Not Implemented	According to DOE officials, LGP adheres to and supports the current DOE Strategic Plan. However, LGP could not provide documentation or evidence of either an improvement in alignment between DOE performance goals and LGP policy goals or the revision of LGP performance measures. We continue to believe that relevant and revised performance goals and measures would improve DOE’s ability to evaluate and implement the LGP.
The Secretary of Energy should direct the program management to revise the process for issuing loan guarantees to clearly establish what circumstances warrant disparate treatment of applicants so that DOE’s implementation of the program treats applicants consistently unless there are clear and compelling grounds for doing otherwise.	Closed – Not Implemented	DOE did not concur with the recommendation and has not taken action to implement it.
The Secretary of Energy should direct the program management to develop an administrative appeal process for applicants who believe their applications were rejected in error and document the basis for conclusions regarding appeals.	Closed – Not Implemented	DOE did not concur with the recommendation and has not taken action to implement it.
The Secretary of Energy should direct the program management to develop a mechanism to systematically obtain and address feedback from program applicants, and, in so doing, ensure that applicants’ anonymity can be maintained, for example, by using an independent service to obtain the feedback.	Closed – Implemented	In September 2010, DOE created a mechanism for submitting feedback—including anonymous feedback—through its website.

GAO-11-145

Recommendation	Status	Action taken
The Secretary of Energy should direct the ATVM Program Office to accelerate efforts to engage sufficient engineering expertise to verify that borrowers are delivering projects as agreed.	Closed – Implemented	Since issuance of our report in February 2011, DOE changed its budgeting practices for monitoring ATVM loans to better ensure that funds would be available to engage independent engineering expertise when needed. DOE also changed its policy for engaging technical expertise, making it the same as for the Title XVII LGP.

**Appendix I: Status of GAO Recommendations
on Department of Energy Loan Programs**

The Secretary of Energy should direct the ATVM Program Office to develop sufficient and quantifiable performance measures for its three goals.	Closed – Not Implemented	In its original comments to our report, and in a subsequent statement of its management decisions, DOE stated that it disagreed with our recommendation. DOE stated its belief that the ATVM program adhered to the requirements of the statute authorizing the program and that the performance measures we suggested would greatly expand the scope of the program—DOE stated it would not develop any new measures not specified by Congress.
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GAO-12-157

Recommendation	Status	Action taken
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to commit to a timetable to fully implement a consolidated system that enables the tracking of the status of applications and that measures overall program performance.	Open	DOE did not concur with the recommendation and has not taken action to implement it.
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to ensure that the new records management system contains documents supporting past decisions, as well as those in the future.	Open	DOE concurred with this recommendation but has not provided us with information regarding its implementation.
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to regularly update the LGP’s credit policies and procedures manual to reflect current program practices to help ensure consistent treatment for applications to the program.	Closed – Implemented	In December 2015, DOE published its revised LPO credit policies and procedures manual, which sets the basic criteria for the determination of eligibility, underwriting of loan and loan guarantee requests, and the management of closed loans and loan guarantees.

GAO-14-367

Recommendation	Status	Action taken
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to fully develop its organizational structure by staffing key monitoring positions.	Open	DOE officials told us that they developed short- and long-term plans for staffing key loan monitoring positions and risk mitigation positions within the Portfolio Management Division and Risk Management Division, respectively. In February 2016, DOE provided us with evidence that it had identified 24 key positions in these two divisions; however, most of these positions remain unfilled, so the recommendation status remains open.
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to fully develop its organizational structure by updating management and reporting software.	Closed – Implemented	In February 2016, DOE officials provided us with evidence that they had completed and implemented updates for their management and reporting systems.

**Appendix I: Status of GAO Recommendations
on Department of Energy Loan Programs**

The Secretary of Energy should direct the Executive Director of the Loan Programs Office to fully develop its organizational structure by completing policies and procedures for loan monitoring and risk management.	Open	In February 2016, DOE officials provided us with evidence that they developed, revised, reviewed, and implemented the majority of their portfolio monitoring and risk management policies and procedures. However, some key work processes (e.g., Alleged Fraud, Waste, or Abuse reporting and Risk Assessment processes) are still under development, so the recommendation status remains open.
The Secretary of Energy should direct the Executive Director of the Loan Programs Office to evaluate the effectiveness of DOE's monitoring by performing the credit review, compliance, and reporting functions outlined in the 2011 policy manual for DOE's loan programs.	Closed – Implemented	In February 2016, DOE officials told us that the Risk Management Division evaluates the effectiveness of DOE's monitoring via annual internal assessments. DOE began the first of these annual assessments in October 2015 and provided GAO with updated procedures for conducting these assessments.

Source: GAO | GAO-16-150T

Note: Recommendations remain open until they are designated as closed – implemented or closed – not implemented.

Related GAO Products

DOE Loan Programs: Current Estimated Net Costs Include \$2.2 Billion in Credit Subsidy, Plus Administrative Expenses. [GAO-15-438](#). Washington, D.C.: April 27, 2015.

DOE Loan Programs: DOE Has Made More Than \$30 Billion in Loans and Guarantees and Needs to Fully Develop Its Loan Monitoring Function. [GAO-14-645T](#). Washington, D.C.: May 30, 2014.

DOE Loan Programs: DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness. [GAO-14-367](#). Washington, D.C.: May 1, 2014.

Federal Support for Renewable and Advanced Energy Technologies. [GAO-13-514T](#). Washington, D.C.: April 16, 2013.

Department of Energy: Status of Loan Programs. [GAO-13-331R](#). Washington, D.C.: March 15, 2013.

DOE Loan Guarantees: Further Actions Are Needed to Improve Tracking and Review of Applications. [GAO-12-157](#). Washington, D.C.: March 12, 2012.

Department of Energy: Advanced Technology Vehicle Loan Program Implementation Is Under Way, but Enhanced Technical Oversight and Performance Measures Are Needed. [GAO-11-145](#). Washington, D.C.: February 28, 2011.

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.

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.

Department of Energy: Observations on Actions to Implement the New Loan Guarantee Program for Innovative Technologies. [GAO-07-798T](#). Washington, D.C.: April 24, 2007.

The Department of Energy: Key Steps Needed to Help Ensure the Success of the New Loan Guarantee Program for Innovative Technologies by Better Managing Its Financial Risk. [GAO-07-339R](#). Washington, D.C.: February 28, 2007.

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Frank Rusco is a Director in GAO's Natural Resources and Environment team, leading work on a broad spectrum of energy issues, including federal oil and gas management; DOE's energy, R&D and loan programs; Nuclear Regulatory Commission oversight; Federal Energy Regulatory Commission oversight and activities; and government-wide energy programs and activities. Mr. Rusco holds both a master's degree and Ph.D. in economics from the University of Washington in Seattle.