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

Audit Report

The Department of Energy Vehicle Technologies Program's $135 Million in Funding to Ecotality, Inc.

OAS-RA-13-29

July 2013

Department of Energy
Washington, DC 20585

July 25, 2013

MEMORANDUM FOR THE SECRETARY

FROM: Greg Friedman
Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Audit Report on "The Department of Energy Vehicle Technologies Program's $135 Million in Funding to Ecotality, Inc."

BACKGROUND

The Department of Energy's Vehicle Technologies Program aims to decrease U.S. oil dependence by developing and deploying advanced transportation technologies. Historically, this Program had been allocated about $300 million annually. The scope of the Program was significantly increased when it received approximately $2.8 billion in funds as part of the American Recovery and Reinvestment Act of 2009.

Over a 6-year period, the Program awarded three financial assistance agreements to subsidiary companies of Ecotality, Inc. The Ecotality subsidiaries (referred to as Ecotality throughout this report), received about $35 million from 2005 to 2011, for two multi-year projects to test and evaluate advanced technology vehicles. In 2009, Ecotality was awarded a Recovery Act grant for about $100 million for electric vehicle demonstration and infrastructure evaluation. The Recovery Act award was intended to conduct the largest U.S. demonstration to date of electric vehicles and related infrastructure and to gather data to guide future widespread electric vehicle deployment. For this award, Ecotality planned to install three different types of charging stations (two commercial and one residential) for electric vehicles in various geographical regions around the country. Consumers and businesses that enrolled in the project received a charging station paid for through the grant as well as a credit toward installation costs.

Because of the number of awards, level of funding, and related inquiries, we initiated this audit to determine whether the Department had effectively awarded and managed funding to Ecotality.

RESULTS OF AUDIT

Our review identified opportunities to improve the effectiveness of the Department's administration of its awards to Ecotality. We noted that the Department had not:

- Adequately documented its consideration of alternatives before making significant changes to Ecotality's Recovery Act project. Faced with less than expected demand for electric vehicles, Department officials told us that they added five additional regions to the project in an effort to meet overall infrastructure targets. While the Department asserted that this change helped ensure that the project would meet its goals, we noted that it resulted in increased travel and administrative costs. As a consequence, the Department subsequently found it necessary to reduce installation incentives. In addition, the overall number of charging stations planned for installation decreased by 1,760 units and data collection requirements for certain units were significantly reduced. Because the Department's consideration of alternatives to the actions taken had not always been documented, we could not determine whether these decisions were in the best interest of project goals and U.S. taxpayers.

- Ensured that the selection of commercial charging station locations was based on a process that advanced the goals of the project. Program officials were aware that a number of commercial charging stations were poorly utilized. Yet, they had not required Ecotality to adjust its installation plan to account for poor performers as the project progressed. The Department asserted that significant data needed to be collected before conclusions were reached about the effectiveness of specific locations. On its face, this appeared to be a logical position. Yet, the rationale did not appear to be applied to decisions to add regions to the project and modify installation patterns for other commercial chargers.

- Ensured that Ecotality's awards were finalized in a timely manner. Although specific timeframes are not stipulated in Federal regulations, good business practices dictate that the final terms of government financial assistance awards be finalized or completed promptly. We found, however, that it took nearly 3 years to finalize Ecotality's Recovery Act award and nearly a year and a half to finalize its 2011 award for vehicle testing. The Department stated that a significant portion of the Recovery Act award delays were attributable to factors that were outside its control, most notably, an accounting system review and project adjustments requested by Ecotality. While we do not dispute that certain factors were not directly manageable by Program officials, others, including within-Program prioritization of work efforts, were. We concluded that these delays potentially put the Government at a disadvantage in terms of management of costs incurred and cost-share allowed in that a significant portion of the awards had been expended/claimed before finalization of all terms and conditions occurred. As such, it would have been difficult to disallow expenditures and proposed cost-share contributions had any been found to be unallowable after the fact.

Further, we received inquiries from several sources expressing concern that the cost-share permitted by the Department for this project was inappropriate. We did not find that the cost-share concept was prohibited under Federal regulations. We did conclude, however, that the cost-share arrangement was unusual and that it provided Ecotality with a very generous cost-share credit. In brief, the Department approved $69 million of third party, in-kind contributions for vehicle and internet usage as part of Ecotality's cost-share commitments. The vehicle cost-share essentially amounted to the entire value of the consumer-purchased vehicles, over $550 per month for each month the consumer participated in the project. While third party in-kind contributions are a recognized method of satisfying cost-share requirements, regulations specify that such contributions be directly proportional to the value received. In this case, the project sought to use only data on vehicle use and charging patterns collected through commercial and residential stations. The actual purchase price of the vehicle was borne entirely by the consumer, and vehicles were purchased to satisfy the personal transportation needs of consumers, not to advance the project.

We recognize that benchmarks for third party, in-kind contributions are difficult to develop. However, permitting cost-share based on the entire purchase price of the vehicle, as was done in this case, appeared excessive. We were unable to determine the impact denial or additional reductions in the proposed cost-share would have had on the project. But, based on the totality of the circumstances, it appeared unlikely that the project would have been consummated unless a cost-share arrangement of this nature had been in place. This raised public policy issues that were beyond the scope of our review.

During the course of the audit, Department officials told us that they analyzed Ecotality's proposal and considered a number of factors prior to permitting the cost-share requested by Ecotality. Officials noted that they effectively apportioned certain cost elements between Ecotality and the Government and had denied requested cost-share elements in several areas. Program officials also indicated that the cost sharing arrangement had been reviewed by a price/cost analyst and approved by a contracting officer.

However, after reviewing a draft of this report, management stated that it would develop third-party cost-share guidance to ensure that future in-kind cost-share allowances are not only in line with existing policies but are also more carefully scrutinized in terms of the overall value to the Government. This will include the reasonableness of both the source and amount of in-kind cost-share.

The audit did not identify any issues with the Department's development and application of procedures for the solicitation, merit review, and selection of Ecotality. Although finalization of the award was not timely, the Department, to its credit, had implemented a compensating control to manage costs during the period between award of the grant and the time it was finalized. Notably, the Department had limited payments to Ecotality to reimbursements for actual work completed during that period. Based on our review of a sample of work, we also found that claimed installations had actually been completed and appropriately corresponded to charges under the award.

The Department awards and administers a considerable amount of funding to private sector entities through a variety of instruments. To achieve success, high quality project management and program administration practices need to be in place and operating as intended. Further, decision-making processes need to be appropriately justified and documented to render the effects fully transparent. To address the issues we observed, we made several recommendations designed to improve the management of this and similar projects.

OTHER MATTERS

Prior to and during the course of conducting this review, we received several complaints relating to alleged overcharging for charging station installations provided through the project. Our examination of these allegations and results are discussed in Appendix 1 of this report.

MANAGEMENT REACTION

Management concurred with our recommendations and indicated that it had completed or initiated corrective actions. We found that reported corrective actions were, for the most part, responsive to our recommendations.

Management's comments and our responses are summarized and more fully discussed in the body of the report. Management's comments are included in Appendix 4.

Attachment

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

REPORT ON THE DEPARTMENT OF ENERGY VEHICLE TECHNOLOGIES PROGRAM'S $135 MILLION IN FUNDING TO ECOTALITY, INC.

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Management of Awards to Ecotality, Inc.

The Department of Energy's (Department) Vehicle Technologies Program made several awards to subsidiaries of Ecotality, Inc. (Ecotality), a company that designs, manufactures, tests and works to commercialize charging and energy storage technologies. The Program awarded Ecotality about $35 million from 2005 to 2011, for two multi-year projects to evaluate and test specific vehicles. Under the terms of the awards, Ecotality was to contribute a minimum 20 percent of the cost of the project (cost-share). Further, Ecotality was also awarded an American Recovery and Reinvestment Act of 2009 (Recovery Act) grant for about $100 million, with a 50 percent cost-share, to deploy and analyze charging infrastructure for electric vehicles in various locations. Although there is no clear legislative history on the meaning behind requiring recipients to provide cost-share, the concept is generally understood to mitigate risk, help leverage Federal investments, and ensure that recipients have some "skin in the game" in these kinds of transactions.

Ecotality's Recovery Act grant was awarded through the Department's Transportation Electrification solicitation. This solicitation included four areas of interest related to projects to accelerate the market introduction and penetration of advanced electric drive vehicles. Ecotality's project was designed to meet Presidential initiatives and Department goals to accelerate the development and production of various electric vehicle systems to reduce petroleum consumption. Ecotality's proposal stated that the project would represent the largest deployment of electric drive vehicles and the largest deployment of vehicle infrastructure ever undertaken.

The objective of Ecotality's grant was to develop, implement, and study techniques for optimizing the effectiveness of infrastructure supporting widespread electric vehicle deployment. Although subsequently modified, Ecotality originally planned to develop a mature infrastructure in five metropolitan areas to ensure accessibility and eliminate anxiety associated with running out of energy. Specifically, the project would have installed fast charging equipment every 10 miles. Originally, the award included infrastructure targets totaling 11,210 charging stations for both residential homeowners and commercial businesses enrolled in the project (participants). When the project was awarded about $14 million in additional government funding, these targets increased to include 14,960 charging units.

Three types of charging infrastructure were installed through the Recovery Act project. Level 2 units, capable of charging a vehicle in about 4 to 6 hours, were installed in both residential and commercial locations and Fast Chargers, which can charge an electric vehicle in about 30 minutes, were installed at commercial locations and along two major transportation corridors. The chargers were developed and manufactured by Ecotality.

Participants were to directly benefit from the project and, in turn, were to provide data that could be used by Ecotality to evaluate electric vehicle usage patterns. Under the original approach for the project, the Government was to provide residential participants with a charging station and a $1,200 credit toward its installation in exchange for allowing Ecotality to draw data on how their charging unit or electric vehicle were being used. Commercial businesses received

Level 2 and/or Fast Charger stations and credit towards installation. Data collected through the project was to be analyzed to evaluate and identify methods for improving the effectiveness of charging infrastructure as well as to develop lessons learned to assist in the electric vehicle market as it matured. Reports documenting the results of the data gathering and analyses were to be distributed to both the Department and the public.

Results of Audit

We found that the Department had developed and followed procedures for the solicitation, merit review, and selection of Ecotality. Our review, limited to an examination of available award documentation, disclosed no issues with the selection of Ecotality for the project. We found that several aspects of the management and administration of Ecotality's awards by Federal officials charged with establishing award conditions and routine oversight of the project could have been improved. These weaknesses likely impacted project objectives.

Project Management

The Department and Ecotality had not always effectively managed the Recovery Act award. Due to a less than expected demand for electric vehicles and the failure of anticipated demand for chargers to materialize, the Department and Ecotality made various decisions to modify the project plan with a goal of meeting installation targets. However, neither the Department nor Ecotality had adequately documented its consideration of alternatives or the impact on award objectives before making significant changes to its Recovery Act award. Specifically:

- Decisions to add regions may have impeded project goals. Originally, the project was to encompass five regions, with two regions added with the $14 million in additional funding. Over the course of the effort and because the demand for electric vehicles was much less than originally anticipated, the Department added five regions to meet infrastructure targets. While that decision expanded the geographic regions in which chargers would be deployed, it resulted in the elimination of what we considered to be a key element to successful deployment of a mature and functional charging infrastructure. Specifically, under the modified approach Ecotality was no longer required to install Fast Chargers in a grid such that each of these units was accessible within a 10-mile range. Department officials stated that deployment in this type of configuration would have reduced the likelihood of utilization, a factor that was not documented in the technical evaluation. Changing this approach, however, altered the original intention to overcome consumers' driving range anxiety. In addition, the methodology regarding increasing utilization was not applied to the other type of commercial stations.

- As regions were added, infrastructure targets were lowered from 14,960 to 13,200 units. Furthermore, while the Department asserted that adding regions helped ensure the project would meet its goals and objectives, this strategic shift increased travel and administrative costs for the award. To compensate for increased costs associated with the change, the Department subsequently decided to lower the residential installation incentive for participants from $1,200 to $400 per unit. The Department stated that the effects of adding regions and lowering incentives on the rate of participation had been considered and discussed with Ecotality. Such analysis, however, was not documented and could not be validated. Department officials also stated that Ecotality had significantly exceeded the residential participation goals in the project and participation had not been adversely affected by the incentive reduction. However, ultimately the number of charging stations installed through the project was reduced, which was the basis of the award. Beyond the information regarding participation, the lack of analysis by the Department or Ecotality prevented us from determining whether the reasoning behind these changes was sound and in the best interest of U.S. taxpayers.

- Changes to the overall deployment plan and extensions of the project's period of performance may have impacted the quantity and perhaps the overall quality of usage data gathering and analyses – one of the primary purposes of the project. Initially, the milestone for completing infrastructure deployment was December 2011, with data collection and the award ending in April 2013. In order to provide time for installation of the charging stations in additional regions and compensate for poor market conditions, the Department extended the infrastructure deployment through September 2013, with the project ending in December 2013. Because of this change, the quantity and distribution of data originally planned for collection, which consisted of at least 16 months of data from each installed unit, was altered. Based on Ecotality's revised installation schedule, only about a year or less of data would be collected from about 3,300 of 13,000 installed Level 2 units, or about 25 percent of the units. Further, for the Fast Chargers, which were originally scheduled to have been installed by June 2011, about 70 percent remained to be installed during 2013. Department officials told us that Ecotality's revised schedule would extend the reporting time for units that had been installed earlier in the project and that the reduced data from some stations would not compromise the analyses to generate lessons learned and best practices for future electric vehicle deployment. However, the Department had not formally analyzed the effects of the decreased data collection and analysis period for a significant percentage of installed units – those installed near the end of the project. Therefore, we could not determine the overall effects and whether the change would skew data analyses.

In another case, the Department and Ecotality decided not to make changes to the plan that may have improved project performance. Specifically, we found:

- Utilization of many charging stations located at commercial sites was limited. Ecotality had analyzed data from individual charging units and qualified them as high, medium or poor performers based on usage per week. As of October 2012, poor performers represented about 78 percent of units in Memphis, 74 percent of units in Washington, DC, and around 60 percent of units in Phoenix, Tucson, Knoxville, and Dallas. The Department stated that utilization was discussed with Ecotality, including examples of either very high or low performing charge stations that may have identified issues or benefits for a particular location. Program officials, however, did not require Ecotality to adjust its commercial installation plan to account for identified poor performers. The Department told us that it did not do so because analyzing commercial installation locations was Ecotality's responsibility, and it recognized the importance of allowing the evaluation to be performed and for significant data to be gathered before drawing firm conclusions. The stated rationale from Department officials in this particular area appeared to be inconsistent with other actions taken with regard to the project. The Department had been actively involved in modifying the project plan and adding regions – an initiative that significantly increased startup costs and project management difficulties associated with geographic expansion. Furthermore, the Department stated that the orientation of Fast Chargers was adjusted to increase its likelihood of utilization.

Award Administration

The Department had not always ensured that Ecotality's awards were finalized in a timely manner. In particular, the Department:

- Significantly delayed finalizing Ecotality's awards, a problem that may have added to uncertainty about the project's scope and cost. Although it was originally planned for completion within 120 days, it took nearly 3 years to finalize the terms and conditions of the Recovery Act award. In addition, by the time the award was finalized in August 2012, Ecotality had already spent about $70 million of its $100 million grant. An additional $26 million award made in 2011 for vehicle testing also was not finalized until February 2013. Notably, financial assistance regulations do not stipulate a maximum amount of time or funding limitations for finalizing awards. Also, as an offsetting control, the Department required Ecotality to submit supporting documentation for reimbursements through these awards. Department officials attributed delays with the Recovery Act award to items outside their control, including an accounting system review and project adjustments requested by Ecotality. Once Ecotality had spent nearly 70 percent of its Recovery Act funding, however, it would have been difficult to disallow cost-share contributions or direct expenditures if these items were later deemed to be unallowable by the Department.

Originally, Ecotality proposed procuring residential Level 2 charging units. However, because there was not a unit available that met project requirements, charger and network development costs were approved for Ecotality. However, the Department:

- Had not requested cost analyses of changes for Ecotality's charging units. Once Ecotality was approved to fabricate Level 2 units, the cost estimate per budgeted unit increased by about 57 percent over the course of the project. We also noted that Ecotality had not been required to fully analyze cost changes for Fast Chargers, which increased by about 140 percent per budgeted unit over the course of the project. Despite these significant changes, the Department had not requested or reviewed a formal cost analysis from Ecotality. Department officials stated that they were aware of updated costs for the charge stations early in the deployment phase and finalizing the project budget constituted their formal review. However, charging stations were already developed and deployed when the award was finalized in August 2012. Based on the significance of these changes, we believe this type of review was necessary to justify the effect on the project.

Additionally, we received inquiries from several sources expressing concern that the cost-share permitted by the Department for this project was inappropriate. While we did not specifically identify evidence indicating that the cost-share was prohibited under Federal regulations, we did note that the amount of cost-share permitted appeared to be fairly generous. Federal regulations permit recipients to use third party, in-kind contributions to meet cost-share requirements established in its financial assistance agreement with the government. For Ecotality's Recovery Act award, the Department approved about $69 million of Ecotality's $110 million required cost-share for participants' vehicle and internet usage. Specifically, the Department approved over $550 per month for each month a consumer's vehicle participated in the project, a value based on the entire purchase price of participating electric vehicles. The actual purchase price of the vehicle was borne entirely by the consumer and not Ecotality. The Department also approved a $17 per month value associated with internet paid for and provided by consumers. This amount was based on the avoided cost of providing an internet connection at certain participants' locations. While in-kind contributions that are directly proportional to value received are allowable, the vehicles and internet connections were purchased to satisfy personal needs of consumers, not solely for the project.

Department officials told us that they analyzed Ecotality's proposal and considered a number of factors prior to permitting the cost-share requested by Ecotality. Specifically, during finalization of the award, the Department had disallowed a portion of Ecotality's proposed cost-share for monthly vehicle mileage as well as insurance and licensing costs. Officials also noted that they effectively apportioned certain cost elements between Ecotality and the Government, and the cost-share arrangement had been reviewed by a price/cost analyst and approved by a contracting officer.

While we understand the unique nature of in-kind contributions and as such benchmarks would be difficult to develop, in our judgment, the amount allowed was overly generous. Considering that only usage data was essential for the project, permitting cost-share based on the entire purchase price of the vehicles involved and consumers' existing internet connections appeared to be excessive. We were unable to determine the impact denial or additional reductions in the proposed cost-share would have had on the project.

However, based on the totality of the circumstances, it appeared unlikely the project would have been consummated unless a cost-share arrangement of this nature had been in place. Specifically, without the allowance of such third party, in-kind cost-share valuations, Ecotality would have encountered a significant financial burden. This raises public policy issues, which were beyond the scope of this review.

Project Decisions

In addition to the issues previously outlined in our report, poor electric vehicle market conditions likely contributed to the problems we identified. At the time of the Recovery Act award, the Department recognized that achievement of infrastructure targets was an aggressive goal given market conditions. In fact, the Department originally established budget periods to evaluate the project's progress, but these technical decision milestones were later eliminated. Transportation electrification and reducing petroleum consumption was, and is, an important part of the Department's mission, however, and likely affected decisions relating to Ecotality. Furthermore, Ecotality's proposal was attractive in that it included large-scale vehicle infrastructure deployment, and was one of the only awardees with this type of project.

Department officials told us that the award took a long time to finalize due, in part, to delays in obtaining a review of Ecotality's accounting system by the Defense Contract Audit Agency and the overall workload of the Program resulting from the Recovery Act. Market factors – less than anticipated demand for electric vehicles – also likely impacted finalizing the grant. Officials indicated that they took action to modify the overall approach and extended project deadlines in response to changing conditions.

While the delays may have resulted in greater uncertainty for consumers and for the project as a whole, we could not identify a specific, cost-related impact. In fact, we noted that Federal officials took action to monitor costs incurred by Ecotality during the period before the grant was finalized by limiting payments to reimbursements for work completed. Our review of a sample of work for which Ecotality was reimbursed generally revealed that installations had been completed and corresponded to charges claimed under the award.

Finally, while a number of Federal regulations exist regarding the allowability of third party, in-kind cost-share contributions, we noted that the Program had not issued implementation guidance in this area. Officials told us they believe their policies and procedures for evaluating third party, in-kind cost-share contributions are adequate. These policies and procedures, however, lack guidance specific to how the Department should review and value third party in-kind cost-share contributions in determining allowability. Existing policies were not effective in preventing what we consider to be the allowance of an overly generous cost-share for this project. The lack of such guidance may also have contributed to certain inconsistencies in reviews of in-kind contributions that we observed. For example, while a large percentage of third party contributions were considered a concern in one award, this factor was not considered in another award.

Program Impact

The Department cannot demonstrate that it made informed decisions that had not adversely affected project objectives. Although the Department stated that award files included the rationale for changes to the project, we identified multiple examples in which analyses and documentation did not include the reasoning provided by the Department through conversations and contact. While we acknowledge that the Department had maintained and archived award documentation, an independent reviewer cannot understand the rationale behind important decisions made by Department officials, as required by Government internal control standards.

Additionally, the Department's weaknesses in oversight of administrative aspects of Ecotality's awards may have led to funding items that were not directly attributable to the grant. In particular, by not finalizing the awards in a timely manner, the Department was at increased risk of incurring costs that were unreasonable in relation to the scope of work and utilizing outside sources of funding that were unallowable.

Because of the importance of cost-share, it is imperative that the Department evaluates these contributions consistently to ensure fair and equitable approvals amongst different recipients and awards. Applying and approving generous valuation techniques for cost-share contributions sets a precedent that may expose the government to increased risk for future cost-shared awards. Further, blurring the lines of allocability and allowability moves cost-share contributions in a direction that diminishes the understood intent of cost-share.

RECOMMENDATIONS

Weaknesses in project management and award administration expose the Program and the Department to increased risk of fraud, waste and abuse. In order to improve project management and award administration, we recommend that the Assistant Secretary for Energy Efficiency and Renewable Energy:

1. Evaluate processes for monitoring awards to ensure changes to projects are supported and documented;

2. Review the process for finalizing awards, including the need to document the rationale for necessary exceptions; and

3. Revise guidance on third party, in-kind cost-share contributions to include details on how these costs should be evaluated and determined to be allowable.

MANAGEMENT REACTION

Management concurred with our recommendations and indicated that it had completed or initiated certain corrective actions. Regarding Recommendation 1, management stated it had reviewed the processes for monitoring grants and verified that all award documentation had been archived in the Department's system. It was noted that the process included a comprehensive due diligence review and typically includes detailed discussions to clarify or justify changes requested. Management commented that it does not have a process in place to request, collect, or archive historical data or information associated with the development and evaluation of alternatives by a recipient that occur prior to notifying a Contracting Officer in writing of a proposed project change. In addition, officials stated that this type of analysis is not required to be documented, and it is unlikely that recipients would be willing to provide this type of internal formulation and assessment of alternatives to the Department.

In regards to Recommendation 2, management commented that it had analyzed its process for finalizing awards and initiated efforts to create standardized timeframes for negotiation and finalization. Further, officials stated that they began a comprehensive assessment of grants management procedures in April 2012, which included developing standard operating procedures to streamline business operations and improve the effectiveness of project management. Management also noted that as part of a deployment planned for Fiscal Year 2014 on funding opportunity announcement management, standard timelines for award and other activities are included.

Department officials also concurred with Recommendation 3, noting that third-party cost-share should be thoroughly scrutinized and guidance would be developed. Officials commented that this guidance would ensure future in-kind cost-share allowances are not only in line with existing policies but are also more carefully scrutinized in terms of the overall value to the government and reasonableness of both the source and amount of in-kind cost-share.

AUDITOR COMMENTS

While we acknowledge management's position on Recommendation 1 that award changes were documented in the award system, we remain concerned about the lack of documentation on the Department's deliberative process for making project decisions. We identified instances where only the basic contract modifications representing the "final" decisions were included in the award files, and documentation of discussions/deliberations and the Program's analysis of alternatives had not been included. In the current resource-constrained environment, transparency and accountability for the Department's decisions takes on a greater degree of importance. As such, comprehensive assessments of alternatives, even internal considerations by recipients of Federal funding and the Department, are an important part of analyzing the underlying rationale for and supporting changes to awards. Furthermore, improving project management processes in this way would provide greater assurance for both independent reviewers and U.S. taxpayers. Consequently, we are concerned that the Department considers Recommendation 1 closed without further action and request the Department consider additional actions to implement our recommendation. Management's planned actions were responsive to Recommendations 2 and 3.

Management's comments are included in Appendix 4.

OTHER MATTERS

The Office of Inspector General received various complaints regarding overbilling for installations of electric vehicle charging stations included in a subsidiary of Ecotality, Inc.'s (Ecotality) American Recovery and Reinvestment Act of 2009 (Recovery Act) project. Specifically, the complaints alleged that a contractor installing electric vehicle charging units for Ecotality as part of the Recovery Act project overcharged participants and the Department of Energy (Department) based on the scope of work performed, improper billing, and price gouging. While we discovered information that could have understandably led to concerns with installation charges, the allegations were essentially unsubstantiated. We did, however, identify a form of "cost layering" that may have led to some of the overbilling concerns we received.

Specifically, we observed cost layering in the price that was billed to participants for charger installation. During our review, we selected a sample of 32 installation packages from the contractor alleged to have overcharged. Our review consisted of an examination of the actual labor paid for charger installations and the amount billed by the installing subcontractor to the contractor Ecotality employed to manage installation nationwide. We also reviewed the amount charged by the contractor managing the installation effort and identified the percentage markup applied to that billing. Based on this sample, we noted that the contractor increased quotes from their subcontracted installers by an average of about 40 percent. Additionally, installer quotes received by the contractor were nearly six times, on average, the actual wages paid for installation labor. These increases varied for each job, and we were unable to determine the individual percentage that was attributable to business costs versus profit margins. Because the charger was provided to the participant by the Government free of charge, virtually all of the markups appeared to be on labor costs.

The Department also received some of the complaints we reviewed pertaining to this contractor and concluded that costs were reasonable. In reaching its conclusion, the Department noted that prices varied based on the nature of each installation job as well as significant costs associated with Davis-Bacon wages and reporting required by the Recovery Act. The Department conducted a due diligence review on installation costs but had not requested the detailed labor costs we obtained for this contractor. Therefore, its review was based on the total charge for the installation, after markups were applied, and would not necessarily have disclosed the cost layering we identified. The Department, however, did note that it considered the impact of potential overcharging to be mitigated by the notice requirements used by the installation company. Specifically, participants were presented with the total cost of the installation prior to completion and could opt out of the program without penalty if they chose to do so.

The documentation we reviewed did not allow us to determine whether the level or amount of cost layering observed constituted price gouging. The practices we observed also appeared to be similar to other consumer, retail types of transactions where both the provider (actual installer) and the installation contractor applied markups. According to Federal regulations, vendors are not precluded from charging fee or profit, and these amounts were not excluded or limited within Ecotality's agreement with this contractor. Installation prices also varied due to the number, geographical locations, and cost structures of charging station installers. In addition, as noted by the Department, wage and reporting requirements specific to this project would affect the level of costs incurred by the contractors.

OBJECTIVE

The objective of this audit was to determine whether the Department of Energy (Department) had effectively awarded and managed funding to Ecotality, Inc. (Ecotality).

SCOPE

This audit was performed between October 2012 and July 2013, at the Department's Headquarters in Washington, DC. In addition, we conducted site visits to Ecotality and one of its contractors.

METHODOLOGY

To accomplish the objective, we:

- Obtained and reviewed relevant laws and regulations related to the financial assistance awards.

- Reviewed the funding opportunity announcement, merit review information, and selection documentation.

- Reviewed award files and analyzed the implementation of requirements included in the terms and conditions of the awards for three projects.

- Conducted onsite testing of books and records, including invoice review.

- Requested and reviewed a judgmental sample of 32 installation packages to determine how costs were adjusted across contractor levels. This sample was selected to include the most recently completed jobs at the time of our site visit. Because the sample was judgmental, we could not project to the population.

- Reviewed cost-share documentation and evaluations completed by Department personnel.

- Interviewed project officers, contracting personnel, and Department 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 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 *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 July 19, 2013.

PRIOR REPORTS

- Special Report on *The Department of Energy's Management of the Award of a $150 Million Recovery Act Grant to LG Chem Michigan Inc.* (OAS-RA-13-10, February 2013). The audit revealed that the Department of Energy (Department) had not managed work performed under the grant to LG Chem Michigan Inc. effectively. Despite expenditures of $142 million in American Recovery and Reinvestment Act of 2009 (Recovery Act) funds, Ecotality, Inc. had not yet achieved objectives in its project plan related to the production of battery cells and jobs created. In addition, LG Chem Michigan Inc. inappropriately claimed, and was reimbursed for, labor charges for activities that did not benefit the project. These issues occurred, in part, due to monitoring and oversight deficiencies.

- Audit Report on *Follow-Up on the Department of Energy's Implementation of the Advanced Batteries and Hybrid Components Program Funded under the American Recovery and Reinvestment Act* (OAS-RA-L-12-05, July 2012). This audit noted opportunities for the Department to improve its administration of the Advanced Batteries Program. Specifically, the Department could better define regulations governing the retention of documentation supporting procurement decisions, ensure recipients adequately safeguard equipment purchased with Federal funds and obtain and review required audit reports to ensure the sufficiency of internal controls and compliance with laws and regulations.

- Special Report on *The Department of Energy's Transportation Electrification Program* (OAS-RA-12-11, May 2012). At the time of the review, the Department had neither obtained nor reviewed required financial and compliance audits of the Transportation Electrification Program's six for-profit recipients and their reports on costs incurred under the grants. Specifically, the Department had not ensured that recipients had completed independent audits as required by Federal regulations. The Department had also not requested and reviewed cost reports to determine the allowability of costs as required by Federal regulations. Department officials began to take action to address identified issues. Therefore, no formal recommendations were made in the report.

- Audit Report on *The Department of Energy's Clean Cities Alternative Fuel Vehicle Grant Program Funded under the American Recovery and Reinvestment Act* (OAS-RA-12-12, May 2012). The Department had not always effectively managed the use of Recovery Act funding and other post-award aspects of the Clean Cities Program. Inadequate policies and procedures and ineffective oversight contributed to the grant administration issues identified. The Department relied, in large measure, on Clean Cities grant recipients to disclose conflicts of interest and to ensure costs incurred were reasonable without adequately monitoring this information. In total, about $5 million in direct payments to recipients and nearly $2 million in cost-share contributions claimed by recipients were questioned. Recommendations were made to the Department to proactively evaluate and address the significant risks inherent in overseeing a complex program involving numerous coalitions.

Department of Energy
Washington, DC 20585

July 9, 2013

MEMORANDUM FOR: RICKEY R. HAAS
DEPUTY INSPECTOR GENERAL
FOR AUDITS AND INSPECTIONS
OFFICE OF INSPECTOR GENERAL

FROM: KATHLEEN B. HOGAN
DEPUTY ASSISTANT SECRETARY FOR ENERGY EFFICIENCY
ENERGY EFFICIENCY AND RENEWABLE ENERGY

SUBJECT: Response to Draft Audit Report on "The Department of Energy Vehicle Technology Program's $135Million in Funding to Ecotality, Inc"

DOE welcomes the opportunity to continue to work with the Inspector General's Office to improve the Transportation Electrification Program award administration and specifically the Ecotality project.

Previous Audit

The Office of the Inspector General (OIG) conducted an audit of the Recovery Act Transportation Electrification Program, with emphasis on the Electric Transportation and Engineering Corporation (ETEC) project (EE0002194), hereafter referenced as Ecotality, from August 2010 through May 2012. The audit resulted in a suggestion to develop a system to track the receipt and review of required audits and annual cost reports. This suggestion was accepted by the DOE with resolution activities initiated nearly immediately. The results of the audit are documented within OAS-RA-12-11 entitled "Special Report on The Department of Energy's Transportation Electrification Program," dated May 10, 2012.

Program Background

The Energy Independence and Security Act of 2007, Section 131, Transportation Electrification authorizes the establishment of a competitive grant program for projects to encourage the use of plug-in electric drive vehicles or other emerging electric vehicle technologies. Through funding appropriated under the American Recovery and Reinvestment Act of 2009 (ARRA), the office of Energy Efficiency and Renewable Energy's (EERE's) Vehicle Technologies Program competitively selected eight projects to accelerate the development and production of various electric drive vehicle systems.

The Ecotality project is one of these eight projects. Its objective is to collect and analyze actual use data for approximately 8,300 plug-in electric vehicles and 13,200 chargers. The project has successfully deployed more than 8,400 vehicles (101 percent of planned deployments) and 12,000 chargers (over 90 percent of planned deployments), and has collected and analyzed data from twelve regions of the United States; these data come from more than 81 million miles of vehicle use and 1.7 million charging events equating to 14,461 Megawatt hours. These data will be used to generate lessons learned and best practices for future electric vehicle deployment.

EERE is committed to effective grants management and strives to implement sound management practices. The draft audit report made three recommendations. EERE concurs with all three.

RECOMMENDATION #1: *"Evaluate processes for monitoring awards to ensure changes to projects are fully analyzed and documented."*

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MANAGEMENT RESPONSE: CONCUR: EERE reviewed the processes for monitoring grants and verified that all award change documentation, including the change request or proposal from the recipient, rationale for the change, government review of the change, and approval of the request are archived in the Strategic Integrated Procurement Enterprise System (STRIPES).

This process includes a comprehensive due diligence review of the request by procurement and project management representatives, as well as legal counsel, National Environmental Policy Act experts, and cost/price analysts depending on the nature and impact of the change requested. The review process typically includes detailed discussions with the recipient in order to clarify and justify the change requested. The resultant analysis, significant comments, suggestions, concerns, concurrence, and other actions resulting from this due diligence review are then entered into a STRIPES file. In the event the grant agreement includes deliverables for analysis to support the decision process, those documents are also entered into STRIPES.

As noted in the IG report, DOE does not currently have processes in place to request, collect, or archive historical data or information associated with the development and evaluation of alternatives by a grant recipient that occur prior to the decision to notify the Contracting Officer in writing of a proposed significant change in approach or impact on expenditures to the project. This type of preliminary information typically involves the recipient's internal financial and business deliberations as well as discussions with project partners, vendors, team members, and stakeholders that are significant in the formulation and assessment of alternatives. These are not required to be documented in STRIPES, and it is unlikely that recipients would be willing to share these with DOE.

The IG should note that all decisions resulting in changes to the Ecotality project were documented, reviewed and approved in accordance with the process described above.

RECOMMENDATION #2: "Review the process for finalizing awards, including the need to document the rationale for necessary exceptions."

MANAGEMENT RESPONSE: CONCUR: EERE has analyzed the process for finalizing awards and initiated efforts to create standardized timeframes for award negotiation and finalization. In April 2012, EERE began a comprehensive assessment of its grants management procedures. The process includes development of standard operating procedures that streamline business operations and increase the effectiveness of project management processes. One of the business functions, funding opportunity announcement (FOA) management, is planned for EERE-wide deployment in FY14 and includes standard timelines for award as well as other activities. These standard timelines will form the basis for execution of many project management and procurement tasks in the future and will include processes for tracking exceptions for award activities and timelines that are not under DOE control.

RECOMMENDATION #3: "Revise guidance on third party, in-kind cost-share contributions to include details on how these costs should be evaluated and determined to be allowable."

MANAGEMENT RESPONSE: CONCUR: EERE concurs that third party in-kind cost share contributions must be thoroughly scrutinized in order to assure appropriate use of taxpayer funds. EERE has evaluated guidance concerning third-party in kind cost share and determined that current policies and procedures reflect government-wide standards for determining whether third party in-kind cost share is allowable. Cost sharing, whether cash or in-kind, must meet the same tests of allowability as applied to DOE funds. Cost sharing requirements are detailed in 10 CFR §§ 600.30, 600.123, 600.224, 600.225(g)(3), and 600.313. These requirements reference specific cost principles that provide detailed guidance on determining the allowability of project costs and associated cost share.

The Ecotality project included a cost-share structure that was proposed by the recipient, reviewed and analyzed, and determined to be allowable. However, EERE concurs that close scrutiny of in-kind cost-share is important, and will continue working to ensure that all cost-share arrangements are reviewed in accordance with generally accepted accounting policies and the appropriate Federal cost principles applicable to the recipient's organization. In addition, EERE is developing guidance to ensure future in-kind cost-share allowances will not only be in compliance with existing policies, but will also more carefully scrutinize the overall value to the government and reasonableness of both the source and amount of in-kind cost-share.

ESTIMATED COMPLETION DATES FOR CORRECTIVE ACTIONS:

RECOMMENDATION 1: "Evaluating processes for monitoring awards to ensure changes to projects are fully analyzed and documented.

ESTIMATED COMPLETION DATE: Since the action from the IG was to "Evaluate processes for monitoring awards" and we have completed the action, EERE concurs with closure, July 9, 2013.

RECOMMENDATION 2: "Review the process for finalizing awards, including the need to document the rationale for necessary exceptions."

ESTIMATED COMPLETION DATE: Since the action from the IG was to "Review the processes for finalizing awards" and we have completed the action, EERE concurs with closure, July 9, 2013.

RECOMMENDATION 3: "revise guidance on third party, in-kind cost-share contributions to include details on how these costs should be evaluated and determined to be allowed."

ESTIMATED COMPLETION DATE: EERE concurs with this recommendation. EERE will complete this action by September 30, 2013.

IG Report No. OAS-RA-13-29

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