



Issue Date February 1, 2011
--------------------------------

Audit Report Number 2011-NY-0001
-------------------------------------

TO: Donald J. Lavoy, Deputy Assistant Secretary for Field Operations, PQ

FROM: *Edgar Moore*  
Edgar Moore, Regional Inspector General for Audit, New York/New Jersey, 2AGA

SUBJECT: HUD's Oversight of Public Housing Authorities' Energy Performance  
Contracting in New York and New Jersey Had Not been Sufficient, but HUD Had  
Taken Appropriate Steps To Improve Controls

## **HIGHLIGHTS**

### **What We Audited and Why**

We audited the U.S. Department of Housing and Urban Development's (HUD) oversight of public housing authorities' (authority) energy conservation procedures through energy performance contracting (EPC) in the states of New York and New Jersey (Region 2<sup>1</sup>). We initiated the audit as part of the activities in our 2010 annual plan.

Our objectives were to determine whether HUD had adequate controls to ensure that (1) the costs of EPC had been properly repaid from the savings from energy conservation and/or add-on subsidy incentives, (2) utility cost savings on measurement and verification (M&V) reports had been reported in a timely manner, (3) utility cost savings were accurately calculated and energy service companies guaranteed utility cost savings were achieved, and (4) its EPC inventory data were accurate and complete.

### **What We Found**

HUD's Office of Public and Indian Housing (PIH) staff did not always adequately monitor the authorities with EPC or verify reported information regarding energy

---

<sup>1</sup> HUD's Region 2 consists of the states of New York and New Jersey.

cost savings. Specifically, HUD did not have adequate controls in place to ensure that (1) the costs of EPC had been properly repaid from the savings from energy conservation and/or add-on subsidy incentives, (2) utility cost savings had been reported on M&V reports in a timely manner, (3) utility savings had been accurately calculated and guaranteed utility cost savings were achieved, and (4) its EPC inventory data were accurate and complete. We attribute this condition to a lack of adequate controls and training of staff to ensure compliance with the published review procedures and regulations. Therefore, HUD may not have assurance that utility cost savings as guaranteed by the energy service companies was achieved. HUD's PIH headquarters officials were aware of the control weaknesses and had taken corrective actions including making organizational changes to provide additional training and technical support to field office staff and participating authorities.

### **What We Recommend**

We recommend that the Deputy Assistant Secretary for Field Operations (1) establish and implement controls to ensure that the costs of EPC have been properly repaid from the savings from energy conservation and/or add-on subsidy incentives, (2) establish and implement controls to ensure that M&V reports are submitted in a timely manner and that data are verified for accuracy, (3) establish and implement controls to verify that actual energy cost savings achieved are equal to or greater than the energy service companies' guaranteed energy savings and/or the add-on subsidy incentive amount, (4) provide mandatory training to the appropriate headquarters and field office staff and participating authorities to ensure that they comply with the current and upcoming regulations related to EPC, and (5) establish and implement necessary control procedures to ensure that the EPC database is complete and accurate.

For each recommendation without a management decision, please respond and provide status reports in accordance with HUD Handbook 2000.06, REV-3. Please furnish us copies of any correspondence or directives issued because of the audit.

### **Auditee's Response**

We discussed the results of our review with HUD officials during the audit and at an exit conference held on January 7, 2011. We provided the discussion draft to HUD on December 13, 2010, and requested a response by January 7, 2011. HUD provided a response on January 7, 2011. HUD officials generally agreed with the finding and recommendations.

The complete text of the auditee's response, along with our evaluation of that response, can be found in appendix A of this report.

## TABLE OF CONTENTS

---

Background and Objectives	4
Results of Audit	
Finding: HUD’s Oversight of Authorities’ EPC Had Not Been Sufficient, but HUD Had Taken Appropriate Steps To Improve Controls	5
Scope and Methodology	11
Internal Controls	13
Appendixes	
A. Auditee Comments and OIG’s Evaluation	15

## BACKGROUND AND OBJECTIVES

---

The progress report, entitled “Implementing HUD’s Energy Strategy,” which was published in December 2008 and submitted to Congress pursuant to Section 154 of the Energy Policy Act of 2005, indicated that the U.S. Department of Housing and Urban Development (HUD) had developed a benchmarking tool that would assist public housing authorities (authority) in addressing utility costs as they shifted to asset management and implemented a vigorous training and capacity-building initiative for energy performance contracting (EPC) in public housing. HUD reported total estimated energy savings of \$33 million for 2007, and \$32.2 million in estimated energy savings was from EPC in public housing. HUD also reported that it did not have tracking systems to monitor energy savings for its overall inventory of public and assisted housing.

EPC, HUD’s tool for the energy savings in public housing, is an innovative financing technique that uses cost savings from reduced energy consumption to repay the cost of installing energy conservation measures<sup>2</sup> without using other Federal funds from the Public Housing Capital Fund program or the American Recovery and Reinvestment Act of 2009 (ARRA). HUD listed the advantages of this financing technique as follows:

- The ability to allow authorities to achieve energy savings without upfront capital expenses;
- The ability to allow authorities to use the energy savings, which are guaranteed by the performance contractor (energy service company) for the costs of the energy improvements; and
- The ability to use a single contractor to perform necessary energy audits and retrofit and guarantee the energy savings from a selected series of conservation measures.

EPC is all about saving measurable quantities of energy. Under an energy service agreement,<sup>3</sup> an energy service company guarantees that after energy conservation measures are installed at an authority, energy use will be reduced by a quantifiable amount. In many respects, the success of an EPC project hinges on verifying that the amount of energy saved closely matches the energy savings estimated and/or guaranteed in the energy service company’s solicitation.

Our objectives were to determine whether HUD had adequate controls to ensure that (1) the costs of EPC had been properly repaid from the savings from energy conservation and/or add-on subsidy incentives, (2) utility cost savings had been reported on measurement and verification (M&V) reports in a timely manner, (3) utility cost savings were accurately calculated and energy service companies guaranteed utility cost savings were achieved, and (4) its EPC inventory data were compiled accurately and completely.

---

<sup>2</sup> According to 10 CFR (Code of Federal Regulations) 435.302(k), the term “energy conservation measure” means “a building material or component whose use will affect the energy consumed for space heating, space cooling, domestic hot water or refrigeration.”

<sup>3</sup> The energy service agreement is a written agreement between a housing authority and an energy service company that provides for the performance of services for the design, acquisition, installation, testing, operation, and when appropriate, maintenance and repair of energy conservation measures at one or more locations.

## RESULTS OF AUDIT

---

### Finding: HUD's Oversight of Authorities' EPC Had Not Been Sufficient, but HUD Had Taken Appropriate Steps To Improve Controls

HUD's Office of Public and Indian Housing (PIH) staff did not always adequately monitor authorities with EPC or verify reported information regarding the energy cost savings. Specifically, HUD did not have adequate controls in place to ensure that (1) the costs of EPC had been properly repaid from the savings from energy conservation and/or add-on subsidy incentives as required by regulations, (2) utility cost savings had been reported on M&V reports in a timely manner, (3) utility savings had been accurately calculated and guaranteed utility cost savings were achieved, and (4) its EPC inventory data were accurate and complete. We attribute this condition to a lack of adequate controls and a need for training of staff to ensure compliance with the published review procedures and regulations. Therefore, HUD did not have assurance that utility cost savings as guaranteed by the energy service companies had been achieved. HUD's PIH headquarters officials were aware of the control weaknesses and had taken corrective actions including making organizational changes to provide additional training and technical support to field office staff and participating authorities.

---

#### **An EPC Loan Was Not Repaid From Add-On Subsidy Incentives Included in the Operating Subsidy Funds**

Although the Long Branch Housing Authority (Long Branch) received add-on subsidy incentives, Long Branch officials used capital funds to pay the cost of financing the energy improvements made under an energy performance contract.

Since 2006, Long Branch had received a fixed annual add-on subsidy incentive of \$210,587 to repay more than \$1.87 million spent on energy improvements including new boilers and weatherization under an energy performance contract, which was part of bond proceeds (approximately \$4 million) initially approved under the Capital Fund Financing Program (CFFP). Therefore, for the period between 2006 and 2009, HUD paid add-on subsidy amounts totaling \$842,348 (\$210,587 for 4 years) to Long Branch for repayment of a loan related to EPC; however, the total amount of the bond was being repaid with annual capital funds.

After deducting the energy service company's total monitoring fee of \$138,544 (\$34,636 for 4 years), which was the direct cost related to an energy performance contract and had been paid by the low-rent program operating subsidy, the

remaining add-on subsidy amount of \$703,804<sup>4</sup> should have been used to amortize the cost of the loan for the energy conservation measures as required by 24 CFR (Code of Federal Regulations) 990.185(a)(3). However, Long Branch used capital funds to amortize the cost of the loan related to an energy performance contract.

Consequently, \$703,804 in capital funds was ineligible used for the contract debt service instead of being used to improve the quality and condition of the public housing units. This error was the result of HUD's inadequate monitoring and lack of verification of reported information regarding the type and amount of incentives.

### **Utility Cost Savings Were Not Reported in a Timely Manner**

According to the HUD Field Office Review Procedure – Energy Performance Contracting, dated July 31, 2005, and the updated current procedure, dated February 24, 2006, authorities are required to submit an annual M&V report to their HUD field office within 45 days of their fiscal year end, and the HUD field office is required to review and approve the annual M&V report within 30 days after receipt of the report regardless of the type of incentives. In addition, PIH Notices 2008-22 and 2009-16 require authorities to provide an annual M&V audit to the local field office reconciling the documented savings to the annual utility expense calculator (form HUD-52722<sup>5</sup>) and the authorities' operating subsidy calculator (form HUD-52723<sup>6</sup>). The PIH notices also indicate that the authorities' annual submission of the M&V report and reconciliation constitutes a certification that the savings are true and accurate. However, three of five authorities (Irvington, Long Branch, and New York City) reviewed did not receive the M&V reports from their energy service companies in a timely manner and did not submit the M&V reports to their HUD field offices, although the authorities had paid the companies an annual average amount of \$30,000 to prepare annual M&V reports.

Verification of the performance of energy conservation measures is critical to all parties involved in EPC because verification confirms that the project is a success and that energy conservation measures are saving funds. However, the Newark, NJ, and New York City field office staff did not have procedures to ensure that participating authorities' M&V reports were submitted in a timely manner. In addition, the Buffalo, NY, field office staff requested the M&V reports only for the authorities approved for add-on subsidy incentives and not for authorities that

---

<sup>4</sup> \$842,348 (\$210,587 for 4 years from 2006 to 2009) - \$138,544 (\$34,636 of annual energy service company's monitoring fee for 4 years) = \$703,804

<sup>5</sup> Form HUD-52722 is the utility expense level calculator (Microsoft-Excel), which is intended to provide guidance and assistance in arriving at the utility expense level for an authority.

<sup>6</sup> Form HUD-52723 is the operating fund calculation of operating subsidy (operating expense analysis worksheet), which is intended to provide guidance and assistance in arriving at the eligible operating subsidy for an authority.

were approved for other incentives. This condition occurred because HUD field office staff was not familiar with HUD rules related to EPC. Therefore, HUD officials could not provide assurance that the annual utility expense information and savings reported on annual M&V reports had been properly reconciled with the annual utility expense reports and that the participating authorities were saving utility costs.

**Utility Cost Savings Were Not Calculated Accurately and Guaranteed Utility Savings May Not Always Have Been Achieved**

Some M&V reports documented inaccurate and overstated amounts of energy cost savings. For example, the Irvington Housing Authority (Irvington) provided the energy service company with the actual consumption data for fiscal year 2008 for 12 nonconsecutive months, and the company used these incorrect data to compute the cost savings for the fiscal year 2008 M&V report. Recomputation of Irvington's savings using the actual consumption data for the 12-month period revealed that the M&V report was overstated by \$47,131. These incorrectly reported savings were not corrected because no one verified the reported energy consumption data. Therefore, HUD did not have adequate procedures to ensure that authorities achieved the utility cost savings, estimated and guaranteed by the energy service company, due to the inaccurate reporting and lack of validation of the energy consumption data.

Verification of Long Branch's M&V report prepared by the energy service company revealed that Long Branch failed to reduce the utility saving calculation, although the equipment had been purchased with CFFP funds and only labor costs of \$87,100 had been charged to the energy performance contract. Since the amount charged for labor was one-third of the total cost of \$268,491 to install two steam boilers to one project, the amount of the savings allocable to the contract should have been one-third of the amount of the reduction in energy consumption costs. However, Long Branch officials reported all of the savings as being allocable to the contract and overstated the amount of savings by \$46,667. According to the HUD Field Office Review Procedure – Energy Performance Contracting, all equipment installed or removed with Federal funds (capital funds and CFFPs) must not be used to generate reported utility savings, or the saving calculations must be reduced to account for the use of these funds.

In addition, Long Branch officials failed to reduce the reported energy savings by the savings that resulted from units' being demolished. Instead, the M&V report showed the total decreased amount in utility costs for this project as the cost savings that resulted from EPC. PIH Notice 2006-06, Guidance on Energy Performance Contracts With Terms up to 20 Years, indicates that HUD will make

the appropriate adjustments to the amount of energy loan amortization subsidy if the number of units changes due to disposition or demolition. However, HUD could not make appropriate adjustments because of the inadequate reporting of energy savings that resulted from units' being demolished.

After Long Branch was approved for EPC, the authority also applied for the HOPE VI program to demolish one of five projects (162 of 515 units), which were scheduled to have energy improvements under the energy performance contract. Within 2 years after the completion of the contract, half of the 162-unit project had been demolished, and the other half was demolished a year later. According to the energy service agreement between the authority and the energy service company, the company was supposed to annually verify the occupancy of the project sites and compare it to the occupancy for the baseline period. If the occupancy changed by more than 3 percent in a given year, the energy service company was supposed to make an adjustment in calculating the actual consumption to obtain the accurate cost savings compared to the baseline. However, the company failed to adjust the actual consumption of water and the cost savings, although the cost savings for water were mainly from the reduced occupancy due to relocation of the tenants more than a year and a half before the demolition of the project. Without adjusting for the correct monthly occupancy, the water savings from the contract might not have been accurately computed or reported.

This condition occurred because HUD did not have adequate controls implemented to ensure that the reported energy savings were accurate and prevent energy improvements from being made for a building that would be demolished within 3 years after the energy improvements were completed. Consequently, the required utility cost savings may not have been realized since HUD had not implemented adequate procedures for ensuring that housing authorities submit accurate and timely M&V reports to be matched with annually submitted HUD forms—HUD-52722 (operating fund calculation of utilities expense level) and HUD-52723 (operating fund calculation of operating subsidy)—as required by PIH Notices 2008-22 and 2009-16.

Obtaining accurate and timely verification of the cost savings from an authority approved for an add-on subsidy incentive is crucial to HUD because regulations at 24 CFR 990.185(a)(3)(iii) require that the difference between the actual cost savings for any year during the contract period and the add-on subsidy should be offset against the authority's operating subsidy for the following year. Therefore, to hold the energy service company and authority accountable for the guaranteed energy savings in the future and ensure that the add-on subsidy amount for the next year is reduced if the required savings are not achieved, HUD needs to have procedures to ensure that the energy savings are accurately calculated and properly reduced for the energy improvements that were completed with the use of other Federal funds and the amount of savings that were attributable to disposed or demolished units.



## **EPC Inventory Data Were Not Accurate and Complete**

The HUD report submitted to Congress pursuant to Section 154 of the Energy Policy Act of 2005 in 2008 stated that in 2007, HUD documented an estimated energy savings of \$32.2 million in EPC in public housing. HUD's estimated \$32.2 million in energy savings in public housing was based on its inventory data. PIH Notices 2008-22 and 2009-16 require field offices to provide the Office of Public Housing Programs an update of the EPC inventory (the required cost, consumption, and ancillary data) for HUD's report to Congress, departmental energy action plan, and management goals. However, HUD's latest inventory data were not accurate and complete. Of five authorities selected for review from Region 2, the incentive types of Long Branch and Irvington were incorrectly reported and, therefore, the add-on subsidy incentive amounts for these two authorities were not documented. In addition, for the energy performance contract, phase I, of the Buffalo Municipal Housing Authority, the new financing term, which was extended from 12 to 20 years, and the total and annual repayment amounts due to refinancing had not been updated. Further, some information for other authorities, such as the term of the contracts, the amounts of the guaranteed and actual savings, the contract dates, or the first repayment dates, was missing. HUD's inadequate monitoring and weak control over maintaining accurate and complete EPC data for the participating authorities appeared to be the cause. Since the reported amounts of the energy savings, estimated or actual, must be supported with complete and accurate documentation, HUD needs to develop procedures to ensure that its inventory of public housing EPC data is complete and accurate.

## **HUD Took Corrective Actions**

A new "Energy Center" was created under the Office of Field Operations in January 2010. The Energy Center is tasked with developing guidance for field office staff and providing necessary training to headquarters and field office staff. The HUD Field Office Review Procedure – Energy Performance Contracting has been updated with new checklists and guidance to enable field office staff to understand the whole EPC process. The regulations at 24 CFR Part 990 were revised in 2009, and the regulations at 24 CFR Part 965 are being revised. HUD awarded two contracts—one for the East Coast and the other for the West Coast—for EPC review in November 2009. HUD officials stated that the tasks of these contractors included auditing of the existing energy performance contracts and conducting yearly verifications of energy cost savings; therefore, these reviews would function as a quality control process to verify the accuracy of existing data. These two EPC review contracts also required the contractors to provide additional training and technical assistance to HUD field office staff.

## Conclusion

HUD's PIH staff did not always adequately monitor authorities with energy performance contracts or verify reported information regarding the energy cost savings. Specifically, HUD did not always follow up with corrective action because it did not have adequate controls in place to ensure that (1) the costs of EPC had been properly repaid from the savings from energy conservation and/or the add-on subsidy incentives, (2) utility cost savings had been reported on M&V reports in a timely manner, (3) utility savings had been accurately calculated and guaranteed utility cost savings were achieved, and (4) its EPC inventory data were compiled accurately and completely. As a result, HUD could not provide assurance that utility cost savings as guaranteed by energy service companies had been achieved. We attribute this condition to a lack of adequate controls and training of staff to ensure compliance with HUD's regulations and guidelines. Nevertheless, HUD officials were aware of weaknesses in program controls and had taken corrective action including monitoring the previous energy performance contracts and making organizational changes to provide additional technical support to headquarters and field office staff and participating authorities.

## Recommendations

We recommend that the Deputy Assistant Secretary for Field Operations

- A. Establish and implement controls to ensure that the costs of EPC are properly repaid with energy cost savings or incentives and not with other Federal funds.
- B. Establish and implement controls to ensure that M&V reports are submitted in a timely manner and verified for accuracy.
- C. Establish and implement controls to verify that actual energy cost savings achieved are equal to or greater than the energy service company's guaranteed energy savings and/or the add-on subsidy incentive amount.
- D. Provide mandatory training to the appropriate headquarters and field office staff and participating authorities to ensure that they comply with the current and upcoming regulations related to EPC.
- E. Establish and implement the necessary control procedures to ensure that the EPC inventory database is complete and accurate.

## SCOPE AND METHODOLOGY

---

To accomplish the audit objectives, we performed the following steps:

- Obtained an understanding of the HUD's energy conservation program, especially EPC, through the review of HUD's regulations, policies, and guidelines.
- Reviewed prior audits and reviews of HUD's EPC with housing authorities including Office of Inspector General (OIG), Government Accountability Office, and HUD reports.
- Reviewed previous and current EPC review contracts and analyzed information and reports including the energy service agreements submitted to HUD by participating authorities and HUD's approval letters.
- Conducted interviews with HUD PIH field office and headquarters and authority officials.
- Selected five authorities and reviewed (1) their supporting documents for the procurement of their energy performance contracts (e.g., energy audit, construction, and monitoring); (2) the expense and/or obligation list and vouchers of the annual capital funds and ARRA funds; and (3) the actual amount of utility savings including the accuracy of the computation of the M&V reports, their supporting utility statements, and the forms for calculating the operating subsidy (form HUD-52723), the utility expense level calculator (form HUD-52722), and the adjustment for utility consumption and rates (form HUD-52722-B).

We performed our audit fieldwork from January through August 2010 at the Newark, NJ, New York City, NY, and Buffalo, NY, field offices and at five authorities: Long Branch and Irvington in New Jersey and New York City, Buffalo, and Binghamton in New York.

According to HUD's EPC inventory data as of February 2009, there were 18 authorities that had completed EPC in Region 2. The total energy performance contract amount of housing authorities approved for frozen rolling base incentive was \$62.8 million, and the total contract amount of housing authorities approved for add-on subsidy incentive was \$32.3 million.

We selected five authorities, which completed their energy performance contracts during our audit period. Of nine authorities with at least one phase of the contract approved for frozen rolling base incentives, we selected two authorities (Buffalo Municipal and Binghamton) with a total contract amount of \$26 million. Of 10 authorities with at least 1 phase of the contract approved for add-on subsidy incentives, we selected 3 authorities (Long Branch, Irvington, and New York City) with a total contract amount of \$18.4 million. Overall, we tested 7 of 23 contracts consisting of 4 of 14 contracts with add-on subsidy incentives and 3 of 9 contracts with frozen rolling base incentives. The results of our review only apply to the housing authorities selected and cannot be projected to the universe or population.

Our review covered the authorities' program years 2005 to 2009, but we extended the period as necessary.

We conducted the 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 that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# INTERNAL CONTROLS

---

Internal control is a process adopted by those charged with governance and management, designed to provide reasonable assurance about the achievement of the organization's mission, goals, and objectives with regard to

- Effectiveness and efficiency of operations,
- Reliability of financial reporting, and
- Compliance with applicable laws and regulations.

Internal controls comprise the plans, policies, methods, and procedures used to meet the organization's mission, goals, and objectives. Internal controls include the processes and procedures for planning, organizing, directing, and controlling program operations, as well as the systems for measuring, reporting, and monitoring program performance.

---

## Relevant Internal Controls

We determined that the following internal controls were relevant to our audit objectives:

- Program operations – Policies and procedures that management has implemented to reasonably ensure that a program meets its objectives.
- Validity and reliability of data – Policies and procedures that management has implemented to reasonably ensure that valid and reliable data are obtained, maintained, and fairly disclosed in reports.
- Compliance with laws and regulations – Policies and procedures that management has implemented to reasonably ensure that resource use is consistent with laws and regulations.
- Safeguarding of resources – Policies and procedures that management has implemented to reasonably ensure that resources are safeguarded against waste, loss, and misuse.

We assessed the relevant controls identified above.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, the reasonable opportunity to prevent, detect, or correct (1) impairments to the effectiveness or efficiency of operations, (2) misstatements in financial or performance information, or (3) violations of laws and regulations on a timely basis.

## Significant Deficiency

Based on our review, we believe that the following item is a significant deficiency:


- HUD's PIH staff did not always adequately monitor authorities with energy performance contracts and verify reported information as required (see finding).

# Appendix A

## AUDITEE COMMENTS AND OIG'S EVALUATION

### Ref to OIG Evaluation

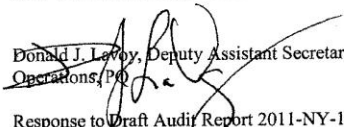
### Auditee Comments

  
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, D.C. 20410-5000

OFFICE OF THE ASSISTANT SECRETARY  
FOR PUBLIC AND INDIAN HOUSING

JAN 7 2011

MEMORANDUM FOR: Edgar Moore, Regional Inspector General for Audit,  
New York/New Jersey, 2AGA

FROM:   
Donald J. Levey, Deputy Assistant Secretary for Field  
Operations, PH

SUBJECT: Response to Draft Audit Report 2011-NY-100X: HUD's  
Oversight of Public Housing Authorities' Energy  
Performance Contracting in New York and New Jersey Had  
Not been Sufficient, but HUD Had Taken Appropriate Steps  
To Improve Controls

This memorandum details HUD's comments and requests your concurrence on the proposed corrective actions for each of the recommendations in the subject audit report as follows:

- (1A) Establish and implement controls to ensure that the costs of EPC have been properly repaid from the savings from energy conservation and/or add-on subsidy incentives,
- (1B) Establish and implement controls to ensure that M&V reports are submitted in a timely manner and that data are verified for accuracy,
- (1C) Establish and implement controls to verify that actual energy cost savings achieved are equal to or greater than the energy service companies' guaranteed energy savings and/or the add-on subsidy incentive amount and that action is taken to obtain the guaranteed savings when necessary,
- (1D) Provide mandatory training to the appropriate headquarters and field office staff and participating authorities to ensure that they comply with the current and upcoming regulations related to EPC, and,
- (1E) Establish and implement necessary control procedures to ensure that the EPC database is complete and accurate.

We appreciate the Inspector General's recommendations for program improvements. HUD is committed to establishing an internal control framework that provides HUD with the ability to monitor and ensure compliance with Federal and Departmental policy, guidance, and procedures for Energy Performance Contracts (EPC).

**Comment 1**

**Comment 2**

**General Comments:**

The Office of Field Operations (OFO) has undertaken several initiatives to ensure the PHAs are complying with Federal and HUD policy, guidance, and procedures regarding EPCs. The OFO continues to make progress on the rollout of its new Energy Center (EC). The EC has completed its Field Office (FO) guidance procedures for reviewing energy performance contracts (EPCs) that includes establishing standardized checklists to ensure consistency among field office reviews and compliance with EPC guidance. Additionally, four FO training sessions have been held with more scheduled in 2011 either through field office visits or webinars. OFO is also increasing their staffing level with four full time staff for two year assignments and detailing another four experienced EPC field staff to finalize guidance, address the backlog of project reviews and to train other field staff. Further, the OFO has established two contracts, one for the East and one for the West, where the contractors are assigned to conduct reviews of selected existing energy performance contracts and to assist the EC in its review of new EPC submissions. Both contractors are also required to provide additional training and technical assistance to HUD Field Office staff as needed.

HUD also recognizes that the measurement and verification (M&V) process to identify and validated EPC savings is an important and integral part of energy performance contracting. To this end, HUD has taken several actions to ensure that M&V is fully implemented and integrated into the EPC approval and verification process. Since 2009 the Energy Center has completely revised its M&V process, reflective of HUD energy policy, Federal Energy Management Program and commercially acceptable procedures. The Energy Center's M&V procedures continue to be refined and Field Office training will emphasize the new guidance and the importance of adhering to M&V reporting schedules. Additionally, HUD's EPC approval letters also emphasize PHA submission requirements for M&V reporting. Further, as part of OFO's EPC contract, two engineering firms assist the EC in reviewing existing energy performance contracts and performing yearly verifications of energy cost savings.

The Public Housing Management and Occupancy Division (MOD) is also revising and updating the Department's EPC policies and guidance, and the Guidebook, *Energy Performance Contracting for Public and Indian Housing* (The Green Book). These actions are expected to be completed in 2011. Pertinent regulations at 24 CFR Part 990 were also revised in 2009, and the revisions were included in updates to HUD's policies and procedures and other guidance. Additionally, the regulations at 24 CFR Part 965 is in the process of being revised and the applicable PIH notices and other documentation will be updated as needed.

Lastly, HUD has also established the Public Housing Conservation Clearinghouse (PHECC) as the official HUD site for EPCs <http://www.hud.gov/offices/pih/programs/ph/phecc/>. The PHECC is the single source for PHAs, Field Offices, consultants and ESCOs on the latest process improvements and guidance.



**Comment 2**

**Recommendation 1A.**

**Establish and implement controls to ensure that the costs of EPC have been properly repaid from the savings from energy conservation and/or add-on subsidy incentives.**

HUD agrees with this recommendation and will take the following corrective actions:

1. PIH, with concurrence by the Office of General Counsel, will require the PHA to sign a certification as part of a PHAs subsidy submission, acknowledging their understanding that the use of HUD funds to amortize an EPC debt is prohibited.
2. The current PIH Notice(s) on energy performance contracting and the Green Book will specifically include guidance on the prohibition of PHAs using HUD Capital, Operating, and Capital Fund Financing Funds to repay an EPC debt or other EPC obligations. Both documents are currently under revision and will be completed in 2011. In the interim, HUD will notify the PHAs of the prohibited use of HUD funds for repaying EPC debt or other EPC obligations.
3. Current EPC checklists used by the FOs for monitoring the PHAs' EPCs will be revised to ensure that the FOs are identifying any prohibited uses of HUD funds to repay EPC debt or other EPC obligations as part of their projected cash flow and funding source analyses in their initial review and approval process.
4. Field Office training curriculum will be revised to include training on methods and tools designed to prevent the improper use of funds.
5. As part of the current OFO EPC review contract, the contractors assessment of HUD's existing EPC inventory will include reviewing the EPC 's funding to ensure that it complies with all HUD policies, procedures, and guidance on energy performance contracting.

**Recommendation 1B.**

**Establish and implement controls to ensure that M&V reports are submitted in a timely manner and that data are verified for accuracy.**

HUD agrees with this recommendation and will take the following corrective actions:

1. Revisions to the EPC PIH Notice will include providing guidance to the PHAs on the M&V report schedule which would be required to be submitted by the PHAs as part of their M&V Plan submission.
2. EC staff, with the assistance of contractors, will conduct a review of existing EPCs to verify the M&V reports are submitted in a timely manner and that the reported information is accurate. This data will be used to update/revise EPC inventory

**Comment 2**

records and any deficiencies noted will be addressed by the appropriate Field Office. Additionally, the results of these reviews will be used to update/revise the training curriculum for the HUD field staff EPC training.

**Recommendation 1C.**

**Establish and implement controls to verify that actual energy cost savings achieved are equal to or greater than the energy service companies' guaranteed energy savings and/or the add-on subsidy incentive amount and that action is taken to obtain the guaranteed savings when necessary.**

**Comment 3**

While we agree with the intent of the recommendation, the recommendation should be revised to accurately reflect HUD's authority related to EPC contracts. HUD proposes the deletion of "**and that action is taken to obtain the guaranteed savings when necessary**".

The OIG's recommendation to include "**and that action is taken to obtain the guaranteed savings when necessary**" is not within HUD's statutory or regulatory authority to enforce. An EPC is a financing mechanism with a third party, most often a financial institution, to fund the design, development, construction, installation, commissioning and M&V activities described in a contract document (Energy Services Agreement) with an Energy Service Company (ESCO). The financing terms and the EPC contract are developed by the PHA in negotiations with a third party financial institution and an ESCo, respectively. HUD is not a party to the financing instrument or the contract with the ESCo. Any action requiring an enforcement of the guarantee provisions must be made by the PHA as a matter of legal recourse.

The performance guarantee is an important part of any energy performance contract with an ESCo. The guarantee ensures that sufficient savings are generated through energy conservation measures to meet debt servicing. HUD through its EPC guidance and training assists PHAs in structuring guarantees that protect the PHA and specifically addresses the importance of the guarantee during contract negotiations to ensure terms are favorable to the PHA in the event of unanticipated events, e.g. rise and fall of utility rates.

PHAs have the authority and discretion to negotiate their own EPC contract provisions, provided they comply with the general procurement provisions under 24CFR 85.36 and incentive provisions under 24CFR 990.185. HUD, however, can take remedial action against a PHA if it uses HUD funds to pay for EPC debt servicing regardless of the incentive type (e.g., add-on, frozen rolling base).

HUD, through the efforts of three independent organizational entities, is committed to improving the management and oversight of EPCs to ensure that actual energy cost savings are accurately reported and achieved. Accordingly, HUD is taking the following actions to address the recommendation.

1. Concurrent with the EPC activities of the EC and the MOD, the Public Housing Financial Management-Operating Fund Division is conducting a review of EPCs to include the proper use of HUD's incentives and reporting of EPC cost savings on the HUD subsidy eligibility forms. The review will be completed in 2011.
2. HUD will also initiate MOD – Revisions to PIH Notices, Green Book and M&V guidance, as well as, field staff and PHA training that will address the overstatement of EPC savings. The PIH Notice, M&V guidance and Green Book will be completed in 2011. Additionally, the contractors will review and validate the yearly utility consumption and energy savings as part of the EPC contractual requirements. The results of these reviews will also be used to identify training opportunities for the HUD field staff as needed.

**Recommendation 1D.**

**Provide mandatory training to the appropriate headquarters and field office staff and participating authorities to ensure that they comply with the current and upcoming regulations related to EPC.**

HUD agrees with this recommendation and is taking the following corrective actions.

1. HUD is revising its EPC PIH Notice and EPC Guidebook, as well as its field staff training curriculum to include the latest EPC guidance and lessons learned through this audit report. HUD will schedule Field Office training in 2011.
2. As part of any planned industry meetings or briefings, HUD will alert participants to specific areas to include but not limited to adherence to M&V reporting schedules, accurate reporting of savings and proper cash flow composition. HUD will make EPC information available to PHAs through webinar training in 2011. Additional outreach options (e.g., through the Public Housing Ecowise Newsletter) will also be explored.

**Recommendation 1E.**

**Establish and implement necessary control procedures to ensure that the EPC database is complete and accurate.**

HUD agrees with this recommendation and has taken actions to address the recommendation.

The Energy Center continues to make improvements to ensure that the EPC database is accurate, complete and auditable. Field Offices are aware of the new reporting requirements that are part of the EPC review/approval process after implementation of the new procedures in 2009. Energy Center checklists provide the needed "checks and balances" to document reviews and source records.

**Comment 2**

**Comment 2**

Earlier this year, the MOD conducted an initial assessment of the existing EPC database. HUD's Energy Center held a nationwide Field Office training webinar this past July that emphasized the purpose of the database, field definitions, and where to locate the appropriate field data. HUD's Energy Center in cooperation with the MOD will continue to refine the EPC database to reflect findings resulting from EPC reviews. Annually, Field Office will receive training regarding lessons learned from HUD's internal quality control reviews.

For new EPCs, Field Offices now retain complete data files starting with the initial PHA EPC project submission. Once approved, the EPC project is tracked by the Field Office and savings reviewed as part of an annual M&V assessment and in the annual subsidy eligibility submission process. In addition to the initial field office review, the Public Housing Financial Management-Operating Fund Division also reviews the PHAs subsidy eligibility submissions, including any EPC activity as part of HUD's budget development and subsequent appropriation allocation processes. Through shared drives, project records and EPC reports are available to the Field Offices, Energy Center, the MOD and the Public Housing Financial Management-Operating Fund Division for policy coordination and management oversight.

As noted in our response to Recommendation 1B, for existing EPC contracts, HUD has tasked its contractors with reviewing the existing energy performance contracts. This data will be used to update/revise EPC inventory records and any deficiencies noted will be addressed by the appropriate Field Office. Additionally, the results of these reviews will be used to update/revise the training curriculum for the HUD field staff EPC training.

Point of contact for any further questions related to the Audit Report 2011-NY-100X is Anthony Misercola, Office of Field Operations, Energy Center 716-551-5755 extension 5415.

### **OIG Evaluation of Auditee Comments**

- Comment 1** HUD officials' agreed with the audit and welcomed recommendations that improve the program. We acknowledge their comments and appreciate their cooperation throughout the audit and willingness to implement corrective actions.
- Comment 2** HUD officials' comments and proposed actions are responsive to the finding and our recommendations.
- Comment 3** HUD officials' proposed the deletion of "and that action is taken to obtain the guaranteed savings when necessary" because the EPC contract is signed between a housing authority and an Energy Service Company and is not within HUD's statutory or regulatory authority to enforce. We agreed with HUD official's comments and deleted the phrase from recommendation C. Nevertheless, HUD official's comments and proposed corrective actions are responsive to the finding and recommendation.