



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

Audit Report

The Department of Energy's Hydrogen and Fuel Cells Program



OAS-RA-13-31

September 2013



Department of Energy
Washington, DC 20585

September 27, 2013

MEMORANDUM FOR THE SECRETARY

FROM:

Greg Friedman
Gregory H. Friedman
Inspector General

SUBJECT:

INFORMATION: Audit Report on "The Department of Energy's
Hydrogen and Fuel Cells Program"

INTRODUCTION AND OBJECTIVE

The Department of Energy spent approximately \$1 billion over the last 5 years on Hydrogen and Fuel Cells Program activities implemented through various projects at Federal laboratories, universities, non-profit institutions, Government agencies and industry participants. The Department also provided an additional \$42 million in American Recovery and Reinvestment Act of 2009 funding to accelerate the commercialization and deployment of fuel cells. As of April 2013, there were nearly 300 ongoing projects funded at the national laboratories and managed through financial assistance awards such as grants and cooperative agreements. The Hydrogen and Fuel Cells Program within the Office of Energy Efficiency and Renewable Energy (EERE) coordinates the Department's efforts across four Program Offices – EERE, Science, Nuclear Energy and Fossil Energy – to promote the widespread use of hydrogen and fuel cells, the stated purpose being to help build a competitive, secure and sustainable clean energy economy.

The Office of Inspector General has consistently viewed financial assistance award management as one of the Department's key management challenges. Based on this focus and due to its significant investment in the Program, we initiated this audit to evaluate the Department's management of the Hydrogen and Fuel Cells Program.

RESULTS OF AUDIT

We found the Department had not always effectively managed the financial aspects of the Hydrogen and Fuel Cells Program. Specifically, our review identified over \$6.6 million in questionable costs out of approximately \$68 million in total reimbursements at 10 recipients sampled in our review. Specifically, we found that the Department:

- Reimbursed \$5.3 million in unsupported and/or unallowable costs at nine recipients for unsupported subcontractor or partner costs, potentially unallowable and/or unsupported travel and meal costs and other expenses that were not supported by detailed invoices.
- Was unaware that one recipient included unallowable costs of approximately \$700,000 in its indirect cost rate calculation, a practice that resulted in higher than allowable reimbursements estimated at over \$64,000.

- Had not ensured that recipient procurement practices were adequate to fully protect the Government's interests and that these practices complied with applicable policies, procedures and best practices. For example, one recipient non-competitively awarded approximately \$1 million for subcontract work to two companies that shared common ownership interests with the recipient. In addition, recipients had not always utilized competition to obtain the best possible prices for goods and services purchased with Federal funds. At two of the recipients, we found examples of purchases valued at about \$210,000 for materials, equipment and services that were not supported by competitive bidding procedures. Accordingly, we questioned approximately \$1.2 million of procurement costs that may not have provided the best value to the Government.

The issues we identified occurred, in part, because program officials had not always provided effective monitoring and oversight and/or adequate guidance to ensure that required financial and accounting policies and procedures were properly adhered to on a consistent basis. For instance, we noted that the Department had not adequately reviewed information that should have led officials to question the potential conflicts of interest identified in our report. In addition, although the Department placed strong emphasis on monitoring contract administration, reporting requirements and technical aspects of projects, it had not adequately monitored financial aspects of the projects to ensure that funds were being used as directed and in accordance with all applicable Federal regulations. Moreover, the Department had not always ensured that recipients arranged for independent audits of internal controls to be conducted as required by financial assistance regulations. These audits would have helped increase the confidence that the Federal projects were managed in strict compliance with laws and regulations, as well as the terms and conditions of the awards. These weaknesses are similar to those identified in our recent audit report on *The Department of Energy's Industrial Carbon Capture and Storage Program Funded by the American Recovery and Reinvestment Act*, (OAS-RA-13-15, March 2013). During that audit, we found that the Department had not implemented certain performance monitoring controls that could have allowed for more thorough reviews of costs prior to reimbursement.

The lack of attention to financial monitoring of recipients increased the risk that questionable and/or unallowable costs would be charged to the Department, effectively reducing the amount of funds available to complete worthwhile projects. Accordingly, we questioned more than \$6.6 million in reimbursements to Hydrogen and Fuel Cells Program recipients included in our review (See Appendix 1). While we could not extrapolate to all Hydrogen and Fuel Cells Program projects, the control weaknesses identified in our report could result in similar issues with other recipients.

In light of current budget challenges, it is critical that the Department ensure that limited resources are used to advance the mission of the Hydrogen and Fuel Cells Program. As such, we made several recommendations that, if fully implemented, should improve the Department's control over the financial aspects of hydrogen and fuel cell projects.

MANAGEMENT REACTION AND AUDITOR COMMENTS

Management concurred with our recommendations and indicated that it had initiated and/or taken corrective action to address issues identified in our report. Management's proposed corrective actions are responsive to our recommendations. Management's comments are included in Appendix 4.

Attachment

cc: Deputy Secretary
Acting Under Secretary of Energy
Acting Under Secretary for Science
Assistant Secretary for Energy Efficiency and Renewable Energy
Acting Assistant Secretary for Fossil Energy
Chief of Staff

REPORT ON THE DEPARTMENT OF ENERGY'S HYDROGEN AND FUEL CELLS PROGRAM

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THE DEPARTMENT OF ENERGY'S HYDROGEN AND FUEL CELLS PROGRAM

Hydrogen and Fuel Cells Program

The Department of Energy (Department) had not always effectively managed the financial aspects of the Hydrogen and Fuel Cells Program. As such, the program incurred questionable costs totaling more than \$6.6 million of the approximately \$68 million that had been reimbursed by the Department to 10 recipients. These costs were incurred under financial assistance awards funded by the Office of Energy Efficiency and Renewable Energy (EERE), the Office of Science, and the Office of Fossil Energy (See Appendix 1).¹ We identified questionable costs related to unsupported recipient and subcontractor expenditures, travel and meal expenses and an inaccurate indirect rate calculation. Furthermore, we questioned a number of procurement practices involving potential conflicts of interest and lack of competition that, as demonstrated by the actual or potential impact on cost, were not in the Government's best interest.

Unsupported and Unallowable Costs

The Department approved and reimbursed approximately \$5.3 million of unsupported and/or potentially unallowable costs to 9 of the 10 recipients we reviewed. Regulations require that incurred costs be reasonable, allocable and adequately documented in the recipient's records in order to be allowable. However, we found that:

- Seven of the 10 recipients could not provide support for subcontract costs of approximately \$5.2 million that were reimbursed by the Department. Specifically, our judgmental sample of invoices submitted to prime recipients from subcontractors contained inadequate detail related to costs such as salaries and wages, fringe benefits, travel, materials and supplies and indirect costs. For example, invoices did not include an itemization of specific costs or supporting documentation, such as number of employees, hours expended, labor rates, materials, equipment and supplies purchased or travel expenses. Although our sample was not statistical, recipient officials informed us that the quality of the invoice documentation for our sampled items was consistent with that available for all invoices. In particular, various recipient officials told us that they generally relied on certifications from subcontractor officials as to the appropriateness of the costs claimed rather than conducting their own reviews or obtaining more detailed support. Due to the lack of supporting documentation, we questioned the \$5.2 million in reimbursements as unsupported.
- Two recipients were unable to provide supporting documentation for non-subcontract type expenses totaling nearly \$50,000. These expenses were described in the recipients' ledgers as being for materials, supplies, services, travel and meals related to the projects. However, absent supporting documentation, we were unable to satisfy ourselves that the costs reimbursed by the Department were appropriate. As a result, we questioned nearly \$50,000 as unsupported costs.

¹ Of the 20 total projects reviewed in our sample of 10 recipients, we did not identify any material concerns with the two projects that were funded by the Office of Science. We did not sample Nuclear Energy Program recipients due to the relatively small dollar value of awards.

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- Eight of the 10 recipients had incurred questionable costs related to travel and meals that were claimed and reimbursed by the Department. In total, we identified over \$43,000 of expenses that recipients claimed and had been reimbursed for questionable and potentially unallowable activities. Included in these costs were lodging and meal expenses that exceeded prescribed limits, local meals and refreshments for recipient employees, Department representatives and other visiting guests, unnecessary car rental insurance, alcohol purchases, and other travel and meal expenses that lacked sufficient supporting documentation. Therefore, we questioned over \$43,000 for these travel and meal costs.

Additionally, we found that one recipient included potentially unallowable costs of approximately \$700,000 in the indirect cost rate applied to the project. Specifically, between 2007 and 2009, the recipient included over \$528,000 of legal and professional expenses that supported a legal challenge to the ownership of the company, nearly \$30,000 of what the recipient identified as business meals and entertainment costs, and bad debt expenses of over \$140,000 – costs that were either potentially or specifically unallowable under the Federal Acquisition Regulation Part 31.205. This resulted in a higher than appropriate overhead rate being applied to the Department's reimbursements over an extended period of time. Specifically, had these unallowable costs not been included in the recipient's indirect cost rate calculation, we estimate that the Department would have reimbursed approximately \$64,510 less in indirect costs. Notably, beginning in 2010, after hiring an accountant, business meals and entertainment costs were determined to be unallowable by the recipient and no longer included in the overhead rate calculation. Recipient officials acknowledged the errors and indicated that they were initially unclear of how to calculate and apply overhead rates. The recipient also noted that the Department never questioned the rates or asked them for an Indirect Cost Proposal, which is required by the Department's Federal Assistance Reporting Checklist to be submitted annually. According to its Chief Financial Officer, the recipient assumed that the rates were acceptable because the Department had not raised any issues; therefore, prior periods were not reviewed. As a result, we questioned \$64,510 in reimbursed indirect costs.

In response to our audit, the Department indicated that it had initiated actions to review the identified questioned costs and recover any costs determined to be unallowable.

Procurement Practices

Contrary to Federal regulations, recipients had not always effectively purchased goods and services in a manner that protected the Department's interests in the Hydrogen and Fuel Cells Program. Our review identified several issues related to procurement practices at various recipients supporting the program. In total, we identified over \$1.2 million in reimbursements related to questionable procurement activities such as non-competitive awards involving potential conflicts of interest and ensuring that goods and services were procured at the lowest possible cost. In particular:

- One recipient had non-competitively awarded approximately \$1 million of design, engineering and fabrication services to two companies under a service agreement that had common ownership interests with the recipient without specifically disclosing the

potential conflict of interest to the Department. The recipient charged over \$211,000 to the project for labor hours worked under a service agreement with a company owned by the recipient's family. While \$44,000 was related to direct labor costs, the recipient explained that the remaining \$167,000 was a recapture of indirect costs, general and administrative costs and the margin of profit for the work provided. In addition, the recipient provided over \$800,000 for design and fabrication work under another service agreement with a different company that was also owned by the recipient's owner and his family.

According to Federal regulations, the Department and the recipient share the responsibility to identify and mitigate the effect of any potential conflicts of interest. Specifically, the Department is required to examine costs with particular care in connection with firms or separate divisions that may not be subject to effective competitive restraints, including consideration of arm's-length bargaining. In addition, the Department relies on the recipient, as the responsible authority, to manage any contractual or administrative issues arising out of procurements in support of the award. We believe this would include specifically disclosing any potential conflicts of interest to Department officials for consideration during the life of the project.

The recipient's owner explained that there was an understanding between the companies that each would assist the other when possible as long as the work being contemplated was not required to be bid out. However, given the recipient's failure to disclose the potential conflicts of interest to Department officials for review and the non-competitive nature of the agreements in place, it is questionable that the "best commercial practices" standard required by Federal regulations for determining reasonableness of these costs was met. When we brought this matter to the attention of Department officials after our review of invoice documentation that had been submitted to the Department, the Project Manager and Contract Specialist for the award indicated that they did not generally perform reviews for conflicts of interest and instead focused their efforts on the technical component of the projects. Given the potential conflicts of interest, we questioned the \$1 million for these related-party transactions.

As a result of the issues we identified, program officials stated that they were reviewing the transactions noted above to ensure the work performed was consistent and reasonable for the charges made. The Department stated that it would consider disallowing all or a portion of subcontract costs that would not have been incurred under competitive, arm's-length transactions. Additionally, the Department stated that it was taking action to prevent future conflicts of interest. Specifically, it had begun to use a new term in financial assistance agreements requiring recipients to provide assurance to the Contracting Officer that no planned, actual or apparent conflicts of interest exist between the recipient and potential subcontractors.

- We identified a number of instances in which the Department's financial assistance partners had not ensured that the lowest possible price had been obtained for goods and services purchased with Federal funds. Federal regulations require that recipients' procurement procedures must use best commercial practices to ensure reasonable costs for procured goods and services, which we believe should include competitive bidding

procedures designed to identify a fair and reasonable price. At two recipients reviewed, however, we found examples of purchases for materials, equipment and services that had not been competitively bid. One recipient had not routinely sought out competitive bids to ensure the best possible price for goods and services. In our sample of 30 transactions, we identified 5 purchases totaling over \$192,000 in which competition had not been used to obtain the best possible price. At another recipient, we noted a purchase for nearly \$18,000 without any competitive bids or justification provided for the sole source procurement. Company officials described the reasons why competition had not been used. In some cases, officials told us that they believed that the providers selected had the most expertise and past experience or were the only ones with the necessary expertise to complete the work. However, detailed documentation for the sole source selections had not been completed. As a result, we could not determine that the recipient officials had a reasonable basis for their respective conclusions regarding the need to procure the goods and services without competition, and therefore, we questioned over \$210,000 awarded non-competitively. In response to our audit, the Department requested additional information for the subcontracts issued and was in the process of conducting a thorough review.

Performance Monitoring and Oversight

The issues we identified occurred, at least in part, because program officials had not always provided effective monitoring and oversight and/or adequate guidance to ensure that required financial and accounting policies and procedures were properly adhered to on a consistent basis. In particular, although the Department placed significant emphasis on the administrative and technical aspects of projects, it had not always ensured that funds were used as directed and in accordance with applicable Federal regulations. In addition, Department officials had not ensured that recipients were fully aware of and in compliance with Federal regulations.

Although the Department placed emphasis on contract administration, reporting requirements and technical aspects of the projects we reviewed, it had not always effectively evaluated whether the financial aspects of awards were reliable. For instance, the information that led us to question potential conflicts of interest of \$1 million in awards had been provided to and approved by program officials through the recipient's periodic requests for reimbursement. However, because the documentation had not been properly reviewed, the Department did not identify and question the relationships between the companies or review the appropriateness of the subcontract.

In addition, as previously noted in our report, one recipient had not been required to submit an indirect cost proposal to the Department for review, resulting in incorrect overhead rate calculations. Department officials told us that they were not the cognizant Federal agency for this recipient, rather, the Department of Defense had such cognizance and was responsible for obtaining and reviewing annual indirect cost proposals. Also, officials indicated that the recipient had submitted its indirect rate proposal for 2006 costs to the Defense Contract Audit Agency (DCAA), the cognizant Federal audit agency. However, the Department could not provide any evidence supporting its assertion. We determined based on our discussion with DCAA that the recipient, in fact did not have any current awards with the Department of

Defense. Further, DCAA staff told us that the most recent activity with the recipient had been a planned 2006 audit that had been subsequently canceled and added that if an audit needed to be conducted, the Department would have to send a request to DCAA.

We also found that Department officials had not ensured that Hydrogen and Fuel Cells Program recipients were fully aware of and in compliance with the Federal rules specific to allowable cost requirements. In particular, officials at the recipients included in our review commented that there was a lack of interaction with Department officials specifically related to the financial monitoring of the awards. Rather, they noted that site visits conducted by Department officials were almost always solely related to the technical status of the project. In addition, numerous recipient officials indicated that they were not familiar with the specific nuances of working within the Federal rules governing allowable cost requirements. As an example, one recipient indicated it was not aware that only costs up to the per diem maximum for lodging, meals and incidentals could be requested and reimbursed. An official for another recipient stated that he was not aware that alcohol was a specifically unallowable cost that we did not find to be credible because the financial assistance award specifically references Federal Acquisition Regulations that identify expenditures for alcohol as an unallowable cost. Multiple recipient officials pointed out that some form of basic training or additional guidance related to making determinations between allowable and unallowable costs would have been beneficial and may have prevented certain issues identified in our report. In response to our audit, the Department indicated that it had recently provided recipients with a presentation emphasizing financial responsibility, including allowable and unallowable costs. Management also stated that it was in the process of implementing a consolidated invoice review unit and capability to allow for additional scrutiny of recipient invoices.

In addition, program officials had not ensured that annual audits of two for-profit recipients had been conducted. The Department's financial assistance rules require that recipients arrange for annual independent audits of their operations. The audits are designed to determine whether the recipient had an internal control structure in place that provided reasonable assurance of compliance with Federal laws and regulations and the terms of the award. After we brought this issue to their attention, program officials stated that they had issued notices of deficiencies to the two recipients regarding the delinquent reports. However, at the end of our review, the Department was still working to obtain the delinquent reports from the recipients.

Finally, the Department stated that the costs we questioned were incurred at a time when recipients were permitted regular drawdowns of grant proceeds under an approved budget. Incurred cost validation was not a part of the regular review process at the time. The Department stated that high-risk for-profit recipients have since been converted to the reimbursement method of payment and that, in the future, all high-risk recipients would be placed on the reimbursement method of payment.

Impact of Program Weaknesses and Path Forward

The lack of financial monitoring of projects placed the Department at a higher than necessary risk of reimbursing questionable and/or unallowable recipient costs. Funds spent on questionable and/or unallowable costs may reduce the amount available to complete project

objectives and represents wasted and misused taxpayer dollars. Accordingly, we are questioning costs of over \$6.6 million that had been previously reimbursed to Hydrogen and Fuel Cells Program recipients included in our review. In light of existing budget challenges facing the Department, it is critical that programs ensure that the limited resources available are used to advance the mission of the Hydrogen and Fuel Cells Program in the most effective and efficient manner possible.

RECOMMENDATIONS

To address the deficiencies identified in our audit and to ensure that taxpayer dollars are used in the most effective and efficient manner, we recommend that the Assistant Secretary for Energy Efficiency and Renewable Energy direct Hydrogen and Fuel Cells Program officials work with officials in the Office of Fossil Energy to:

1. Enhance financial monitoring activities, to include identifying and mitigating potential conflicts of interest, enforcing requirements pertaining to documentation of procurement decisions, and reviewing recipient reimbursement requests for unallowable costs; and
2. Ensure recipients are aware of Federal award requirements related to cost and procurement standards, including allowability of costs claimed for reimbursement, annual indirect cost proposals and ensuring that internal control audits are performed as required.

In addition, we recommend:

3. Contracting Officers in EERE and the Office of Fossil Energy conduct reviews of questioned costs identified in our report and determine whether the costs were allowable, allocable and reasonable; and
4. Contracting Officers in EERE conduct a review of the indirect cost rates of the recipient that included potentially unallowable costs associated with legal and professional expenses, meals and entertainment expenses, and bad debt expenses and collect any resulting overpayments identified.

MANAGEMENT REACTION

Management commented that our report had identified opportunities to strengthen Federal oversight of the financial aspects of Hydrogen and Fuel Cells Program projects, which it planned to implement in the coming months. Management concurred with each of the recommendations in the report and indicated that it had initiated and/or taken corrective action to address the issues identified. Management stated that it was committed to effective grants management and had recently taken steps to improve the program based on a comprehensive review of grants management procedures. For instance, it had already started implementing several new processes to enhance financial monitoring, including an increased emphasis on invoice reviews and requiring enhanced invoice support documentation. Additionally, management stated that it would establish a Central Invoice Review Unit to review and approve all reimbursement requests submitted by recipients for competitively selected financial assistance awards.

Management also noted that it would strengthen its education and outreach activities to recipients by creating an Internet webpage with comprehensive information on Federal award requirements. In addition, meetings following each award execution will have an "allowable costs" topic on the agenda. Management committed to establishing a standard set of terms and conditions for its financial assistance agreements that would clarify recipients' obligations with respect to potential conflicts of interest, procurement activities and subrecipient management. Furthermore, management stated that it would have Contracting Officers make final determinations for all questioned costs and seek recovery for any payments determined to be unallowable, unallocable or unreasonable.

AUDITOR COMMENTS

Management's comments and planned corrective actions are responsive to our recommendations. Technical comments from management have been incorporated into this report, as appropriate. Management's comments are included in Appendix 4.

QUESTIONED COSTS

This chart summarizes the questioned costs for the Office of Energy Efficiency and Renewable Energy (EERE) and the Office of Fossil Energy identified in the report. As discussed in the report, the questioned costs related to unsupported costs, unallowable costs and costs associated with related party transactions. These costs were discussed in the *Unsupported and Unallowable Costs* and *Procurement Practices* sections of the report.

Example	Questioned Costs		
	EERE	Fossil Energy	TOTAL
1. Unsupported Subcontract Costs	\$4,127,344	\$1,088,978	\$5,216,322
2. Unsupported Recipient Costs	\$49,560	\$0	\$49,560
3. Travel and Meal Costs	\$40,699	\$2,979	\$43,678
4. Unallowable Indirect Costs	\$64,510	\$0	\$64,510
5. Transactions Involving a Potential Conflict of Interest	\$0	\$1,053,779	\$1,053,779
6. Lack of Competition or Justification for Sole Source Procurements	\$17,988	\$192,572	\$210,560
Total	\$4,300,101	\$2,338,308	\$6,638,409

Appendix 2

OBJECTIVE

To determine whether the Department of Energy (Department) had effectively and efficiently managed the Hydrogen and Fuel Cells Program.

SCOPE

This audit was performed between March 2012 and September 2013, at the Department's Headquarters in Washington, DC and at the National Energy Technology Laboratory in Pittsburgh, Pennsylvania. In addition, we conducted site visits to 10 recipients in Pittsburgh, Pennsylvania, Boulder and Golden, Colorado, and Westwood, Billerica, Lowell and Newton, Massachusetts.

METHODOLOGY

To accomplish our audit objective, we:

- Reviewed applicable laws, regulations and guidance pertaining to the Hydrogen and Fuel Cells Program, the American Recovery and Reinvestment Act of 2009 (Recovery Act) and financial assistance award administration.
- Held discussions with Department officials responsible for the selected recipients to determine their roles and responsibilities related to monitoring of awards.
- Identified the universe of Hydrogen and Fuel Cells Program projects awarded by the Department with completion dates after September 30, 2007. We judgmentally selected recipients and/or projects for review based on recipients that were co-located with multiple projects, total project funding including Recovery Act funding, projects managed by various program offices and ensuring a mix of private companies and educational institutions. Using this process, we selected 20 projects awarded to 10 recipients.
- For each of the recipients selected for review, we conducted site visits to evaluate recipient policies and procedures for tracking project costs and analyzed a judgmental sample of financial transactions related to each of the projects. Our sample size varied based on total project funding and the length and nature of the project. In total, we sampled 651 financial transactions based on high dollar amounts and obtaining a general mixture of payments for materials, equipment, services, travel, meals, salaries and benefits, and subcontract costs for the 20 projects reviewed. Because our samples were not statistical, we could not project the sample results to the population of financial transactions. However, after identifying insufficient documentation for subcontractor costs in our sample at certain recipients, we expanded our work and determined that the lack of documentation was systemic and affected all subcontract costs. As a result, we questioned all payments made to the identified subcontractors for the projects included in our review.

Appendix 2

- Reviewed recipient documentation obtained from the Department's Strategic Integrated Procurement Enterprise System.

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 finding and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. 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 *GPRRA Modernization Act of 2010* and determined that it had established performance measures for the management of the Hydrogen and Fuel Cells 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.

We held an exit conference with Department officials on September 26, 2013.

PRIOR REPORTS

- Audit Report on the [*Department's Hydrogen Projects*](#) (OAS-L-06-19, September 2006). This report revealed that the Department of Energy (Department) generally awarded grants and cooperative agreements based upon a competitive solicitation followed by a peer review to determine the merit of the proposed projects. Also, the work funded at a national laboratory, while non-competitively awarded, appeared to be within the laboratory's mission. Likewise, we found that the Department required the appropriate levels of cost sharing from the awardees. However, we noted that the Department had not always conducted effective cost reviews during the performance period of the agreements.
- Audit Report on [*The Department of Energy's Industrial Carbon Capture and Storage Program Funded by the American Recovery and Reinvestment Act*](#) (OAS-RA-13-15, March 2013). This report found that the Department had not always effectively managed the Industrial Carbon Capture and Storage Program and the use of American Recovery and Reinvestment Act of 2009 (Recovery Act) funds. Specifically, the Department had not adequately documented the approval and rationale to use \$575 million to accelerate existing projects rather than proceeding with new awards as required by Federal and Department policies. In addition, the Department reimbursed recipients approximately \$16.8 million without obtaining and/or reviewing adequate supporting documentation. Furthermore, three recipients were awarded over \$90 million in Recovery Act funding even though the projects experienced financial and/or technical issues prior to being recommended for selection. Finally, the Department had not ensured that recipient subcontractor or vendor selections for goods and services represented the best value to the Government.



Department of Energy

Washington, DC 20585

JUL 31 2013

MEMORANDUM FOR: GREGORY H. FRIEDMAN
INSPECTOR GENERAL
OFFICE OF INSPECTOR GENERAL

FROM: STEVEN G. CHALK *S. Chalk*
DEPUTY ASSISTANT SECRETARY
FOR RENEWABLE ENERGY
ENERGY EFFICIENCY AND RENEWABLE ENERGY

DARREN MOLLOT *D. Mollot*
ACTING DEPUTY ASSISTANT SECRETARY
FOR CLEAN COAL
FOSSIL ENERGY

SUBJECT: Response to OIG Draft Audit Report on "Department of Energy's
Hydrogen and Fuel Cells Program"

The Office of Energy Efficiency and Renewable Energy (EERE) and the Office of Fossil Energy (FE) appreciate the opportunity to respond to the Draft Audit Report.

The goal of the Hydrogen and Fuel Cells Program is to promote the widespread use of hydrogen and fuel cells to help build a competitive, secure, and sustainable clean energy economy. The Report confirms that the Hydrogen and Fuel Cells Program "placed strong emphasis on monitoring contract administration, reporting requirements, and technical aspects of projects." The Hydrogen and Fuel Cells Program has been repeatedly praised for its superior management by a Federal Advisory Committee, the National Academies, and the Government Accountability Office. The Program has saved taxpayers more than \$30 million since 2009 by terminating or redirecting underperforming projects. The Program has also enabled over 400 patents, over 60 pre-commercial technologies, and more than 40 commercial technologies, all of which demonstrate the benefit of Federal investment in a \$10 billion global hydrogen and fuel cell market.

The Report identifies opportunities to strengthen Federal oversight of the financial aspects of projects, which EERE and FE will implement in the coming months. EERE and FE will seek full recovery of taxpayer dollars used for unallowable, unallocable, or unreasonable costs. A Contracting Officer will make an official determination on the questioned costs and move expeditiously to initiate recovery proceedings. In addition, a Contracting Officer will review the procurement practices identified by the Office of Inspector General (OIG), make an official determination, and undertake appropriate remedial action.

EERE and FE are committed to effective grants management. In April 2012, EERE, with FE's support, began a comprehensive review of its grants management procedures.



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- EERE benchmarked its grants management process against peer agencies.
- EERE established an internal “community of practice” composed of subject matter experts in program and project management to develop new standard operating procedures and best practices, which will be applied to all EERE programs and projects.
- EERE created a new Project Management Coordination Office (PMCO) to ensure consistent and active project management across EERE’s diverse portfolio of projects. PMCO is working with peer offices at other Federal agencies to develop training courses for Federal project managers and standards for a certification credential.
- EERE is in the process of consolidating multiple IT systems in order to establish a single Enterprise IT solution for core business functions, including grants management. This new system will provide EERE project managers with innovative tools for managing and evaluating projects, including their technical progress, budgets, and schedules.
- EERE is in the process of establishing a uniform set of terms and conditions for funding opportunities and awards, which will facilitate active project management. EERE will use cooperative agreements for most of its future projects, which will allow greater oversight of project activities. EERE will also establish annual go/no go milestones for projects, which will facilitate the modification or termination of underperforming projects.
- EERE is strengthening and centralizing its review of project invoices.
- EERE is increasing its engagement with recipients. Federal project managers will hold meetings (by telephone or webinar) at least once per quarter with every recipient and review the project’s technical progress, budget, and schedule.
- EERE is increasing the frequency of site visits. Federal project managers will visit most projects at least once per year. Larger projects will be subject to greater scrutiny. Federal project managers will visit larger projects at least twice per year, and independent firms may be retained to conduct additional audits.

Specific responses to OIG recommendations are provided below.

OIG Recommendation 1: Enhance financial monitoring activities, to include identifying and mitigating potential conflicts of interest, enforcing requirements pertaining to documentation of procurement decisions, and reviewing recipient reimbursement requests for unallowable costs.

EERE/FE Response: Concur. EERE and FE are committed to effective grants management. In April 2012, EERE, with FE’s support, began a comprehensive review of its grants management procedures, which has resulted in the reforms described above. EERE and FE have already started implementing several new processes to enhance financial monitoring including: emphasizing invoice review for reimbursement instead of automatic draw down, requiring enhanced invoice support documentation, approving an improved invoice review procedure, conducting invoice review training, and requiring a new agreement clause that requires recipients to notify the Contracting Officer in writing prior to entering into new sub-award or subcontract agreements that may involve potential conflicts of interest. To implement the DOE IG’s recommendations, EERE is establishing a Central Invoice Review Unit (CIRU) within its Office of Business Operations to review and approve all reimbursement requests submitted by

recipients for competitively selected financial assistance awards. This team, which will include experts in Federal cost principles and financial audits, will ensure consistent, rigorous review of reimbursement requests submitted by recipients. By centralizing invoice review, EERE will ensure rapid and efficient processing of reimbursement requests and facilitate early identification and resolution of problem issues and trends across the enterprise. In addition, EERE is establishing a standard set of terms and conditions for its financial assistance agreements. These terms and conditions will clarify the prime recipient's obligations with respect to potential conflicts of interest and procurement activities.

OIG Recommendation 2: Ensure recipients are aware of Federal award requirements related to cost and procurement standards, including allowability of costs claimed for reimbursement, annual indirect cost proposals, and ensuring that internal control audits are performed as required.

EERE/FE Response: Concur. It is standard practice for the Contracting Officer to notify recipients about Federal award requirements through written communications and meetings. EERE will strengthen its education and outreach activities by publishing an Internet webpage with comprehensive information on Federal award requirements. In addition, all kickoff meetings following award execution will have an "allowable costs" topic on the meeting agenda. EERE and FE have already engaged an extended audience of recipients at the DOE Hydrogen and Fuel Cells Program Annual Merit Review in May 2013, where a presentation on grants and cooperative agreements was given to more than 1,000 attendees. The presentation, which included an emphasis on financial responsibility such as allowable and unallowable costs, was posted online. EERE is establishing a standard set of terms and conditions for its financial assistance agreements. These terms and conditions will clarify the prime recipient's obligations with respect to subrecipient management.

OIG Recommendation 3: Contracting Officers in EERE and the Office of Fossil Energy conduct reviews of questioned costs identified in our report and determine whether the costs were allowable, allocable and reasonable.

EERE/FE Response: Concur. EERE Contracting Officer's will make an official determination on the questioned costs by October 30, 2013, and seek recovery any payments for unallowable, unallocable, or unreasonable costs by December 31, 2013. By October 30, 2013, FE's Contracting Officers will complete their review of questioned costs and determine whether they were allowable.

OIG Recommendation 4: Contracting Officers in EERE conduct a review of the indirect cost rates of the recipient that included potentially unallowable costs associated with legal and professional expenses, meals, and entertainment expenses, and bad debt expenses and collect any resulting overpayments identified.

EERE Response: Concur. The Contracting Officer will request an indirect cost proposal. Upon receipt, the Contracting Officer will request an audit of the recipient's indirect cost rate, as

Appendix 4 (continued)

appropriate. Once the indirect cost rate is determined, the Contracting Officer will seek recovery of any overpayments identified by March 31, 2014.

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