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Report to Congressional Committees

May 2014

DOE LOAN PROGRAMS

DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness

GAO-14-367

GAO Highlights

Highlights of GAO-14-367, a report to congressional committees

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DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness

Why GAO Did This Study

DOE's Loan Programs Office administers the Loan Guarantee Program (LGP) for certain renewable or innovative energy projects and the Advanced Technology Vehicles Manufacturing (ATVM) loan program for projects to produce more fuel-efficient vehicles and components. As of March 2014, the programs had made more than $30 billion in loans and guarantees: approximately $21.9 billion for 33 loan guarantees under the LGP and $8.4 billion for 5 loans under the ATVM loan program. Both programs can expose the government and taxpayers to substantial financial risks should borrowers default.

GAO assessed the extent to which DOE has developed and adhered to loan monitoring policies for its loan programs for 2009 to 2013. GAO analyzed relevant regulations and guidance; prior audits; DOE policies; and DOE data, documents, and monitoring reports for a nonprobability sample of 10 loans and guarantees. Findings from the sample are not generalizable, but the sample covered a range of technologies and loan statuses. GAO also interviewed DOE officials.

What GAO Recommends

GAO recommends that DOE (1) staff key positions, (2) update management and reporting software, (3) complete policies for loan monitoring, and (4) evaluate the effectiveness of its loan monitoring. DOE generally agreed with the recommendations.

View GAO-14-367. For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

What GAO Found

The Department of Energy (DOE) has not fully developed or consistently adhered to loan monitoring policies for its loan programs. In particular, DOE has established policies for most loan monitoring activities, but policies for evaluating and mitigating program-wide risk remain incomplete and outdated. These activities are generally the responsibility of the Risk Management Division in DOE's Loan Programs Office. This division, established in February 2012, has been operating since its inception under incomplete or outdated policies. DOE has missed several internal deadlines for updating its loan monitoring policies. DOE officials told GAO that updated policies were delayed in part because the Loan Programs Office did not have a Director of Risk Management until November 2012. Additionally, the Risk Management Division had not staffed 11 of its 16 planned positions until late 2013, when it staffed 6 of the 11 vacancies. Under federal guidance, credit programs should have robust management and oversight frameworks for monitoring the programs' progress toward achieving policy goals within acceptable risk thresholds, and taking action where appropriate to increase efficiency and effectiveness. It is difficult to determine whether DOE is adequately managing risk if policies are outdated or incomplete and key monitoring positions are not fully staffed.

In some cases GAO examined, DOE generally adhered to the loan monitoring policies that it had in place. For example, DOE generally adhered to its policies for authorizing disbursement of funds to borrowers. But, in other cases, DOE adhered to the policies inconsistently or not at all because the Loan Programs Office had staff vacancies and was still developing management and reporting software and procedures for implementing policies. For example:

- DOE inconsistently adhered to its policies for monitoring and reporting on credit risk, particularly for preparing credit reports—periodic reviews of project progress and factors that may affect the borrower's ability to meet the terms of the loan. DOE did not prepare dozens of credit reports, mostly in 2011, because according to officials it had not filled positions or fully developed the software needed for producing these reports.
- DOE inconsistently adhered to its policies for managing troubled loans requiring that it prepare and approve plans for handling loans to borrowers in danger of defaulting on their loan repayments. For two troubled loans, officials said DOE did not prepare a formal plan, as called for in its policy, in part because implementing procedures were incomplete.
- DOE did not adhere to its policy requiring it to evaluate the effectiveness of its loan monitoring because of continuing staff vacancies. Without conducting these evaluations, DOE management cannot assess the adequacy of its monitoring efforts and thus be reasonably assured that it is effectively managing risks associated with its loan programs.

As a result, DOE was making loans and disbursing funds from 2009 through 2013 without a fully developed loan monitoring function. During this time, inconsistent adherence to policies limited assurance that DOE was completing activities important to monitoring the loans and protecting the government's interest.

Contents

Abbreviations

ATVM	Advanced Technology Vehicles Manufacturing
DOE	Department of Energy
EISA	Energy Independence and Security Act
FIPP	Financial Institution Partnership Program
LGP	Loan Guarantee Program
OMB	Office of Management and Budget
Recovery Act	American Recovery and Reinvestment Act

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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May 1, 2014

The Honorable Dianne Feinstein
Chairman
The Honorable Lamar Alexander
Ranking Member
Subcommittee on Energy and Water Development
Committee on Appropriations
United States Senate

The Honorable Mike Simpson
Chairman
The Honorable Marcy Kaptur
Ranking Member
Subcommittee on Energy and Water Development,
and Related Agencies
Committee on Appropriations
House of Representatives

The Department of Energy's (DOE) loan programs have made more than $30 billion in loans and loan guarantees. These include approximately $21.9 billion for 33 loan guarantees under the Loan Guarantee Program (LGP) and $8.4 billion for 5 loans under the Advanced Technology Vehicles Manufacturing (ATVM) loan program. Under the LGP, to encourage certain types of renewable or innovative energy projects, the federal government agrees to reimburse lenders for the guaranteed amount of loans if the borrowers default. The ATVM loan program provides direct loans to manufacturers to produce more fuel-efficient vehicles and components. Both programs expose the federal government to financial risks should those borrowers default.

DOE's management of these risks is an important aspect of the loan programs, not only because of the tens of billions of dollars currently at stake but also because of the programs' authority to make or guarantee more loans. As of March 2014, DOE had about $45 billion in loan and loan guarantee authority remaining for both programs, about $3.8 billion of which the department had conditionally committed for two guarantees. In addition, because loan tenure periods may last up to 30 years, DOE's Loan Programs Office, which administers both programs, must monitor and manage the agency's portfolio of loans and guarantees over decades. DOE's policy manuals for the Loan Programs Office state that, in monitoring the performance of the loans made and guaranteed, DOE seeks to protect the financial interests of the federal government, and thus the taxpayer, by "proactively managing risks associated with projects" receiving support from the LGP or the ATVM loan program.

Our previous reviews of DOE's loan programs focused on how DOE established the programs and selected loan and guarantee recipients, as well as the status of DOE's efforts to use remaining authorities and appropriations for the programs. Among our past findings have been that DOE implemented the LGP in a way that treated loan guarantee applicants inconsistently; that the LGP did not have the consolidated data on the status of applications that the department needed to facilitate efficient program management and oversight;[1] and that, for the ATVM loan program, DOE had not engaged the engineering expertise needed for technical oversight of loans or developed sufficient performance measures.[2]

Under the 2007 Revised Continuing Appropriations Resolution, GAO is mandated to review DOE's execution of the LGP and to report our findings to the House and Senate Committees on Appropriations. Because DOE is administering the LGP and ATVM loan program through one Loan Programs Office, we included both programs in this review. For this report, we assessed the extent to which DOE has developed and adhered to loan monitoring policies for its loan programs.

To address this objective, we acquired and reviewed DOE's policy manuals and documents detailing procedures for implementing those policies, and we identified 10 loan monitoring activities described in those manuals or by DOE officials in the Loan Programs Office. We interviewed DOE officials to ensure that our understanding of these policies and procedures was thorough and accurate. To determine the extent of DOE's adherence to its loan monitoring policies, we acquired and

[1]GAO, *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); and GAO, *DOE Loan Guarantees: Further Actions are Needed to Improve Tracking and Review of Applications*, GAO-12-157 (Washington, D.C.: Mar. 12, 2012).

[2]GAO, *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).

analyzed documentation from a nonprobability sample of 10 of the 36 loans and loan guarantees that had been made under DOE's loan programs, as of March 2013.[3] The loans and loan guarantees were chosen to cover projects involving a range of technologies, construction statuses, credit watch list statuses, loan or guarantee amounts, dates of loan finalization, and amounts disbursed. We examined project files pertaining to the 10 monitoring activities we identified in order to determine the extent to which those files—and thus, DOE's monitoring of the loans for those projects—adhered to the department's monitoring policies, as well as the level of consistency in monitoring across projects. We did not review adherence to all DOE policies for the programs, rather only those most directly associated with the 10 activities we identified. In addition, to provide context, we compared DOE's monitoring policies with those of private lenders who finance large energy projects. To do so, we interviewed a nonprobablility sample of eight experts (four private lenders, three academic experts, and one industry expert) about private lenders' monitoring policies[4] and compared the results with DOE's policies and the 10 activities we identified (see app. IV). A more detailed description of the objectives, scope, and methodology of our review is provided in appendix I.

We conducted this performance audit from March 2013 to April 2014 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.

[3] At the time we finalized our sample, in March 2013, DOE had issued 31 loan guarantees and 5 loans, respectively. This was prior to the recent issuance of 2 loan guarantees in February 2014. In instances where we use a nonprobability sample, it means that we are unable to generalize our findings to the general population. However, in regards to this sample, we are able to make observations about DOE's monitoring activities for the diverse set of 10 loans and guarantees, respectively.

[4] We identified four private lenders financing similar projects to those in the LGP and ATVM loan program, using additional criteria such as the value of loans issued and number of loans issued. We identified three academic experts through a literature search of relevant academic articles on project finance loan monitoring practices and the financing of innovative energy technologies, contacting the most frequently cited. We also interviewed the author of an industry study compiling leading monitoring practices from institutions across a number of sectors, including 10 private lenders, as well as several export credit and government agencies. For more details, see appendix I.

Background

DOE's LGP was originally designed to address a fundamental impediment for investors and lenders that stems from the risks of innovative and advanced energy projects, including technology risk—the risk that the new technology will not perform as expected—and execution risk—the risk that the borrower or project will not perform as expected. Companies can face obstacles in securing enough affordable financing from lenders to survive the gap between developing innovative technologies and commercializing them. Because the risks that lenders must assume to support new technologies can put private financing out of reach, companies may not be able to commercialize innovative technologies without the federal government's financial support.

The LGP was established in Title XVII of the Energy Policy Act of 2005 to encourage early commercial use of new or significantly improved technologies in energy projects. The act—specifically section 1703—originally 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. In February 2009, Congress expanded the scope of the LGP in the American Recovery and Reinvestment Act (Recovery Act) by adding section 1705 to the Energy Policy Act, which extended the program and provided funding to include projects that use commercial energy technology that employs renewable energy systems, electric power transmission systems, or leading-edge biofuels that meet certain criteria. As of March 2014, DOE had made 31 loan guarantees for approximately $15.7 billion under section 1705, which expired on September 30, 2011, and 2 loan guarantees for approximately $6.2 billion under section 1703. These guarantees have been for biomass, geothermal, nuclear, solar, and wind generation; energy storage; solar manufacturing; and electricity transmission projects (see app. III). Two borrowers withdrew in 2012 before starting to draw funds from their loans. Additionally, in September and October 2013, DOE deobligated 2 loan guarantees because they did not seem likely to meet the loan conditions required to begin drawing on their loans. Three other loan guarantee borrowers have defaulted and filed for bankruptcy—one borrower and its loan guarantee have been restructured, and the guarantee remains active; the other two borrowers are in liquidation proceedings. In addition, DOE has conditional commitments,[5] issued in 2010, for approximately $3.8 billion in section 1703 loan guarantees for two nuclear projects. In December 2013, DOE announced a new solicitation for applications for up to $8 billion in loan guarantees for advanced fossil energy projects.

The ATVM loan program was established in December 2007 by the Energy Independence and Security Act (EISA), and the fiscal year 2009 Continuing Resolution appropriated funding for the program. DOE's five loans for $8.4 billion under this program went to both established automakers and start-up manufacturers. These loans are for the manufacture of fuel-saving enhancements of conventional vehicle technology, plug-in hybrids, and all-electric vehicles. In May 2013, one borrower paid back its loan. Two ATVM borrowers have defaulted on their loans. In 2013, DOE sold the defaulted loan notes in auction proceedings. In 2010, DOE consolidated the previously separate LGP and ATVM program under the Loan Programs Office. Monitoring for both LGP and ATVM is conducted out of one division: the Portfolio Management Division, with support coming from several other divisions throughout the Loan Programs Office.

DOE Has Not Fully Developed or Consistently Adhered to Loan Monitoring Policies

DOE has not fully developed or consistently adhered to loan monitoring policies for its loan programs. In particular, DOE has established policies for most loan monitoring activities, but policies for some of these activities remain incomplete or outdated. Further, in some cases we examined, DOE generally adhered to its loan monitoring policies but, in others, DOE adhered to those policies inconsistently or not at all because the Loan Programs Office was still developing its staffing, management and reporting software, and policies.

[5] A conditional commitment is a commitment by DOE to issue a loan guarantee if the applicant satisfies specific requirements. The Secretary of Energy has the discretion to cancel a conditional commitment at any time for any reason prior to the issuance of a loan guarantee.

DOE Has Policies for Most Loan Monitoring Activities, but Some Remain Incomplete or Are Outdated

DOE has established policies for most loan monitoring activities, but policies for some of these activities remain incomplete or outdated. More specifically, DOE has established policies for loan monitoring activities including disbursing funds, monitoring and reporting on credit risk, and managing troubled loans. (For more details about DOE loan monitoring policies and activities, see app. II.) However, loan monitoring policies for evaluating and mitigating program-wide risk remain incomplete or outdated, and several dates DOE set for completing or updating these policies passed during the course of our work.

Evaluating and mitigating program-wide risk is generally the responsibility of the Risk Management Division within DOE's Loan Programs Office. This division was established in February 2012 and has been operating since its inception under incomplete or outdated policies. For example, the policies do not address how the new structure of the Risk Management Division fits into existing policies, thus not providing clear guidance on the organizational roles of the division. DOE officials told us that policy revisions were delayed in part because the Loan Programs Office did not have a Director of Risk Management until November 2012 and that a planned revision was put on hold to await the arrival of a new Executive Director in May 2013. Additionally, the Risk Management Division had not staffed 11 of its 16 planned positions until late 2013, when it staffed 6 of 11 vacancies.

As highlighted by an independent White House review of DOE's loan programs,[6] as well as our discussions with private lenders, a risk management division is essential for mitigating risk. Similarly, Office of Management and Budget (OMB) guidance specifies that credit programs should have robust management and oversight frameworks for monitoring the programs' progress toward achieving policy goals within acceptable risk thresholds, and taking action where appropriate to increase efficiency and effectiveness. It is difficult to determine whether DOE is adequately managing risk if policies against which to compare its actions are outdated or incomplete. Also, without fully staffing key monitoring positions, the Risk Management Division is limited in its ability to revise and complete policies, as well as perform its other monitoring responsibilities.

[6] Herbert Allison, *Report of the Independent Consultant's Review with Respect to the Department of Energy Loan and Loan Guarantee Portfolio* (Washington, D.C.: Jan. 31, 2012).

DOE Did Not Consistently Adhere to Its Loan Monitoring Policies Because Its Loan Programs Office Organizational Structure Was Still under Development

In some cases we examined, DOE generally adhered to its loan monitoring policies but, in other cases, DOE adhered to its monitoring policies inconsistently or not at all because DOE was still developing the Loan Programs Office's organizational structure, including staffing, management and reporting software, and implementing procedures for policies. As a consequence, DOE was making loans and disbursing funds from 2009 through 2013 without a fully developed loan monitoring function. DOE generally adhered to its monitoring policies for activities such as disbursing funds and reviewing borrower requests for changes to loan agreement provisions. For example, for the 10 loans in our sample, we found that, in disbursing funds, DOE generally documented its analysis of the financial health of the project and recorded supervisory approvals, as required in its policy. Similarly, we found that in nearly all of the 30 requests for amendments and waivers to loan agreements for the 10 loans in our sample, DOE officials properly recorded their review of the requested changes.

In some other cases, DOE inconsistently adhered to its monitoring policies. For example, in regard to monitoring and reporting on credit risk, DOE was inconsistent in its preparation of credit reports which, according to DOE's policy manuals, provide early warning signs of potential credit problems and can guide project and loan restructuring efforts should the need arise. In total, DOE was missing 24 of 88 periodic credit reports due through May 2013 across the 10 sample loans. Twenty of the missing reports were not completed because DOE did not begin producing periodic credit reports until August 2011. DOE officials told us that such reports were not produced before then because the Portfolio Management Division had not filled the staff positions needed for producing these reports, and its management and reporting software was under development. As a result, DOE disbursed more than $4.7 billion for the 10 loans in our sample before it began producing periodic credit reports as required in its policy manuals.[7] According to DOE officials, although DOE was not producing credit reports during this time, DOE staff were taking other measures to monitor the loans, such as keeping in regular contact with the borrowers.

[7] This disbursement amount represents disbursements for the 10 loans in our sample. Additional disbursements would have been made for some of the remaining loans.

In addition, after DOE began producing credit reports, DOE officials inconsistently recorded credit risk ratings on multiple credit reports. For example, of the 64 reports we reviewed as part of our sample, 11 had one or more credit risk rating fields left blank, and other credit rating fields contained errors. According to DOE officials, the reasons for the blank and incorrect fields included human error and a system design error that occurs in its management and reporting software.[8] Further, there was a wide range between when credit reports were completed and when they were reviewed; more specifically, the time it took to review reports completed on a quarterly basis ranged from as little as a week to over 3 months. DOE officials told us that the reporting and review period inconsistencies were a result of inadequate staffing and incomplete implementing procedures that did not provide clear guidance on reporting dates. Also, some reports were submitted and approved outside of DOE's management and reporting software, for which the system design was still being worked out, and training was being provided. DOE's policy manuals specify that one purpose of these credit reports is to serve as an information source for inquiries by government oversight authorities seeking to understand the loans' structures and decisions. Incomplete or inconsistent credit reporting can make it difficult for these authorities to understand and assess the status of the loans and determine if corrective actions are needed. According to DOE officials, as of February 2014, its staffing levels and its management and reporting software were sufficient to support full and timely credit reporting. After we found inconsistencies in DOE's credit reports, DOE established a draft implementing procedure to guide the development of future credit reports that clarified reporting dates and preparation periods for new and existing staff in June 2013. Furthermore, DOE officials stated, in January 2014, that the department has taken steps to address human error in the credit risk rating fields by requiring that the fields representing previous credit ratings are populated automatically. DOE officials also stated that they are addressing the system design issue in the next generation of its management and reporting software, planned for release in late fall 2014.

In another example, DOE inconsistently adhered to policies for managing troubled loans. DOE's policy manuals require that DOE prepare and approve plans for handling troubled loans to borrowers who are in danger

[8] DOE officials also noted that DOE does not manage its portfolio based solely on a loan's credit rating.

of defaulting on their loan repayments. Once it becomes clear that a loan is in danger of default, DOE policy calls for the preparation, approval, and implementation of a workout action plan, which identifies potential problems and lays out decisive remedial actions to help minimize potential losses. However, for two troubled loans in our sample, DOE officials told us they had not prepared a formal workout action plan in a single document but instead specified problems and remedial actions in many documents over a period of time. For example, in one case, in 2011, where DOE officials were aware for at least 10 months that the borrower would likely default on its payments, DOE provided us with about 20 such documents including analyses of collateral, draft memoranda, and slideshow presentations, which showed that DOE had taken or considered some of the options described by its policy. However, these documents did not conform to DOE's policy for these plans, particularly its policy that DOE prepare a workout plan document and seek formal approval from its management. DOE officials told us that "operational matters had evolved beyond the steps outlined in their policy manuals." DOE officials noted that they were revising the manuals to better comport with best practices in the finance industry and that DOE has been operating under draft implementing procedures since June 2012. These officials also noted that DOE's 2009 and 2011 policy manuals were inadequate and were completed without the benefit of experts in the field of workout plans due to limited staffing in the Portfolio Management Division at the time. Officials noted that managers with such expertise are now on staff in the division, but the branch within the division that is tasked with managing troubled loans, including the development and implementation of workout action plans, had not staffed four of five positions as of February 2014. DOE officials told us that, given the availability of third-party financial advisors and the limited number of assets that fall within that category, they may not need to fill all of the positions. However, inconsistent adherence to policies and incomplete staffing limit DOE's assurance that it has been effectively managing troubled loans during a period when there have been five defaults and bankruptcies among DOE loan program borrowers or that it can effectively manage such loans in the future.

Further, DOE did not adhere to some existing policies for program-wide evaluation and mitigation of portfolio-wide risk, in particular policies for evaluating the effectiveness of its loan monitoring. DOE's 2011 policy manual states that certain functions are critical to management's ability to assess the adequacy and quality of the agency's monitoring. The manual further states that failure to maintain these functions is an unsound practice that could expose DOE to loss or criticism. These functions—

which are referred to as credit review, compliance, and reporting functions—include internal assessment of documentation, portfolio-wide reporting on risks, and evaluation of the effectiveness of DOE's loan monitoring. The Loan Programs Office's Portfolio Management Division has conducted some internal assessments of the quality of DOE documentation and, in May 2013, started some portfolio-wide reporting on the overall risk posed by DOE's loan obligations. However, DOE officials told us that the division has not evaluated the effectiveness of the agency's loan monitoring efforts or produced the required reports. DOE officials told us that these responsibilities have been transferred to the Risk Management Division, which, as noted earlier, was operating under incomplete or outdated policies and had staff vacancies. Without conducting these evaluations, DOE management cannot assess the adequacy of its monitoring efforts and thus be reasonably assured that it is effectively managing risks associated with its loan programs.

Conclusions

DOE's loan programs began making loans and guarantees in 2009, and by March 2014 DOE had made or guaranteed over $30 billion in loans that required monitoring. In its policy manuals, DOE recognizes the importance of monitoring loans and guarantees to proactively manage their risks and protect the financial interests of the federal government and the taxpayer. OMB guidance specifies that credit programs should have robust management and oversight frameworks. However, DOE has been monitoring its loans since 2009 without the benefit of a fully-developed organizational structure because staffing, management and reporting software, and monitoring policies and procedures are still works in progress. The absence of a fully-developed organizational structure has resulted in inconsistent adherence to policies during a period of significant program events, including loan disbursements, borrower bankruptcies, and loan repayments involving billions of dollars. Because DOE inconsistently adhered to the policies it had in place, DOE's assurance that it was completing activities critical to monitoring the loans has been limited. DOE has made progress since 2011 in developing its monitoring functions, but it has repeatedly missed internal deadlines for completing its loan monitoring policies and procedures. In the meantime, DOE has recently announced a new solicitation for up to $8 billion in loan guarantees for advanced fossil energy projects and issued two new loan guarantees for nuclear generation, adding $6.2 billion in loans to be overseen.

In addition to a fully developed loan monitoring organization, evaluating the effectiveness of ongoing monitoring efforts is important to ensuring risks are being adequately managed in DOE's loan programs. However, since the first loans were made, DOE has not conducted evaluations of its loan monitoring by performing the credit review, compliance, and reporting functions outlined in its 2011 policy manual. Such evaluations might have identified and addressed the inconsistent adherence to its policies that we identified. As DOE's manual states, a failure to maintain a reliable and effective evaluation function is unsound and could expose DOE to loss or criticism. Given the high profile and large sums of money involved in DOE's loan programs—more than $30 billion in loans and guarantees already made and approximately $45 billion in remaining loan and loan guarantee authority—this exposure is significant.

Recommendations for Executive Action

To provide greater assurance that DOE is effectively monitoring its loans, we recommend that the Secretary of Energy direct the Executive Director of the Loan Programs Office to take the following four actions:

- Fully develop its organizational structure by
  - staffing key monitoring positions,
  - updating management and reporting software, and
  - completing policies and procedures for loan monitoring and risk management.
- 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.

Agency Comments and Our Evaluation

We provided a draft of this report to DOE for review and comment. In its written comments, DOE generally agreed with our recommendations. DOE also said it disagreed with some statements in the draft report. It was difficult, however, for us to determine which statements DOE disagreed with because the comments focused on highlighting DOE's monitoring efforts in four areas rather than specifying areas of disagreement. DOE's written comments and our detailed responses can be found in appendix V of this report. DOE also provided technical comments that we incorporated, as appropriate.

DOE noted several actions it is undertaking in response to our recommendations. Regarding its organizational structure, DOE stated it would continue to recruit and hire qualified managers and staff for its Portfolio Management and Risk Management Divisions; implement a second generation of its software by the end of the first quarter of 2015, as well as a new information and reporting system by the end of the third quarter of 2014; and continue to prepare and issue portfolio monitoring and risk management procedures and guidelines. However, DOE did not provide information on any plans for updating and completing its overall policy manual for the programs. We believe this action is needed because it would provide guidance on the organizational roles of the new Risk Management Division and address inconsistencies we found between the current manual and current DOE practices, such as those for troubled loans. Regarding evaluation of the effectiveness of DOE's monitoring, DOE described several efforts for reviewing and monitoring the Loan Programs Office's portfolio. However, DOE did not indicate that it plans to prepare the required reports to evaluate the effectiveness of its loan monitoring.

We are sending copies of this report to the Secretary of Energy, the appropriate congressional committees, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions about this report, 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 report. GAO staff who made key contributions to this report are listed in appendix VI.

Frank Rusco

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Appendix I: Objectives, Scope, and Methodology

This appendix details the methods we used to examine the Department of Energy's (DOE) Loan Programs Office. The 2007 Revised Continuing Appropriations Resolution[1] mandates that GAO review DOE's execution of the Loan Guarantee Program (LGP) and report its findings to the House and Senate Committees on Appropriations. Because DOE is administering the LGP and Advanced Technology Vehicles Manufacturing (ATVM) loan program through one Loan Programs Office, we included both programs in this review. For this report, we assessed the extent to which DOE has developed and adhered to loan monitoring policies for its loan programs.

To assess the extent to which DOE has developed loan monitoring policies for its loan programs, we acquired and reviewed DOE's policy manuals and detailed procedures documents for implementing those policies, and we created a summary of 10 activities in DOE's monitoring process based on those manuals and procedures. DOE's manuals date from October 2011 for the LGP,[2] and November 2009 for the ATVM loan program.[3] In addition, as of April 2013, DOE had implemented 24 detailed procedures that provide more specific guidance for the monitoring activities we identified.[4] Functionally, DOE's monitoring activities for the LGP and ATVM loan program are substantially the same because their policy manuals require similar activities, use the same reports, and document results in the same management and reporting software.[5] As of

[1]Pub. L. No. 110-5 §20320(c) (Feb. 15, 2007).

[2]U.S. Department of Energy Loan Programs Office, Credit Policies and Procedures, Title XVII of the Energy Policy Act of 2005 (Washington, D.C.: Oct. 6, 2011).

[3]U.S. Department of Energy Advanced Technology Vehicles Manufacturing Program Office, Credit Policies and Procedures (Washington, D.C.: Nov. 23, 2009).

[4]For the purposes of this report, we distinguish between "policies" and "implementing procedures." In this report, "policies' refer to requirements in DOE's policy manuals for its LGP and ATVM loan program cited above. "Implementing procedures" refer to DOE's "work process documents," which provide requirements for the implementation of individual monitoring activities. As of August 2013, DOE had proposed 37 procedures describing its monitoring activities; of these, 25 have been written, approved, and implemented.

[5]DOE uses a web-based document management, content management, and reporting tool to manage its loan portfolio called "Quicksilver." DOE developed Quicksilver to help its monitoring staff ensure loan compliance and report on the progress of loans. DOE created and implemented Quicksilver in about October 2011. Because many of the loans guaranteed by DOE originated prior to this time, DOE staff worked to backfill information about these loans.

January 2014, DOE is drafting a new policy manual in order to reflect current practices and supersede the separate manuals for both programs. Moreover, we conducted semistructured interviews with DOE staff to ensure that our understanding of these policies and procedures was complete and accurate.

To assess the extent to which DOE adhered to its monitoring policies, we acquired and analyzed documentation from a nonprobability sample of 10 of the 36 loans and loan guarantees that had been made by March 2013, therefore, requiring monitoring.[6] The use of a nonprobability sample means that we are unable to generalize our findings to the loans and loan guarantees not in our sample, but we are able to make observations about DOE's monitoring activities for the diverse set of 10 loans and guarantees. The loans and loan guarantees were chosen to cover projects involving a range of technologies, construction statuses, credit watch list statuses, loan or guarantee amounts, dates of loan finalization, and amounts disbursed. We examined relevant project files, including disbursement records, plans for troubled loans, and credit reports. We requested all disbursement records and plans for managing troubled loans for the 10 sample loans. DOE began producing credit reports in August 2011, so we examined all credit reports for the 10 sample loans that were produced between August 2011, and May 2013, when we completed our data collection. We compared these files with selected DOE policies to determine where the guidance was followed and where it was not, as well as the level of consistency in monitoring across projects. We did not review all DOE policies, rather only those most directly associated with the 10 activities identified in our summary. In some cases, our review of documentation was limited by the fact that DOE's detailed procedures remained under development.

In addition, to provide context, we compared DOE's monitoring policies with those of private lenders. We conducted semistructured interviews with eight experts (four private lenders, three academic experts, and one industry expert) about private lender monitoring policies and compared the information they provided with DOE's policies and the 10 activities we identified. We selected a nonprobability sample of four private lenders financing similar projects to those in the LGP and ATVM loan program,

[6] At the time we finalized our sample in March 2013, DOE had issued 31 loan guarantees and 5 loans, respectively. This was prior to the recent issuance of 2 loan guarantees in February 2014.

using additional criteria such as the value of loans issued and number of loans issued. The use of a nonprobability sample in this case means that we are unable to generalize the information they provided to the private lenders not in our sample, but we are able to make observations about how DOE's polices compare with those lenders' descriptions of their own and industry-wide practices. Our primary source in identifying lenders was a search of the lenders most active in financing large innovative energy and advanced vehicle projects in the Bloomberg New Energy Finance database. We discussed general policies and practices with these private lenders because they were unable to share specific written policies and procedures. We identified academic experts through a literature search of relevant academic articles on project finance loan monitoring practices and the financing of innovative energy technologies, and we then contacted the most frequently cited academics. In addition, we reviewed a study conducted by KPMG on behalf of the Export-Import Bank of the United States, which compiled leading monitoring practices from institutions across a number of sectors, including 10 private lenders, as well as several export credit and government agencies. We then interviewed the study's author.

We conducted this performance audit from March 2013 to April 2014 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.

Appendix II: Summary of Monitoring Activities Identified in DOE Loan Programs Office Policies and Procedures

In order for us to compare the Department of Energy's (DOE) monitoring efforts to those of private lenders, we summarized and categorized DOE's monitoring into 10 activities based on DOE policy and discussions with DOE officials (see table 1). Taken together, the 10 activities cover the full duration of the loan, from the time loans have been made, through disbursement of funds, construction of the project, and the operation of the project, until final repayment, which can be up to 3 decades in the future. Some of the monitoring activities we identified are to be done for every loan. For example, prior to disbursing loan payments, DOE policies require that staff perform several steps to review the financial health of the project and the borrower, such as checking borrower documentation, performing technical reviews of the health of the project, and obtaining supervisory approval prior to processing payment. During construction, DOE policy directs loan monitoring and technical staff to review project financial and technical documents to ensure that the project is progressing toward its construction goals. DOE policy for another activity we identified directs DOE staff to monitor and report on the financial health of the project and prepare reports about the project's financial information, among other things. Other monitoring activities are applied only if the internal or external risk to the financed project increases. Two of these 10 activities address this possibility: (1) assessing potential actions for loans with increasing risks and (2) managing troubled loans.[1] As part of managing troubled loans, DOE officials are to determine whether it is preferable to make changes in a troubled loan's structure, such as restructuring the project in a way that might reduce risk, or to seek an outside entity to purchase the loan and take on the risk, among other options.

To develop this summary of DOE's monitoring activities, we examined high-level DOE policy guidance—specifically DOE's October 2011 policy manual for its Loan Guarantee Program, its 2009 policy manual for its Advanced Technology Vehicles Manufacturing (ATVM) loan program, DOE's approved implementing procedure documents, and DOE loan monitoring documentation. In addition, we reviewed a draft policy manual intended to unify guidance for both loan programs (more detailed information about how we summarized these activities is available in app.

[1]For the purposes of this report, troubled loans are loans or guarantees that are at risk of defaulting on the terms of their loan agreement or loans or guarantees that have already defaulted.

I). Table 1 summarizes the 10 monitoring activities we identified that are described by DOE Loan Programs Office policies and procedures.

Table 1: Monitoring Activities for Loans and Loan Guarantees Made by the DOE Loan Programs Office

Monitoring activity	Description
Providing input at loan closing	At the time of loan negotiation and closing, staff from DOE's future monitoring team can provide review and input to the team that originates the loan to help establish the proper monitoring conditions in the loan agreement.
Transferring loan files from origination staff to monitoring staff	Official change of primary responsibility of loans and hand-off of documentation.
Monitoring loan disbursement during project construction	As funding is disbursed for project construction, DOE reviews whether the borrower has met the conditions in the loan agreement. Independent engineers and DOE staff engineers advise DOE's loan portfolio managers.
Monitoring and reporting on credit risk	As funds are disbursed, and throughout project construction and operation, DOE monitoring staff conduct a number of activities to monitor credit risk, such as reviewing project financial information and the collateral value of the project, preparing periodic credit risk reports, and evaluating the health of the project's current and future cash flows. These activities are documented over time.
Reviewing borrower requests for changes to the loan agreement and the need for administrative or material credit actions	DOE staff evaluate routine requests from the borrower to make changes to the loan agreement, such as changing reporting requirements, or changing project cost and schedule estimates. If there are changes in project risk, DOE may take certain actions, including credit watch actions, such as placing a company on a "watch list" of borrowers for which DOE upper management receives weekly status updates; administrative credit actions, defined as routine actions (e.g., consents to certain actions by a project company); and material credit actions, such as seeking additional collateral to offset loan risk.
Monitoring construction progress	DOE staff monitors construction activities against specific benchmarks established in the financing and project documents. Monitoring staff use the services of an independent engineer, as well as an in-house DOE technical review group, for monitoring cost and schedule performance during the project's construction phase.
Monitoring project operations	After construction is completed, DOE's monitoring activities shift to monitoring project operations. Operations monitoring largely includes the review of reports and other financial information submitted by the borrower.
Assessing potential actions for loans with increasing risks	If operating or financial difficulties are significant enough for the monitoring staff to consider that the project may become impaired, the DOE monitoring staff will decide whether the project remains viable but requires a modification of terms in order to continue to be performing. Under these circumstances, monitoring staff develop a restructuring or workout plan with the assistance of internal advisors (including industry experts), as well as external financial and legal advisors.
Managing troubled loans	A DOE function separate from the loan monitoring staff (Special Assets and Loan Administration) manages troubled assets and monitors transaction risk.
Evaluating and mitigating program-wide risk	Two separate DOE groups—the Risk Management Division and the Portfolio Management Division's Portfolio Review, Compliance, and Reporting Branch—review the DOE monitoring program's portfolio-level performance and risk, the adequacy of DOE's allocated credit subsidy, and the Loan Programs Office's effectiveness and compliance with its own procedures, among other things. This includes credit review, compliance, and reporting functions that were originally part of the Portfolio Management Division but were transferred to the Risk Management Division.

Source: GAO analysis of DOE data.

Appendix III: DOE Loan Guarantees and Loans as of March 2014

Dollars in millions

Program/borrower	Sector	Loan guarantee/ loan amount at closing	Closing date	Notes/status
LGP - Title XVII Section 1705				
1366 Technologies Inc.	Solar manufacturing	$143	9/8/11	
Abengoa Bioenergy Biomass of Kansas, LLC	Biomass	127	9/29/11	
Abound Manufacturing Solar, LLC	Solar manufacturing	370	12/9/10	Defaulted/bankrupt
AES ES Westover, LLC	Transmission	17	12/22/10	Withdrew prior to drawing funds
Agua Caliente Solar, LLC	Solar generation	967	8/5/11	
Arizona Solar One, LLC (aka Abengoa Solar, Inc; Solana)	Solar generation	1,359	12/20/10	
AV Solar Ranch 1, LLC	Solar generation	646	9/30/11	
Caithness Shepherds Flat[a]	Wind generation	1,314	12/16/10	
Cogentrix of Alamosa, LLC	Solar generation	89	9/9/11	
Desert Sunlight 250, LLC[a]	Solar generation	660	9/29/11	Part of overall Desert Sunlight project
Desert Sunlight 300, LLC[a]	Solar generation	801	9/29/11	Part of overall Desert Sunlight project
Genesis Solar, LLC[a]	Solar generation	852	8/26/11	
Granite Reliable Power, LLC[a]	Wind generation	169	9/23/11	
Great Basin Transmission South, LLC (aka SWIP/On Line)	Transmission	324	2/11/11	
High Plains Ranch II, LLC (aka Sunpower Corp CA Valley Solar Ranch)	Solar generation	1,189	9/30/11	
Kahuku Wind Power, LLC	Wind generation	117	7/26/10	
Mesquite Solar 1, LLC	Solar generation	330	9/28/11	
Mojave Solar LLC (aka Abengoa Solar Mojave)	Solar generation	1,124	9/23/11	
NGP Blue Mountain I, LLC[a]	Geothermal	99	9/3/10	
OFC 2, LLC (aka Ormat)[a]	Geothermal	350	9/23/11	
Poet Project Liberty, LLC	Biomass	103	9/23/11	Withdrew prior to drawing funds
Prosun Project Company, LLC (aka Project Amp/Photon)[a]	Solar generation	1,400	9/30/11	Deobligated prior to drawing funds
Record Hill Wind, LLC	Wind generation	102	8/15/11	
Solar Partners I (aka Brightsource Ivanpah II)	Solar generation	514	4/5/11	Part of overall Ivanpah project
Solar Partners II (aka Brightsource Ivanpah I)	Solar generation	486	4/2/11	Part of overall Ivanpah project

Dollars in millions				
Program/borrower	**Sector**	**Loan guarantee/ loan amount at closing**	**Closing date**	**Notes/status**
Solar Partners VIII (aka Brightsource Ivanpah III)	Solar generation	510	4/5/11	Part of overall Ivanpah project
Solopower, Inc.	Solar manufacturing	185	8/19/11	Deobligated prior to drawing funds
Solyndra, Inc.	Solar manufacturing	535	9/4/09	Defaulted/bankrupt
Stephentown Regulation Services, LLC (aka Beacon Power Corporation)	Energy storage	43	8/6/10	Defaulted/restructured - restructured guarantee is called Stephentown Spindle, LLC
Tonopah Solar Energy (aka Solar Reserve, LLC)	Solar generation	692	9/28/11	
USG Oregon, LLC	Geothermal	94	2/23/11	
Section 1705 subtotal		**$15,711**		
LGP - Title XVII Section 1703				
Georgia Power Company	Nuclear generation	$3,462	2/20/14	Part of overall Vogtle project
Oglethorpe Power Corporation	Nuclear generation	2,722	2/20/14	Part of overall Vogtle project
Section 1703 subtotal		**$ 6,184**		
LGP subtotal		**$ 21,895**		
Advanced Technology Vehicles Manufacturing (ATVM) loan program				
Fisker Automotive, Inc.	Automotive manufacturing	$ 529	4/22/10	Defaulted/auctioned (subsequently bankrupt)
Ford Motor Company	Automotive manufacturing	5,937	9/16/09	
Nissan North America, Inc.	Automotive manufacturing	1,448	1/28/10	
Tesla Motors, Inc.	Automotive manufacturing	465	1/20/10	Repaid in full
The Vehicle Production Group, LLC	Automotive manufacturing	50	3/10/11	Defaulted/auctioned (subsequently restructured by the purchaser)
ATVM subtotal		**$8,429**		
Total		**$30,323**		

Source: GAO analysis of DOE data.

Note: The loan amounts reflected above are those that appear in the Department of Energy's (DOE) accounting system. They include the full amount of the loans partially guaranteed through the Financial Institution Partnership Program (FIPP) and do not include capitalized interest. As such, the amounts and total for LGP Section 1705 above vary from those presented in GAO-12-157, table 9, which did not count the full loan amount for FIPP guarantees and did include capitalized interest.

[a]FIPP transaction. Under FIPP, project developers partnered with private lenders to apply to DOE for partial guarantees. In a FIPP financing DOE provided a guarantee for up to 80 percent of a loan. The lender applicants were required to hold at least 20 percent of the credit exposure for the project. The loan amount in the above table represents the full loan amount rather than the partial guarantee, per DOE's accounting system.

Appendix IV: Established DOE Loan Monitoring Policies Generally Align with Those of Private Lenders

In order to provide context and better understand the Department of Energy's (DOE) loan monitoring, we compared DOE policies with those of private lenders that finance large energy projects. We conducted semistructured interviews with eight experts about private lenders' monitoring policies and compared the results with DOE's policies and the 10 activities we identified. For more information on our methodology see appendix I.

For the activities in which DOE has established policies, those policies generally align with those of private lenders. More specifically, our discussions with experts and our review of DOE's policies indicate that DOE's general monitoring activities, frequency of monitoring, actions taken when risk appears to be increasing, and organizational structures were all generally similar to those of private lenders. For example, both DOE policies and private lenders described various monitoring activities to oversee borrowers including periodic reviews of borrower information, independent engineering reviews of projects' progress and expenditures, site visits to projects to monitor construction, and the tracking of borrowers' compliance with loan agreements. In one instance, DOE's monitoring policies appear more rigorous than many private lenders'. Specifically, both DOE's and private lenders' policies call for independent engineers for technical expertise and oversight, but DOE also has engineers on staff who oversee the independent engineers and advise DOE's loan portfolio managers.

While both DOE and private lenders were similar in having separate risk management functions, we could not directly compare DOE's reporting relationship for its Risk Management Division with that of the private sector because of the incomplete policies and evolving nature of the Risk Management Division, as well as differences between a private lender and a government agency—such as the structure of overall management and the greater diversity of missions assigned to DOE than to a bank.

Appendix V: Comments from the Department of Energy

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

Department of Energy
Washington, DC 20585

APR 18 2014

Mr. Frank Rusco
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street NW
Washington, D.C. 20548

Dear Mr. Rusco:

Thank you for the opportunity to comment on the Government Accountability Office's (GAO) draft report on the Department of Energy's (DOE or the Department) Loan Programs Office (LPO or the Program), *DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness*.

LPO employs a robust portfolio monitoring process that mitigates risk and protects taxpayers' interests. The effectiveness of our portfolio monitoring and risk management is illustrated by the overall health of our portfolio; our losses to date represent about 2 percent of the $35 billion portfolio of closed and committed loans and guarantees—and less than 10 percent of the roughly $10 billion in loan loss reserves that Congress set aside for the Program. In a past report, GAO noted that private sector lenders report that LPO's due diligence is as rigorous as, or more rigorous than, underwriting and due diligence standards in the private sector. (GAO 12-157 *DOE LOAN GUARANTEES: Further Actions Are Needed to Improve Tracking and Review of Applications,* March 2012)

GAO based its audit on policy manuals dated from 2009 and 2011. As the GAO's report notes, LPO is drafting new policies to reflect current practices. LPO's process documents are continually being reviewed and updated to reflect industry best practices, lessons learned, and new approaches necessitated by the uniqueness of the LPO portfolio. LPO has significantly increased its monitoring staff since 2011 and continues to recruit and hire qualified managers and staff for both the portfolio monitoring and risk management functions.

LPO's oversight framework has structured independence with each division having well defined roles and accountability. LPO's portfolio monitoring and risk management functions work together to monitor, evaluate, and audit performance in managing default, technical, and legal risks inherent in closed loans. Risk management is also responsible for compliance, including internal controls, regulatory compliance, self-assessments, and surveys, and liaising with internal and external auditors and investigators. LPO started planning its credit review, compliance and reporting functions in 2011 and has been performing credit reviews and reporting since 2012. Any administrative delays in documenting the draft policies and procedures have not adversely affected the operation of LPO's risk management function.

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Although we generally agree with the GAO's overall recommendations and agree that improvements can and will continue to be made, we disagree with some of the statements in the draft report.

See comment 1.

LPO Disbursement Monitoring is Fully Developed

The Program has vigorous procedures in place for disbursements, and at no time has a disbursement been made without confirming that all required conditions have been satisfied and obtaining all necessary internal approvals.

See comment 2.

LPO Prepares Required Credit Reports

The Program's 2011 policy manual requires the portfolio monitoring division to prepare a periodic loan review report for each project at least annually. Since the issuance of the 2011 policy manual and implementation of management and reporting software, LPO has prepared and submitted quarterly or semi-annual credit reports in addition to annual credit reports for every project in our loan portfolio.

Credit reports are not the only tool in determining borrower health and capacity to repay the DOE-supported loan. The other tools—which include the monthly reviews during construction; engagement with project management and sponsors; communication with internal and external subject matter experts; and access to and review of market data from external sources—provide the opportunity to identify signs of increased risk and develop and implement corrective action. LPO also has industry-standard procedures in place to assess the status of loans and determine if corrective actions are needed.

See comment 3.

DOE Prepares Plans for Troubled Loans

LPO has documented policies and processes for monitoring and managing troubled loans which involve preparing internal analyses, discussions and presentations—including the involvement of expert bankruptcy and financial advisors and oversight and monitoring by LPO and DOE senior management. LPO prepared comprehensive analyses and presentations which served as workout plans for the two loans mentioned by GAO. Consolidation of these analyses and presentations into a single document would not have changed the overall effectiveness of the workout plans. The dynamic nature of distressed asset management frequently calls for flexibility in workout plans as staff and experts seek to effectively respond to changing variables.

See comment 4.

DOE Can Assess the Adequacy of Monitoring and Risk Mitigation Efforts

After transitioning LPO's credit review function to the risk management division, LPO's credit review team performed 15 independent credit reviews in fiscal year 2013 for priority transactions. This year, the risk management organization will complete their annual review of the entire portfolio including revisiting transactions reviewed in 2013 as well as all newly funded transactions.

2

In 2012, LPO initiated a risk identification process under OMB Circular A-123*, Management's Responsibility for Internal Control*, which resulted in the performance of compliance reviews to assess and verify that identified risk areas had sufficient internal controls in place to mitigate those risks. These compliance reviews have been performed annually since 2012. The portfolio monitoring function has also conducted internal compliance assessments of its key processes since early 2013. To date, they have conducted over 60 internal compliance assessments.

LPO has prepared an internal watch list since the end of 2011. Specific projects may be placed on this internal list if deviations from expected performance trends are cited during regular monitoring activities for potential impact upon DOE's risk. The list acts as one early warning tool for increased monitoring of project issues and borrowers so that the proper management actions can be taken.

LPO will continue its ongoing efforts to recruit and expand its staff for both the portfolio monitoring and risk management functions, complete its second generation management and reporting software and memorialize, update and upgrade several operating procedures. LPO will also continue to evaluate the effectiveness of the monitoring process as well as all other processes throughout the Program. For further discussion of our responses to the recommendations please see Appendix 1, and separate technical and factual comments are attached as Appendix 2 hereto.

The Department's Loan Programs Office is supporting a broad portfolio of innovative technologies helping to accelerate America's transition to a clean energy future. In doing so, the Department remains intently focused on serving as a steward of taxpayer dollars while investing in the technologies that will power the 21st century.

Sincerely,

for April Stephenson

Peter W. Davidson
Executive Director
Loan Programs Office

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Appendix 1

GAO-14-367 DOE LOAN PROGRAMS: DOE Should Fully Develop Its Loan Monitoring Function and Evaluate Its Effectiveness

Response to GAO Recommendations

GAO Recommendation 1(a): Staffing key monitoring positions

DOE Response:
LPO agrees with this recommendation and continues to recruit and hire qualified managers and staff for both the portfolio monitoring and risk management functions. Both divisions will continue to utilize federal employees and contractors to maintain and/or increase current staffing levels in key monitoring and risk management positions. As of January 31, 2014, portfolio monitoring includes 42 full-time employees, with four supervisory loan specialists supervising nine portfolio managers and nine loan specialists and analysts. Since August 2011, portfolio monitoring has expanded by 33 full-time employees while risk management has hired eight full-time employees plus additional contractor support.

GAO Recommendation 1(b): Updating management and reporting software

DOE Response:
LPO agrees with this recommendation and continues to develop and test the second generation of *QuickSilver*, the Program's workflow management system. This updated version of *QuickSilver* will provide (among other features) an improved overall user interface/experience, better organized information, an enhanced portfolio monitoring platform, improved usability and functionality, improved application and database architecture and increased flexibility to meet new LPO requirements and changing demands. Implementation of the second generation of *QuickSilver* is currently scheduled by the end of the first quarter of calendar 2015.

LPO is also continuing to develop and implement the Management Information and Reporting System (MIRS), our reporting software for "real-time" program analysis, decision-making, and resource allocation. When complete, MIRS will provide a comprehensive information reporting system that provides timely and accurate portfolio quality and status information to LPO and DOE management. MIRS will better aggregate data and, with real-time and historic data accessibility, promote quicker and more effective decision-making by leadership. Current plans are to have MIRS (Phase 3) operational by the end of the third quarter of calendar 2014.

GAO Recommendation 1(c): Completing policies and procedures for loan monitoring and risk management

DOE Response:
LPO agrees with this recommendation and will continue to prepare and issue portfolio monitoring and risk management procedures and guidelines related to loan monitoring and identifying, evaluating and mitigating program-wide risk. Currently in place are 33 portfolio

1

Appendix 1

monitoring procedures, including those related to the identification and monitoring of assets exhibiting signs of distress, the involvement of a risk and portfolio management committee in the oversight of troubled assets, the transfer of troubled assets to the special assets team and engagement with external financial and legal advisers and other government agencies as warranted. The process documents are constantly being reviewed and updated to reflect best practices, lessons learned and new processes necessitated by the uniqueness of the LPO portfolio. LPO has targeted completion and approval of the key portfolio monitoring procedures by the end of the third calendar quarter 2014.

<u>GAO Recommendation 2</u>: 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.

<u>DOE Response</u>:
LPO agrees with this recommendation and will continue to evaluate the effectiveness of the monitoring process as well as all other processes throughout the Program. By their nature, the evaluation of the effectiveness of portfolio monitoring and the performance of credit review, compliance and reporting functions are ongoing. Specifically for the credit review, compliance, and reporting functions, the following work has already been performed or is in process:

- **Credit Reviews** – While still working under the portfolio monitoring function, the credit review team developed and tested the credit review process in 2012. After transitioning the credit review function to risk management, the credit review team officially delivered 15 independent credit reviews to portfolio monitoring in fiscal year 2013 for priority transactions, with the risk ratings of the risk management function being reconciled with the ratings of the portfolio managers and utilized as the input to the annual credit subsidy re-estimate process. Risk management will be completing their annual review of the entire portfolio, including revisiting the transactions reviewed in 2013 as well as all newly funded transactions by June 30, 2014 in advance of the re-estimate process for fiscal year 2014.
- **Compliance Reviews** – In 2012, LPO initiated a risk identification and internal control review process using guidelines in OMB Circular A-123 which resulted in the performance of compliance reviews to assess and verify that identified risk areas had sufficient internal controls in place to mitigate those risks. These compliance reviews have continued through 2013 and are currently being performed for 2014. Portfolio monitoring personnel have also conducted internal compliance assessments of their key processes since early 2013. To date, portfolio monitoring has conducted over 60 internal compliance assessments.
- **Reporting** – The LPO has prepared an internal watch list since the end of 2011. Projects may be placed on the watch list in the event that portfolio monitoring personnel conclude, in the course of their monitoring activities, that a deviation from an expected project performance trend will impact DOE's risk. The watch list acts as one early warning tool for increased monitoring of project issues and borrowers.

2

GAO Comments

The following are GAO's comments on the letter from the Department of Energy dated April 18, 2014.

1. DOE states that its disbursement monitoring is fully developed and that DOE has not made disbursements without confirming that all required conditions have been satisfied and obtaining all necessary internal approvals. We found that DOE generally adhered to its policies related to disbursements, documenting analyses, and recording approvals, as we report on page 10. However, as we point out in the report, other aspects of DOE's loan monitoring were still under development while DOE was disbursing funds.
2. DOE states that its 2011 policy manual requires the agency to prepare loan review reports for each project, at least annually, and that the agency has prepared quarterly, semiannual, and annual reports for all projects since the 2011 manual was issued. The manual in effect prior to 2011 also required periodic credit reports, so we looked for all reports prepared for the 10 loans in our sample. As we report, DOE did not start preparing any periodic credit reports until 2011, and 24 of 88 required periodic credit reports were missing for the 10 loans. Of these missing reports, 4 were due after the 2011 policy manual was issued.

   DOE also states that credit reports are not the only tool in determining borrower health and capacity to repay the DOE-supported loan. We agree that credit reports are not the only tool, but DOE's policy manual indicates their importance. Specifically, it states that reports will enhance the credit monitoring process by providing (1) an early warning signal of potential credit issues, (2) a basis for potential loan restructuring, (3) a basis for reassessing credit risk, and (4) an information source for inquiries.
3. DOE states that it prepared comprehensive analyses and presentations that served as workout plans for the two loans mentioned by GAO and that consolidation of these analyses and presentations into a single document would not have changed the overall effectiveness of the workout plans. We did not evaluate whether this approach was more or less effective than the stated approach in DOE's policies, which call for a formal workout action plan that must be approved by management. As we note in our report, DOE did not follow its policies in that area. We also note DOE's statements that they are revising the policy manual to better comport with best practices in this field and that DOE has been operating under draft implementing procedures since June 2012. The mismatch

between DOE's written policies and its actual practices highlights the importance of our recommendation for DOE to complete its policies and procedures.

4. DOE describes several actions it has taken and has under way for reviewing and monitoring the Loan Programs Office's portfolio. We note in the report that DOE has conducted some internal assessments and begun portfolio-wide reporting on risks, but that DOE was not adhering to its policies for evaluating the effectiveness of its loan monitoring. Specifically, DOE's 2011 policy manual requires "a formal Credit Review and Compliance report" to be issued quarterly, but DOE officials told us that none had been produced, again underscoring the importance of our recommendation in this area.

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

Frank Rusco, (202) 512-3841 or ruscof@gao.gov

Staff Acknowledgments

In addition to the individual named above, Karla Springer, Assistant Director; Marcia Carlsen; Lee Carroll; Cindy Gilbert; Ryan Gottschall; Armetha Liles; Eric Miller; Cynthia Norris; Madhav Panwar; Lindsay Read; Barbara Timmerman; Jarrod West; and Steve Westley made key contributions to this report.

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