



U.S. Department of Energy  
Office of Inspector General  
Office of Audits and Inspections

# Audit Report

The Department of Energy's \$700 Million Smart Grid Demonstration Program Funded through the American Recovery and Reinvestment Act of 2009



OAS-RA-13-08


January 2013



**Department of Energy**  
Washington, DC 20585

January 17, 2013

MEMORANDUM FOR THE SECRETARY

FROM:   
Gregory H. Friedman  
Inspector General

SUBJECT: INFORMATION: Audit Report on "The Department of Energy's \$700 Million Smart Grid Demonstration Program Funded through the American Recovery and Reinvestment Act of 2009"

INTRODUCTION AND OBJECTIVE

The Department of Energy's Office of Electricity Delivery and Energy Reliability received about \$4.5 billion under the American Recovery and Reinvestment Act of 2009 to enhance the reliability and resilience of the Nation's power grid, or nearly 33 times the amount appropriated in Fiscal Year 2009. Of the amount awarded, the Department allocated nearly \$700 million to the Smart Grid Demonstration Program (Program) to fund 32 regional demonstrations and energy storage projects. The Program also provided supplemental Recovery Act funding to 10 existing Department projects for renewable and distributed systems integration and high temperature superconductivity. The projects were intended to demonstrate and further the advancement of the "smart grid," promoting innovative grid technologies. The Department awarded Recovery Act funding through cooperative agreements to both for-profit and non-profit entities.

Because of the dramatic increase in funding and the national importance of modernizing the Nation's power grid, we initiated this audit to determine whether the Program had been properly managed. This audit report is the second in a series of reports on the Department's Smart Grid efforts. Our January 2012 report, *The Department's Management of the Smart Grid Investment Grant Program* (OAS-RA-12-04, January 2012), on a separate Smart Grid grant program, identified several opportunities to enhance the management of the Department's Smart Grid efforts. Specifically, the audit identified weaknesses in financial management and incomplete and insufficient cyber security plans, potentially jeopardizing achievement of Recovery Act goals.

RESULTS OF AUDIT

We found the Department had not always managed the Program effectively and efficiently. Our review of 11 projects, awarded \$279 million in Recovery Act funding and \$10 million in non-Recovery Act funding, identified weaknesses in reimbursement requests, cost-share contributions, and coordination efforts with another Department program. These issues resulted in about \$12.3 million in questioned costs.

Specifically, the Department had:

- Approved reimbursements totaling about \$12.3 million that lacked supporting documentation necessary to verify that costs were incurred and were reasonable. Contrary to award terms and conditions, the Department reimbursed two recipients for claims based on estimated rather than actual costs, resulting in overpayments of approximately \$9.9 million. A third recipient received nearly \$2.4 million without providing adequate supporting documentation. In fact, the recipient had not begun manufacturing the energy storage units called for by the award.
- Not always ensured recipients contributed their agreed-upon share of project costs. For example, the Department erroneously approved one recipient's plan to use about \$28 million in expected proceeds from the sale of an energy storage unit manufactured in part with Federal funds and previous recipient contributions to meet its overall \$32.7 million cost-share requirement. Federal regulations specifically prohibit using Federal funds and previous recipient contributions toward meeting cost-share requirements.
- Awarded a recipient \$14 million for a project even though the recipient had received \$2 million under the Advanced Research Projects Agency – Energy (ARPA-E) Program for similar work. In fact, the recipient, unknown to the Department until our audit, had reported the same accomplishments under both awards.

Although the Program had established procedures over financial reviews of projects, the problems we identified occurred, in part, because it had not adequately reviewed financial transactions and planned for or monitored recipient cost-share provisions.

After being presented with the results of our audit, the Department initiated actions to resolve the \$12.3 million in questioned costs we discovered. Specifically, Department officials reported that one recipient was making adjustments to address issues with reimbursements made based on estimated versus actual costs. Additionally, the Department was taking action to resolve unsupported costs and the associated cost-share contributions, including requiring payment of corresponding interest owed. The Department also stated one recipient had returned funds improperly claimed for incomplete energy storage units. Furthermore, ARPA-E officials required the recipient with potentially overlapping projects to differentiate specific accomplishments and informed us they would take proactive measures to eliminate any potential overlap, or the appearance thereof, between the ARPA-E and Smart Grid Demonstration projects.

Given the infusion of Recovery Act funding, the Program has a unique opportunity to improve the Nation's power grid. In total, we questioned about \$12.3 million in costs claimed by recipients. In the absence of significant improvements, the Program is at risk of not meeting its objectives and has an increased risk of fraud, waste and abuse. Accordingly, we made recommendations to the Department to improve the management of the Program.

## MANAGEMENT REACTION

Management concurred with the report's recommendations and indicated that corrective actions have been or would be initiated. However, management expressed concerns with several conclusions in our report. Management's comments and our responses to its concerns are summarized in the body of our report. Management's comments are included in their entirety in Appendix 3.

Attachment

cc: Deputy Secretary  
Associate Deputy Secretary  
Acting Under Secretary of Energy  
Assistant Secretary for Electricity Delivery and Energy Reliability  
Chief of Staff

**REPORT ON THE DEPARTMENT OF ENERGY'S \$700 MILLION SMART GRID DEMONSTRATION PROGRAM FUNDED THROUGH THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009**

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# THE DEPARTMENT OF ENERGY'S \$700 MILLION SMART GRID DEMONSTRATION PROGRAM FUNDED THROUGH THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

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## Smart Grid Demonstration Program

The Smart Grid Demonstration Program (Program) was authorized by the *Energy Independence and Security Act of 2007* and amended by the American Recovery and Reinvestment Act of 2009 (Recovery Act). The Program's goal is to demonstrate and further the advancement of the "smart grid," which generally refers to a class of technologies designed to enhance power grid operations. Under the Recovery Act, the Department of Energy (Department) allocated about \$700 million to fund 42 cooperative agreements with for-profit and non-profit entities to demonstrate such technologies as energy storage systems and advanced metering infrastructure. Of the 42 projects, 10 had been awarded partial funding prior to the Recovery Act.

Our audit examined the Department's management of 11 projects for which 9 recipients received Federal funds. The Department awarded these projects about \$279 million, or about 40 percent of the Program's Recovery Act funding, and an additional \$10 million in non-Recovery Act funding. We found the Department had not always managed the Program efficiently and effectively. Specifically, we identified reimbursements that were not adequately supported, problems with cost-share contributions, and funding made to potentially overlapping projects.

### Reimbursements

Three of the nine recipients we reviewed had claimed, and the Department approved, requests for reimbursement that lacked supporting documentation that costs had been incurred by the recipients or were reasonable. Regulations require costs incurred to be reasonable and documented. Award terms and conditions also require recipients to claim only costs actually incurred. Notwithstanding these requirements, the Department had approved questionable reimbursements. For example:

- One recipient was reimbursed about \$7.3 million more than allowed by the terms and conditions of the award. After reviewing the recipient's records, we identified an approximate \$7.3 million difference between reimbursements requested and actual expenditures by the recipient. Contrary to the requirements, representatives of the recipient informed us they had based their monthly claims on both actual and estimated expenses and had not subsequently reconciled estimates to actual. Further, representatives told us that the discrepancy we identified included a combination of costs invoiced by subcontractors

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that had not yet been paid and costs reported as incurred by subcontractors that had not yet been invoiced to the recipient. As a result of our audit, the Department stated the recipient was making the appropriate monthly adjustments to balance reimbursements with actual costs. By the completion of our report, \$4.9 million had been addressed and the remaining \$2.4 million was to be addressed by June 2013.

- Another recipient was reimbursed about \$2.6 million over the amount allowed for two projects. The recipient had also based its reimbursement requests on estimated, rather than actual costs, and had consistently over-billed the Department for costs incurred. As a result of our audit, the recipient provided the Department with a reconciliation dating back to the inception of its two projects funded by the Department, both awarded prior to the Recovery Act and supplemented with Recovery Act funding. The reconciliation revealed about \$2.6 million in erroneous reimbursement claims to the Department, as well as a misreporting of an additional \$2.6 million in the recipient's cost-share. In addition to taking action on the costs and cost-share erroneously claimed, the Department requested the recipient pay about \$110,000 in interest owed on the overpaid amounts.
- A third recipient was reimbursed about \$2.4 million for energy storage units not yet manufactured and the reimbursement requests lacked supporting documentation of incurred costs. Despite project costs totaling about \$4 million, including cost-share, the recipient had identified reliability and performance problems with the proposed technology, and stopped production at the facility before manufacturing the specific units for this project. Because the entire project revolved around manufacturing and demonstrating the units, which had not begun, we were concerned that the Department reimbursed about \$2.4 million in Federal funds and approved an additional \$1.6 million in cost-share claims for this project. Additionally, although the Department concluded the company's estimated costs were "reasonable" during negotiations, in our view, the Department had mistakenly agreed to reimburse the recipient based on the commercial price of units, rather than actual production costs, and had not tracked actual expenses. Further, the recipient, despite the lack of production, continued to charge the Department for other project costs. In response to our findings,

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Department officials stated they were aware the manufacturing of the units had not begun. However, according to Department officials, the recipient had since paid back about \$1.7 million for the energy storage units. For the remaining \$700,000 we questioned, Department officials stated detailed documentation was provided and reviewed for invoiced costs. Based on that review, the Department concluded that the remaining costs were reasonable and allowable.

The reimbursement issues we identified occurred for a number of reasons. Based on our discussions with recipients, we concluded that they had misunderstood the terms and conditions of their agreements regarding requesting reimbursement. Although the Program had established procedures over financial oversight of projects, we also found the financial oversight insufficient to ensure the accuracy and integrity of amounts paid. Specifically, for two of the recipients, Department officials were unaware reimbursement requests were based on estimates because they had not always obtained and reviewed invoices.

After being presented with the results of our audit, the Department told us that it had initiated action to resolve all of the \$12.3 million in questioned costs. As of the date of our report, the Department had recovered about \$6.6 million and planned to recover an additional \$5 million for payments made to recipients. For the remaining \$700,000, as noted above, the Department determined the amounts to be reasonable and allowable.

#### Cost-Share Contributions

Recipients had not always contributed their cost-share as required by Federal laws, regulations and agreements with the Department. Cost-share contributions are important to ensure recipients are fully invested in the success of their projects and Federal funds are leveraged to the maximum extent practicable. Section 988 of the *Energy Policy Act of 2005* requires recipients participating in demonstration activities funded by the Department to contribute at least 50 percent of total project costs from non-Federal sources. However, we found the Department:

- Approved a recipient's plan to use about \$28 million in expected proceeds from the sale of an energy storage unit manufactured in part with Federal funds and previous recipient contributions to meet its overall \$32.7 million cost-share requirement. In its cost-share plan, the recipient



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had included the sales proceeds of the unit and had not removed the Federal funds and previously claimed cost-share contributions from the calculation. Federal regulations specifically prohibit using Federal funds and previous recipient contributions toward meeting cost-share requirements. In response to our concerns, Department officials stated the recipient does not currently have a sales contract in place and the Department will closely monitor the transaction. However, because the expected proceeds account for such a large percentage of the total amount to be contributed, it is imperative the Department address the concerns before the end of the project. Department officials stated they would ensure the recipient understands that only the proceeds from the sale of the storage unit less the costs to fabricate/manufacture the unit can be recognized as cost-share and noted they are actively working with the recipient to address the cost-share concerns. However, this stipulation had yet to be defined in the agreement as of the completion of our review.

Near the end of our audit, the recipient requested that the Department accelerate Federal funding of the project due to financial difficulties and to avoid additional layoffs after a 33 percent staff reduction. In approving the accelerated funding, Department officials noted the action increased the likelihood that the project would be completed successfully. However, we noted that under the approved accelerated spending plan, Federal funds would, in fact, be exhausted before the technology is tested or demonstrated; thus, increasing the risk to the Department. According to Department officials, performance tests are scheduled for the first quarter of 2013, and the recipient was current in its cost-share contributions.

- Had not ensured that a recipient contributed the cost-share required by the terms and conditions of its cooperative agreement. The terms and conditions on the award included a specific schedule the recipient was to adhere to for the duration of the project for cost-share contributions. The agreement required the recipient to contribute 34 percent of costs incurred during the first phase of the project — ending May 2011; however, as of September 2011, the recipient had only contributed about \$413,000 of the over \$2.4 million in total project costs, or about 17 percent. Under the agreement, the recipient was expected to increase its cost-share in later phases of the project to

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reach an overall cost-share of 52 percent. While the Department agreed to pay a higher percentage in the initial phase of the project, the recipient's failure to meet the existing lower cost-share expectations raised concern about its ability to meet the higher cost-share in later phases. Department officials also stated that because the project was significantly delayed, they had not expected the recipient to contribute at the level required in the award (58 percent for the period May 2011 – 2012 and 81 percent for May 2012 – 2013). However, officials had not modified the award to specify revised contribution expectations and to ensure that the recipient eventually contributes the total amount required. Department officials stated that the recipient, as of the issuance of our draft report, had subsequently exceeded the required contribution level at the current stage of the project. We did not verify this information.

Cost-share issues occurred because the Department had not adequately planned for, monitored or enforced cost-share provisions. For example, although Department officials were aware of the insufficient contributions of one recipient, they had neither modified the award to ensure the recipient ultimately contributed half of the funding, nor taken action to limit spending until the recipient could provide assurance of its ability to meet cost-share requirements.

#### Potential Overlapping Efforts

We found the Department had provided a recipient about \$14 million under the Program and \$2 million under the Advanced Research Projects Agency-Energy (ARPA-E) Grid-Scale Rampable Intermittent Dispatchable Storage Program for similar work. When initially awarded, Program funding supported the development of an energy storage unit that included the testing of materials for a carbon electrode component of the unit. Subsequently, the recipient changed its approach to develop a "metal electrode," a technology the recipient had received funding separately from ARPA-E to develop. After the change in approach, Department officials never revisited the level of funding being provided to the Smart Grid project in light of related funding provided to this recipient from ARPA-E. Further, although funding was awarded under the premise that the projects were different, we found numerous progress reports from the recipient that identified the same accomplishments for both projects.

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Even though both Smart Grid and ARPA-E officials were aware the recipient had received funding for potentially overlapping projects, they had not coordinated their oversight activities. We did not identify in our limited test work any evidence the recipient had charged both projects for the same expenses. However, we remain concerned about the potential overlap between the projects. As a result of our audit, ARPA-E officials required the recipient to differentiate specific accomplishments and informed us they would take proactive measures to eliminate any potential overlap, or the appearance thereof, between the ARPA-E and Smart Grid Demonstration projects. Office of Electricity Delivery and Energy Reliability officials stated the technical project officer would schedule semi-annual discussions with the ARPA-E technical project officer, continue to monitor the project, and coordinate as needed with ARPA-E officials.

## **RECOMMENDATIONS**

In total, we identified about \$12.3 million in questioned costs. Without improvements in project management, the success of the efforts awarded under the Recovery Act is ultimately at risk. The lack of financial and project oversight increases the risk that fraud, waste, and abuse can occur without detection. Further, the failure of recipients to comply with their agreed-upon cost-share contributions increased the risks associated with these projects.

Given the significant amount of funding remaining to be spent and the issues found during our audit, the Department has an opportunity to modify its monitoring efforts, and thereby, increase the likelihood of successful outcomes for these projects. To help achieve the objectives of the Program and the Recovery Act, we recommend that the Assistant Secretary for Electricity Delivery and Energy Reliability direct Program officials to:

1. Ensure adequate review of payments made to recipients;
2. Provide training to recipients on proper submission of reimbursement packages;
3. Ensure that recipients contribute their required cost-share from allowable sources; and,
4. Ensure the elimination of any potential overlapping funding among awards authorized by various Department programs.

Additionally, we recommend that the contracting officers for the Program:

5. Resolve the questioned amounts in our report.

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**MANAGEMENT  
REACTION AND  
AUDITOR COMMENTS**

Management concurred with the report's recommendations and indicated that corrective actions have been or would be initiated. Management stated annual invoice training will be completed and the submission of invoices would be a specific agenda topic for project kick-off meetings. Management also noted that a program-wide review of cost-share for the Program will be completed and the technical project officers for the Program and ARPA-E would increase coordination. For the questioned costs, management concurred with the recommendation and as noted in our report, had initiated several actions to address the \$12.3 million in questioned costs.

However, management expressed concern with several statements included in our finding about payments for energy storage units. Specifically, management did not concur that it had mistakenly agreed to reimburse the recipient based on the commercial price of the energy storage units or that it was unaware the recipient had not begun manufacturing the units. Management stated that it maintained frequent contact with the recipient and had been continually aware of the project's progress.

Management's comments and planned corrective actions are responsive to our recommendations. Based on the actions taken by management, we made changes to the report in addition to Recommendation 5 to reflect the response and actions taken. Further, in our finding on energy storage units, we clarified that the Department was aware that the recipient had not begun manufacturing. However, we disagree that the Department had not mistakenly agreed to reimburse the recipient based on the commercial price of the units. Under the terms and conditions of the award, the recipient was to be reimbursed for only costs actually incurred. The Department paid the recipient based on the commercial price of the unit without verifying that actual costs had been incurred or that the recipient had provided supporting documentation to verify allowability and reasonableness of reimbursements. The fact that the recipient had not manufactured the units and was reimbursed for almost 2 years before the Department received repayment of the \$1.7 million, reaffirms our position that the Department mistakenly agreed to reimburse the recipient.

Management's comments are included in their entirety in Appendix 3.

## Appendix 1

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**OBJECTIVE** The objective of this audit was to determine whether the Smart Grid Demonstration Program (Program) funded through the American Recovery and Reinvestment Act of 2009 (Recovery Act) had been properly managed.

**SCOPE** This audit was performed between April 2011 and January 2013, at the Department of Energy's (Department) Headquarters in Washington, DC, and the National Energy Technology Laboratory (NETL) in Morgantown, West Virginia and Pittsburgh, Pennsylvania. In addition, we conducted site visits on 11 projects with 9 recipients.

**METHODOLOGY** To accomplish the objective, we:

- Obtained and reviewed relevant laws and regulations related to implementation of the Recovery Act and financial assistance awards administration;
- Reviewed the Funding Opportunity Announcement, merit review information and selection documentation;
- Conducted site visits to nine recipients to observe assets purchased and future sites of projects, interviewed officials and analyzed financial transactions and implementation of financial assistance requirements as prescribed by the terms and conditions of the awards;
- Reviewed invoices submitted for reimbursements and conducted onsite testing of books and records with each recipient;
- Obtained access to the Department's Strategic Integrated Procurement Enterprise System and reviewed individual award files for the 11 projects;
- Interviewed project officers and contracting personnel for each of the nine recipient's awards; and,
- Conducted interviews and meetings with Department Program officials.

We conducted this performance audit 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 the evidence obtained provides a reasonable basis for our findings and

## Appendix 1 (continued)

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conclusions based on our audit objectives. Accordingly, we assessed significant internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. In particular, we assessed the Department's implementation of the *GPRA Modernization Act of 2010* and determined that it had established performance measures for the management of the Program. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. Finally, we conducted an assessment of computer-processed data relevant to our audit objective and found it to be reliable.

An exit conference was held with the Department on January 16, 2013.

### **PRIOR REPORT**

- Audit Report on [\*The Department's Management of the Smart Grid Investment Grant Program\*](#) (OAS-RA-12-04, January 2012). The audit revealed several opportunities to enhance management of the Smart Grid Investment Grant Program. Specifically, although prohibited by Federal regulations, Department of Energy officials approved one grantee's use of \$1.8 million in Federally-sourced funds to meet its cost-share obligation. In addition, the audit revealed that one recipient was reimbursed twice, in the amount of \$300,000, for transportation costs. Further, three of the five recipient cyber security plans reviewed were incomplete, and did not always sufficiently describe security controls and how they were implemented. Because the audit found that the cumulative effect of these issues could potentially jeopardize the goals of the Smart Grid Investment Grant Program, four recommendations were made.

**MANAGEMENT COMMENTS**



**Department of Energy**  
Washington, DC 20585

December 20, 2012

MEMORANDUM FOR RICKEY R. HASS  
DEPUTY INSPECTOR GENERAL  
FOR AUDITS AND INSPECTIONS

FROM: PATRICIA A. HOFFMAN <sup>PH</sup>  
ASSISTANT SECRETARY  
ELECTRICITY DELIVERY AND ENERGY RELIABILITY

SUBJECT: Response to Office of Inspector General's (IG) Draft Audit  
Report "The Department of Energy's Smart Grid Demonstration  
Program Funded through the American Recovery and  
Reinvestment Act of 2009"

The Office of Electricity Delivery and Energy Reliability (OE) appreciates the opportunity to respond to the Office of Inspector General's (IG) Draft Audit Report "The Department of Energy's Smart Grid Demonstration Program Funded through the American Recovery and Reinvestment Act of 2009."

Under the Smart Grid Demonstration Program (SGDP), OE manages \$1.75 billion of taxpayer and private funds. OE takes the responsibility of managing each of the 32 SGDP and 10 renewable and distributed systems integration and high temperature superconductivity projects very seriously to ensure that funds are being spent properly and that they are accomplishing their intended purpose and objectives.

OE understands that such a large, important, and complex program requires a level of monitoring and oversight that is much higher than normally applied in typical programs. In fact, OE's management processes and procedures for the SGDP program go well beyond Federal, Department of Energy (DOE) and National Energy Technology Laboratory (NETL) standard project management practices and include specific requirements to help ensure that recipients deliver the intended results in a timely and cost-effective manner and with reduced risks for U.S. taxpayers.

Examples of this increased oversight are:

- OE requested and received Office of Management and Budget (OMB) approval of monthly versus quarterly progress reports to ensure problems can be identified early.
- NETL developed a SGDP Project Monitoring Plan (Revision 2 dated March 26, 2012) which includes the following





- Technical Project Officer (TPO) Desktop Monitoring Checklist: to be completed on review of each monthly report
- TPO On-site Monitoring Checklist: to be completed during site visits. The checklist contains 49 questions dealing with, among other things, Davis-Bacon Act requirements, payroll records, equipment/property, personnel and technical progress
- Invoice Review Checklist, based on the annual training, to ensure TPOs are reviewing all aspects of the invoice.
- Initiated a program in which TPOs have been offered, at a minimum, 32 hours of on-site training and seminars in advanced electrical power systems. These have been provided by such organizations as Western Area Power Administration (WAPA), Schweitzer Engineering Laboratories (SEL) and the Power Systems Engineering Research Center (PSERC).

In addition, all SGDP TPOs are Contracting Officer Representative (COR) and TPO Level I certified and Contract Specialists (CS) are certified at Level II for acquisition and Level I for financial assistance.

OE's responses to the five recommendations in the Audit Report are listed below. In addition, OE is including Attachment 1, which contains supplementary information and raises specific concerns with some of the Audit Report's findings and conclusions.

**Recommendation 1:** Ensure adequate review of payments made to recipients

**Response:**

OE concurs that, at a minimum, adequate review of payments made to SGDP recipients is important. Additionally, OE believes the current review process for payments made to recipients is sound and is significantly more than "adequate" to manage SGDP projects. The first stage of the process is before the award is made and includes a thorough review of the budget by the TPO, the CS and typically a Cost Price Analyst. These reviews produce a list of budget questions that must be addressed by the recipient before the award is made to ensure that all negotiated costs are reasonable and allowable. Once the award is made, OE follows the standard processes and methods for invoice review as defined by:

- Federal Grant and Cooperative Agreement Act, P.L. 95-224, as amended by P.L. 97-258
- Part 600, Financial Assistance Rules
- OMB Circulars
- Terms and conditions of the award
- NETL Project Management Guidelines (Revision 3.0 dated March 22, 2012)
- NETL Federal Project Management Center, Frequently Asked Questions, "Invoice Review"

Given the increased visibility, importance and value of the SGDP, OE initiated the following actions, over and above the standard processes and methods, to support a more informed and thorough review of invoices:

- Put all SGDP projects on cost reimbursement through the Automated Clearing House instead of reimbursement through the Automated Standard Application for Payment system
- Conducts annual training for TPOs and CSs on proper invoice review
- Created an invoice review checklist, based on the annual training, to ensure TPOs are reviewing all aspects of the invoice

Given the strict adherence to the standard processes and the additional processes developed, OE believes that the process for review of payments is significantly more than “adequate”.

**Action:** NETL will continue to provide annual invoice review training to all SGDP TPOs and CSs and strictly follow all standard and additional processes for invoice review. For FY13, the annual invoice review training will be completed by August 30, 2013.

**Recommendation 2:** Provide training to recipients on proper submission of reimbursement packages

**Response:**

OE concurs that it is important that recipients submit accurate and thorough reimbursement packages and that additional training could benefit recipients. OE routinely conducts project Kickoff Meetings where project and administrative requirements are discussed. NETL’s standard operating procedure (Best Practice 2007-3: “Project Kickoff Meetings for Financial Assistance Agreements) for a new project is to host a “Project Kick-off Meeting” within 60 days of the award date. Included in this SOP is, “The FPM should place the Contract Specialist and Contracting Officer at a convenient time in the agenda to offer comments and field any questions ...” Typically, the proper submission of reimbursement packages is discussed during this segment of the agenda to avoid any surprises or misunderstandings.

**Action:** NETL will include a specific agenda topic to the Best Practice 2007-3: “Project Kickoff Meetings for Financial Assistance Agreements SOP to address the submission of invoices. This will be completed by March 29, 2013. Also, the CS and TPO will continue to serve as day-to-day resources answering Recipients’ questions on submission of reimbursement packages.

**Recommendation 3:** Ensure that recipients contribute their required cost-share from allowable sources.

**Response:**

OE concurs that recipients' required cost share must come from allowable sources. OE, as a standard practice, tracks Recipient cost share to ensure compliance with applicable laws and regulations. OE negotiates a cost share plan with each recipient that meets the project requirements. In all cases, the plan negotiated with a SGDP recipient is based on allowable sources, in accordance with applicable laws and regulations, to protect the government's investment. Recipient cost share to the SGDP significantly exceeds the initial programmatic requirement of 50%. Recipient cost share for all projects accounts for 62% of total project costs. This corresponds to \$400 million more than was required by the funding opportunity announcement.

**Action:** NETL will continue to ensure that the cost share plans negotiated with the recipients are reasonable and allowable, in accordance with 10 CFR 600 and OMB Circulars, and will ensure that all recipients contribute their required cost-share to protect the government's investment. In addition to on-going reviews of cost share requirements performed by the TPO and CS for each SGDP project, NETL will perform a program wide review of SGDP cost share by April 30, 2013.

**Recommendation 4:**

Ensure the elimination of any potential duplicate funding among awards authorized by various Department programs.

**Response:**

OE concurs that duplicate funding among awards must be avoided. While the IG felt potential duplication may exist between these research/demonstration projects, the program was aware of the specific concern and had previously ensured duplication did not exist. The IG confirmed, in subsequent discussions, that no duplicate requests for reimbursement have occurred between the two projects. OE will continue to coordinate with other DOE Programs to ensure potential duplication among awards does not occur.

**Action:** The TPO will continue to monitor the progress of the SGDP project and coordinate as needed with the ARPA-E TPO regarding the ARPA-E project. In addition to "as needed" meetings, the NETL TPO will schedule semi-annual discussions with the ARPA-E TPO. The first discussion will be completed by March 29, 2013.

**Recommendation 5:**

Resolve the remaining questioned amounts in our report totaling about \$9.7 million.

**Response:**

As stated in the audit report, the \$9.7 million amount consists of two actions, for two separate awards under the SGDP, in amounts of \$7.3 million and \$2.4 million.

- OE concurs with the finding that one recipient was paid about \$7.3 million over actual costs. Based on supporting documentation provided with the Recipient's reimbursement requests, there was no indication that the claimed expenses were based on both actual and estimated expenses. It was subsequently learned that the Recipient used both actual and estimated expenses for completed subcontractor/consultant work when submitting their reimbursement requests. The Department has reviewed invoice reconciliations (proposed by the Recipient as a result of this audit), and is making the appropriate monthly adjustments necessary to balance reimbursements with actual costs. Of the approximate \$7.3 million in questioned cost, the Recipient has applied invoice reconciliations totaling \$4.9 million to the project and it is anticipated that the remaining balance will be exhausted by June 2013.
- OE concurs that \$1.7 million for the energy storage units was paid before the manufacturing was begun. Per the terms of this award this was reasonable and acceptable as the recipient intended to begin manufacturing the energy storage units. Shortly before the manufacturing process was begun, potential performance issues were identified; therefore, the manufacturing was delayed. The recipient notified the Department of the manufacturing delay and the \$1.7 million has been repaid to the Department. The remaining \$2.3 million identified in this finding (\$0.7 million in federal funds and \$1.6 million of recipient cost share) are reasonable and acceptable project costs related to project management; demonstration site planning and preparation; defining test parameters, data collection and analysis requirements; and initial baseline data collection. Also, OE does not concur that it "mistakenly agreed to reimburse the recipient" nor that it, "was unaware that the recipient had not begun manufacturing the units". OE maintains frequent contact with this recipient and has been continually aware of the progress of this project. OE will continue to monitor the progress of this project in order to support a successful demonstration.

**Actions:**

- **To address any potential invoice issues, NETL will send a letter to all SGDP recipients reminding the recipients that only actual costs should be included in invoice requests. This letter will also provide references and information on allowable actual costs and a reminder to contact the CS or TPO if the recipient has a question about the invoice process. This letter will be sent to all SGDP recipients by February 28, 2013.**
- **Regarding the \$7.3 million finding, NETL will continue to review the recipient's invoices to: 1) ensure the entire reconciliation of \$7.3 million is**

**applied to the award; and 2) ensure the recipient only receives payment for actual expenses for the remainder of the project. OE expects to have all estimated expenses reconciled to actual costs by June 2013.**

- **Regarding the \$2.4 million finding, the action of the recipient repaying the \$1.7 million has been completed. Other than continuing to monitor the progress of this project, no further action on this finding is planned.**

Should you have any questions, please contact me at (202) 586-1411 or Kathy Bittner at (202) 287-5613.

## CUSTOMER RESPONSE FORM

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1. What additional background information about the selection, scheduling, scope, or procedures of the audit or inspection would have been helpful to the reader in understanding this report?
2. What additional information related to findings and recommendations could have been included in the report to assist management in implementing corrective actions?
3. What format, stylistic, or organizational changes might have made this report's overall message more clear to the reader?
4. What additional actions could the Office of Inspector General have taken on the issues discussed in this report that would have been helpful?
5. Please include your name and telephone number so that we may contact you should we have any questions about your comments.

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