OFFICE OF INSPECTOR GENERAL

U.S. Department of Energy

AUDIT REPORT

DOE-OIG-24-23 July 2024

THE NATIONAL NUCLEAR SECURITY ADMINISTRATION'S ENERGY SAVINGS PERFORMANCE CONTRACT WITH NORESCO, LLC AT THE PANTEX PLANT

Department of Energy
Washington, DC 20585

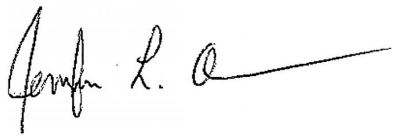
July 8, 2024

MEMORANDUM FOR THE ASSOCIATE ADMINISTRATOR, OFFICE OF PARTNERSHIP AND ACQUISITION SERVICES

SUBJECT: Audit Report on The National Nuclear Security Administration's Energy Savings Performance Contract With NORESCO, LLC at the Pantex Plant

The attached report discusses our audit of the National Nuclear Security Administration's (NNSA) Energy Savings Performance Contract (ESPC) with NORESCO, LLC at the Pantex Plant. ESPCs incorporate energy conservation measures, which are upgrades to equipment and controls intended to save energy and associated costs. However, the guaranteed savings identified in the NORESCO, LLC ESPC did not reflect the site conditions at the Pantex Plant. Due to the site conditions and NNSA's inadequate contract oversight, NNSA was in noncompliance with the ESPC from 2018 through 2021. As a result, NNSA approved $6,705,006 in payments for guaranteed savings without validating that the cost-effective energy savings were actually achieved. As a result of our audit findings, the current NNSA Contracting Officer took immediate action to begin addressing our concerns during the audit. These actions will save American taxpayers approximately $2.5 million. This report contains two recommendations that, if fully implemented, should help ensure that NNSA is spending taxpayers' funds effectively on ESPCs. Management fully concurred with our recommendations.

We conducted this audit from November 2022 through February 2024 in accordance with generally accepted government auditing standards. We appreciated the cooperation and assistance received during this audit.



Jennifer L. Quinones
Deputy Inspector General
Office of Inspector General

cc: Deputy Secretary
Chief of Staff

DOE-OIG-24-23

Department of Energy
Office of Inspector General

The National Nuclear Security Administration's Energy Savings Performance Contract With NORESCO, LLC at the Pantex Plant
(DOE-OIG-24-23)

WHY THE OIG PERFORMED THIS AUDIT

The Office of Inspector General has issued several audit reports identifying weaknesses in the Department of Energy's management of Energy Savings Performance Contracts. Specifically, we identified weaknesses in contract oversight over the installation, savings, and maintenance of energy conservation measures.

Because of the issues identified in previous audit reports, we conducted this audit to determine whether the National Nuclear Security Administration's (NNSA) Pantex Plant (Pantex) realized the guaranteed savings in NORESCO, LLC's (NORESCO) contract DE-AD52-06NA27281.

What Did the OIG Find?

Energy Savings Performance Contracts (ESPCs) are contracts between a Federal agency and an energy service company which allow a Federal agency to improve energy efficiency at no direct cost to the U.S. Treasury. ESPCs incorporate energy conservation measures, which are upgrades to equipment and controls intended to save energy and associated costs. However, the guaranteed savings identified in the NORESCO ESPC did not reflect the site conditions at Pantex. One example is that the NORESCO reports improperly included energy savings for buildings that had been demolished or sold. Although NORESCO identified noncompliant site conditions in its annual reports, NNSA's Contracting Office did not take action to update the contract to address the site changes. This occurred because of inadequate oversight of the contract and included a period in which there was no onsite ESPC Federal oversight. Repeated changes to NNSA Contracting Office personnel responsible for oversight of the Pantex ESPC resulted in oversight personnel being unaware of site conditions. As a result of our audit findings, the current NNSA Contracting Officer took immediate action to begin addressing our concerns during the audit. These actions will save American taxpayers approximately $2.5 million.

What Is the Impact?

Due to the site conditions and NNSA's inadequate contract oversight, NNSA was in noncompliance with the ESPC from 2018 through 2021. As a result, NNSA approved $6,705,006 in payments for guaranteed savings without validating that the cost-effective energy savings were actually achieved.

What Is the Path Forward?

To address the issues identified in this report, we have made two recommendations that, if fully implemented, should help ensure that future ESPCs are adequately managed.

BACKGROUND

The National Nuclear Security Administration (NNSA) uses Energy Savings Performance Contracts (ESPCs) to help reduce the overall energy used at sites run by its management and operating contractors. ESPCs are contracts between a Federal agency and an energy service company. Such contracts allow a Federal agency to undertake energy savings projects without first obligating capital funds or requesting special Congressional appropriations. These projects incorporate energy savings measures, which are upgrades to equipment and controls intended to save energy and associated costs. Under ESPCs, energy service companies have guaranteed that the savings generated will cover the costs of those projects over the terms of the contracts (up to 25 years). The Federal agency pays for the contract using the savings generated from the project and keeps all additional cost savings after the contract ends.

In 2005, NNSA awarded an Energy Savings Performance Contract (ESPC) to NORESCO, LLC (NORESCO) for the Pantex Plant (Pantex) valued at $55,217,112. The ESPC was initially comprised of four energy conservation measures (ECM). ECM 1 was an energy efficient lighting upgrade, which was comprised of changing outdated light fixtures, ballasts, and light bulbs with higher efficiency fixtures, ballasts, and light bulbs. In addition, ECM 1 was to generate energy savings by providing replacement light bulbs and parts for the duration of the contract. Together, ECM 1 was contracted to generate $571,838 of stipulated[1] guaranteed savings annually. ECM 2 was an Energy Management Controls System which would help control heating, cooling, lighting, and processing equipment. ECM 2 was contracted to generate $431,548 of stipulated guaranteed savings annually. ECM 3 consisted of chilled water and steam distribution system upgrades. ECM 3 was to install four large chillers that would replace smaller, outdated units. It also would replace leaky pipes, condensate return units, and steam traps on the steam distribution system. It was contracted to generate $841,835 of stipulated guaranteed savings annually. Lastly, ECM 4 was a dehumidifier replacement which worked in conjunction with the Energy Management Controls System and was contracted to generate $329,335 of guaranteed savings annually. In 2009, the contract was modified due to the management and operating contractor at that time installing chillers before NORESCO could complete all four ECM installations. As a result, NORESCO had to reduce the ESPC from its original value of $55,217,112 to $33,063,817. Specifically, the installation of non-NORESCO chillers hindered NORESCO's ability to install the chillers in ECM 3, which were essential to the installation of ECM 2 and ECM 4, resulting in those ECMs being terminated. It also meant that the NORESCO ESPC now only consisted of ECM 1, the lighting upgrades, and part of ECM 3 for the steam distribution plant upgrades.

Under 42 United States Code § 8287, Subchapter VII, an ESPC is awarded to a contractor for the purchase and installation of energy savings measures in a Government facility in exchange for a share of the energy savings achieved by the Government. The aggregate annual payments by a Government agency to both the utilities and the energy service company cannot exceed the amount that the agency would have paid for utilities without an ESPC. In addition, an annual energy audit is required to validate the energy savings achieved by the ESPC. Further, 10 Code of Federal Regulations (CFR) 436.36 requires that payments for ESPCs are to be made only by

[1] Stipulated savings are savings that are based on calculations at the beginning of the contract. The savings are based on projections of the quantity and the specification of energy usage of equipment installed.

appropriated funds made available to the agency for the payment of energy expenses and related operation and maintenance expenses that would have been incurred without the presence of the ESPC. Lastly, 10 CFR 436.37 requires that an energy baseline be established at the beginning of the contract and that the baseline is used in the annual energy audit to verify the guaranteed energy savings were achieved. However, the energy baseline is subject to adjustment due to physical changes to buildings, hours of use or occupancy, area of conditioned space, addition or removal of energy consuming equipment or systems, energy consuming equipment operating conditions, and weather (i.e., cooling- and heating-degree days).

A prior Office of Inspector General audit identified concerns with the NORESCO ESPC and NNSA oversight. In particular, we found: (1) NNSA entered into an ESPC with NORESCO at the Los Alamos National Laboratory, which included the installation of energy savings lighting equipment that was ultimately not installed; (2) NNSA paid NORESCO the full contracted amount on the Los Alamos National Laboratory ESPC although the company reported that it failed to meet guaranteed savings that were to be achieved from upgrading the thermostats; and (3) Los Alamos National Laboratory used different thermostat settings than what the ESPC specified for several buildings, resulting in NNSA not achieving the full savings NORESCO was paid for on the thermostat upgrades that were completed. Due to these concerns and the importance of ensuring energy savings are being achieved, we conducted this audit to determine whether NNSA's Pantex Plant realized the guaranteed savings in NORESCO's contract DE-AD52-06NA27281.

NONCOMPLIANT SITE CONDITIONS

NNSA could not provide reasonable assurance that NORESCO's ESPC at Pantex realized its guaranteed savings. Specifically, the guaranteed savings identified in the NORESCO ESPC did not reflect the site conditions at Pantex, and while the noncompliant site conditions were identified in the Measurement and Verification (M&V)[2] reports NORESCO sent to NNSA, NNSA's Contracting Office did not take action to update the contract to address the changes in the site conditions at Pantex.

For example, the M&V reports sent by NORESCO to Pantex included energy savings for buildings that had been demolished or sold. See Table 1. Specifically, 10 Pantex buildings were demolished during the life of the ESPC. The 10 buildings accounted for 6.18 percent of the total light fixtures in the ESPC. Additionally, one building was sold, which was 0.1 percent of light fixtures. Furthermore, one building was transferred from Pantex's ownership, which made up 0.01 percent of light fixtures. The total impact of the removed buildings is 6.29 percent of light fixtures for which Pantex was still receiving energy savings, which were in buildings that no longer exist.

[2] According to the Contracting Officer's Representative, Annual Verification reports are the end results of M&V inspections prepared throughout the year and sent to the energy service company by its contracted onsite representative. NORESCO's M&V board provides the annual energy audit details to be placed in the M&V report supplied to the Contracting Office.

TABLE 1

Impact of Demolished and Sold Buildings on NORESCO's ESPC

NORESCO Lighting Upgrades	Buildings	Percent of Buildings	Fixtures	Percent of Fixtures
Buildings Demolished	10	4.95%	634	6.18%
Buildings Sold	1	.50%	10	.10%
Buildings Transferred	1	.50%	1	.01%
Total Deviations from Contract	12	5.94%	645[3]	6.29%

Similar to the demolished buildings, NORESCO had identified in numerous M&V reports that the energy efficient light bulbs and fixtures had been replaced with LEDs by Pantex. As early as 2017, Pantex began installing an unknown number of LEDs and other non-NORESCO lights in buildings that were part of the ESPC. Specifically, as part of the ESPC, NORESCO replaced incandescent light bulbs with energy efficient light bulbs. However, over the life of the contract, as Pantex renovated buildings across the site, Pantex replaced the energy efficient light bulbs in the ESPC with LEDs.

Further, the M&V reports included savings from replacement light bulbs that had not been shipped to Pantex. Specifically, in 2018, Pantex performed an inventory of lighting parts, and based on the results of that inventory, Pantex requested NORESCO to stop shipping replacement parts due to a surplus in light bulbs. NORESCO complied with Pantex's request and notified NNSA's Contracting Office to initiate a modification order. However, NNSA's Contracting Office never completed the negotiation for the modification order. Therefore, NORESCO stopped shipments without NNSA's approval or a modification to the contract. According to 10 CFR 436.37 and Federal Energy Management Program, *Best Practices and Lessons Learned for Federal Agency ESPC Projects*, any changes to the baseline energy savings of a contract need to be approved through a contract modification; otherwise, the energy service company is not in compliance with the ESPC. No inventory on NORESCO replacement parts has been conducted since 2018. During our site visit, we found that the inventory provided by Pantex did not reflect a surplus. Instead, we saw a minimal amount of replacement parts. Pantex officials stated that they did not have enough lighting replacement parts[4] to last until the contract expires in 2028. In the end, NORESCO continued to claim energy savings since 2018 for replacement parts that it had not shipped to Pantex. NORESCO claimed up to $503,404 in operations and maintenance savings for the shipment of replacement parts from 2018 to 2021 for replacement parts that were not received by Pantex.

Furthermore, the M&V reports included energy savings from a steam distribution system that had an abundance of leaks. The steam distribution savings are dependent on the entire steam system working optimally.[5] For this ECM, NORESCO only installed 440 of the 1,850 steam

[3] LEDs further reduce the number of fixtures that are being maintained by NORESCO; however, we were not provided the number of LED fixtures installed in NORESCO-covered buildings.
[4] Replacement parts include ballast parts, light bulbs, and other miscellaneous parts used to repair fixtures.
[5] The steam system covers all Pantex but only a small portion was installed by NORESCO.

traps that were a part of the guaranteed savings of the ESPC. In addition to replacing the 440 steam traps, the other work on the steam distribution system that NORESCO performed consisted of repairing all visible leaks, replacing 30 condensate return units, and installing 160 isolation valves to bring the Pantex steam distribution system to original working order. However, the steam system at Pantex is a closed system that depends on all components of the steam system to be leak free and functioning properly. Therefore, according to the ESPC, it is imperative that NORESCO monitor the entire system to ensure optimal operation. We found the M&V reports had understated the condition of the steam distribution system. Specifically, the M&V reports stated that, on average, there was between 0.8 percent and 1 percent failure rate of the steam traps. In contrast, during our site visit, subject matter experts at Pantex reported the failure rate of the steam traps was between 5 percent and 6 percent. In addition, Pantex personnel reported they lost 60 percent of the water in the steam system when it should have only had a loss of 10 percent, and they stated this loss would greatly impact the savings generated from the steam distribution system. Further, NNSA's Production Office reported that it found an abundant amount of steam leaks and, to its credit, rejected the most recent M&V report as inaccurate. Furthermore, NNSA's Production Office stated that most likely the steam distribution system did not achieve the guaranteed savings identified in the M&V reports. According to the ESPC contract, while NORESCO provides oversight of the steam distribution system to ensure it is functioning properly, Pantex is obligated to perform the actual maintenance on the steam distribution system when NORESCO identifies that the system is not working optimally. However, during our site visit, we noted Pantex was unaware of its maintenance obligations.

While there were differences in the Pantex site conditions compared to what was contracted in the ESPC, it should be noted that NORESCO had notified NNSA contracting officials of the differences in numerous M&V reports. Specifically, NORESCO had notified NNSA in the M&V reports that Pantex buildings had been demolished; energy efficient lightbulbs had been replaced with non-NORESCO LEDs; a modification needed to be made to the ESPC to stop shipping light bulbs; and the steam distribution system had leaks. However, at the time of our audit, a modification had not been completed to address any of these conditions identified in the M&V reports. The lack of a modification is concerning because NORESCO can continue to claim energy savings until a modification is made to the ESPC by NNSA officials even when conditions at the site do not match the ones in the ESPC.

INADEQUATE CONTRACT OVERSIGHT

The guaranteed savings in the ESPC did not reflect the changed Pantex site conditions because of inadequate NNSA contract oversight. This included a period in which there was no onsite Federal oversight of the ESPC. Repeated changes to NNSA Contracting Office personnel responsible for oversight of the Pantex ESPC resulted in oversight personnel being unaware of site conditions. Despite NNSA Contracting Office officials signing off on the M&V reports, as having been reviewed and meeting all energy savings goals, we found that NNSA Contracting Office personnel were unaware of the site conditions that had been described repeatedly in the M&V reports. In addition, they were unaware of the degraded condition of the steam distribution system. Ultimately, NNSA Contract Office officials did not track and modify the contract in accordance with 10 CFR 436.37. This regulation states that a Federal agency or

contractor will perform an annual energy audit to determine the if the ESPC is achieving its annual energy savings. Further, it states that if something changes outside the energy service company's control such as changes to the buildings, use of the buildings, or removal of equipment, a modification to the contract and to the baseline would be needed. These changes are the exact conditions at Pantex. For example, NNSA Contracting Office officials were unaware of multiple conditions related to lighting issues at Pantex that were reported by NORESCO as early as 2017. They were also unaware of the number and locations of the demolished buildings. In addition, they were unaware that Pantex replaced NORESCO lighting that was installed as part of the ESPC. Further, they were unaware that NORESCO stopped shipping replacement parts for lighting, and they were unaware that NORESCO was claiming savings on the lights it had not shipped. NNSA Contracting Office officials were also unaware of conditions with the steam distribution system.

In addition, NNSA centralized all NNSA ESPCs from the NNSA Field Offices to NNSA's Contracting Office in Albuquerque. Further, according to the Contracting Office, it handles over 40 ESPCs with a staff of three people, which creates an excessive workload. This situation also occurred because NNSA's Contracting Office did not have a Federal representative onsite to witness the annual site verification to ensure an accurate inspection. In fact, it was unaware of when the NORESCO representative, who is responsible for performing the annual site verification, was onsite.

When we presented these concerns to NNSA Contracting Office officials, they agreed with the concerns and took immediate action to address them. Specifically, they sent a memorandum to NORESCO to initiate termination of the ESPC due to its being at risk of not generating guaranteed savings. Further, they have since added onsite personnel that will ensure that M&V inspections are taking place and are accurate. Furthermore, NNSA Contracting Office officials have rejected inaccurate M&V reports and cited many discrepancies in the steam distribution system.

NNSA'S APPROVAL OF ALMOST $7 MILLION IN PAYMENTS FOR UNIVERIFIED ENERGY SAVINGS

Due to the site conditions and NNSA's inadequate contract oversight, NNSA was in noncompliance with the ESPC from 2018 through 2021. As a result, NNSA approved $6,705,006[6] in payments for guaranteed savings that were not verified by NNSA through the required verification of M&V reviews from 2018 through 2021. Specifically, the measurements taken for the M&V reports use stipulated savings to calculate the guaranteed savings, and these calculations rely on an accurate representation of ESPC site conditions. However, the site conditions, such as the condition of the steam distribution system, have not always been accurately represented in the M&V reports. In addition, due to the inadequate contract oversight by NNSA, action was not always taken when discrepancies between the site conditions and the annual verification were identified. Specifically, NNSA is responsible, per Federal regulation, for validating that the guaranteed savings in the M&V reports were accurate. However, for

[6] The $6,705,006 of authorized payments was tabulated from the last approved payment schedule in Modification 10, which is the sum of scheduled payments for the years: 2018, 2019, 2020, and 2021.

approximately 4 years, there was no documentation to support that this validation was completed. As a result, NNSA was in noncompliance with the contract and paid $6,705,006 for guaranteed savings that had not been verified.

ACTIONS TAKEN BY CONTRACTING OFFICE

As a result of our audit, NNSA's Contracting Office took steps to fix some of the conditions. Effective October 2023, NNSA stopped all service activity for the NORESCO ESPC. This resulted in four remaining payments of the contract, valued at $7,691,037, that will not be paid out to NORESCO. In May 2024, the current NNSA Contracting Officer issued a final decision to terminate with a contract buyout of $5,170,142, using incremental payments. Due to the actions taken by NNSA, the amount after the buyout results in $2,520,895 of savings to American taxpayers.

RECOMMENDATIONS

We recommend that the Associate Administrator, Office of Partnership and Acquisition Services:

1. Direct NNSA's Contracting Office to strengthen its oversight role and ensure effective administration of ESPCs by:

    a. Validating the completion of the Pantex NORESCO ESPC contract termination process;

    b. Enhancing controls to ensure NNSA contract oversight reviews M&V reports and takes appropriate action;

    c. Monitoring when guaranteed savings are not being achieved and correcting any deficiencies;

    d. Implementing an active contract continuity plan for NNSA Contracting Office personnel who have oversight of ESPCs;

    e. Communicating roles and responsibilities among the managing and operating contractor, the energy service company, and NNSA during the term of the contract;

    f. Establishing onsite representation from NNSA's Contracting Office for future ESPCs; and

2. Direct the NNSA's Office of Partnership and Acquisition Services to exercise necessary oversight over the Contracting Office's verification and award practices for future ESPCs.

MANAGEMENT RESPONSE

Management fully concurred with our recommendations. Management stated that NORESCO and NNSA have agreed to terminate the contract and negotiated a termination cost. The contract will be officially terminated once funding is available. In addition, NNSA will enhance oversight and the review process of their M&Vs by requiring positive attestation from the Contracting Officer's Representative that a walkthrough of all ECM have taken place. Further, NNSA will develop a deliberate process to ensure continuity and proper training when new Contracting Officer's Representatives are assigned to an ESPC. Also, NNSA will ensure that roles and responsibilities are thoroughly discussed during the post-award conference. NNSA will also implement process enhancements to ensure the assigned Contracting Officer's Representative is located onsite. Finally, NNSA is developing an NNSA supplemental directive to establish the requirements, processes, and procedures for developing and implementing ESPCs within NNSA. All corrective actions are expected to be completed by December 31, 2024.

Management's comments are included in Appendix 3.

AUDITOR COMMENTS

Management's comments and corrective actions are responsive to our recommendations.

OBJECTIVE

We conducted this audit to determine whether the National Nuclear Security Administration's (NNSA) Pantex Plant (Pantex) realized the guaranteed savings in NORESCO, LLC's contract DE-AD52-06NA27281.

SCOPE

The audit was performed from November 2022 through February 2024 at Pantex in Amarillo, Texas. The scope of our audit covers Energy Conservation Measure 1 and Energy Conservation Measure 3 of the Energy Savings Performance Contract (ESPC) DE-AD52-06NA27281 at Pantex. The audit was conducted under Office of Inspector General project number A22AL016.

METHODOLOGY

To accomplish our audit objective, we:

- Reviewed applicable Federal laws and regulations, Department of Energy regulations and guidance, and Federal Energy Management Program best practices related to the administration of ESPCs from fiscal year (FY) 2005 through FY 2022.

- Reviewed all contract modifications for ESPC DE-AD52-06NA27281 from FY 2005 through FY 2022.

- Reviewed the Annual Verification reports also known as Measurement and Verification reports performed by NORESCO, LLC from FY 2009 through FY 2021.

- Reviewed As-Built reports for the NORESCO, LLC ESPC at Pantex.

- Reviewed the Facilities Information Management System ad hoc report of buildings dispositions and performed a side-by-side comparison to the As-Built reports to identify the number of buildings that have been demolished or sold.

- Performed a site visit of Pantex to assess the condition of the energy conservation measures in ESPC DE-AD52-06NA27281. We also verified that the buildings listed as demolished or sold in the Facilities Information Management System ad hoc report were no longer on Pantex property.

- Interviewed personnel from NNSA; Consolidated Nuclear Security, LLC; and NNSA Production Office to understand the management and performance of the energy conservation measures.

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 objective. We believe that the evidence obtained provides a reasonable basis

for our findings and conclusions. In particular, we assessed the internal control components and underlying principles significant to the audit objective. Specifically, we assessed the risk assessment component and the underlying principle of assessing fraud risk. We also assessed control activities and the underlying principle of implementing policies and procedures. Finally, we assessed the control activities, monitoring, control environment, and information and communication. However, because our review was limited to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit.

We assessed the reliability of data we received through: (1) witnessing the production of data reported, and (2) comparing that data against the data previously provided. We determined that the data was sufficiently reliable for the purposes of this report.

Management officials waived an exit conference on June 26, 2024.

- Audit Report on *National Nuclear Security Administration's Energy Savings Performance Contracts (DOE-OIG-18-07, November 2017)*. We identified that based on the energy savings measures in the Energy Savings Performance Contract (ESPC), Los Alamos National Laboratory (LANL) and the Y-12 National Security Complex did not always achieve the full energy savings under the contracts. Specifically, it was discovered that: (1) the National Nuclear Security Administration (NNSA) entered into an ESPC at LANL, which included the installation of energy savings lighting equipment that was not installed; (2) NNSA paid an energy service company the full contracted amount even though the company reported that it failed to meet guaranteed savings that were to be achieved from upgrading thermostats at LANL; (3) LANL used different thermostat settings than what the ESPC specified for several buildings, resulting in NNSA not achieving the full savings from the thermostat upgrades that were completed; and (4) a Y-12 National Security Complex ESPC has not achieved the full savings from one of its energy savings measures that involved reconnecting a condensate return system in a facility.

- Audit Report on *Energy Savings Performance Contract Review Board (OAI-L-16-04, December 2015)*. The review of the Sustainability Performance Office management of the Energy Savings Performance Contracts (ESPCs) Review Board identified an area in which the Review Board's responsibilities and procedures could be clarified to help ensure that the Department of Energy's ESPCs are in the Government's best interest. Specifically, we noted that some sites have demonstrated a reluctance to submit ESPC proposals to the Review Board because of concern over protecting procurement sensitive information. Action to clarify the Review Board's role in protecting the procurement sensitivity of ESPC proposals should enable the Sustainability Performance Office to better ensure that the Review Board receives ESPC proposals, identifies problems, and communicates issues prior to awarding ESPCs. The Office of Inspector General provided a suggested action to the Sustainability Performance Office to clarify and communicate the Review Board's responsibilities and processes to Department program offices and sites for protecting ESPC procurement sensitive information.

- Audit Report on *Energy Savings Performance Contract Biomass Project at the Oak Ridge National Laboratory (OAI-L-16-03, November 2015)*. The review of the ESPC-financed biomass project at the Oak Ridge National Laboratory (ORNL) identified an issue with the original terms and conditions of the ESPC that could have complicated the resolution process that ultimately resulted in demolishing and replacing the biomass plant with a natural gas system. In particular, per the terms of the contract negotiated in 2008, the Site Office was responsible for equipment repair or replacement of the biomass plant after the original warranty period expired. The ESPC stipulated that the biomass plant had a 1-year manufacturer's warranty that began at project acceptance. In March 2012, the Site Office extended a "conditional" project acceptance of the ESPC with the caveat that Johnson Controls complete several outstanding items. It was this conditional acceptance that led to the Site Office's and Johnson Control's opposing views as to whether the warranty period had started and if the plant was under warranty at the time the corrosion was discovered. Due to the nature of the conditional acceptance, the Site Office and Johnson Controls sought to reach a mutually acceptable resolution to the

failed biomass plant that resulted in the agreement to substitute the biomass plant with a natural gas boiler and leave other ESPC terms unchanged. The Office of Inspector General stated that it was important for the Department to understand the contract terms, performance responsibilities, warranty conditions, and financial risks associated with ESPCs, especially when the ESPC includes a new and innovative technology such as biomass.

- Audit Report on *The Department of Energy's Administration of Energy Savings Performance Contract Biomass Projects (DOE/IG-0892, August 2013)*. The review of the ESPC-financed biomass project at ORNL identified planning and operational issues with the project. Specifically, the ORNL Site Office had not: (1) required site characterization testing and mitigation of adverse conditions prior to awarding the ESPC; (2) mitigated the risk of bio-fuel shortages and cost fluctuations; and (3) verified the quantity of bio-fuel deliveries. The problems identified with the ORNL Biomass Plant were due, in part, to inadequate guidance and oversight. Notably, the Department lacked sufficient guidance for managing the construction of large-scale ESPC projects. Also, the Department had not developed a process to identify, document, and disseminate lessons learned from ESPC projects across the Department complex.

- Audit Report on *Management of Energy Savings Performance Contract Delivery Orders at the Department of Energy (DOE/IG-0822, September 2009)*. The audit revealed the Department had not always effectively used ESPC orders to achieve energy savings. Specifically, the Department had not: (1) ceased payments to the energy services company after projects had stopped generating savings; (2) verified the ESPC orders had generated the contractually required energy savings; (3) ensured equipment installed was appropriately operated and maintained; and (4) taken actions to include all costs necessary to implement the project when evaluating the project's cost-effectiveness. In addition, site offices had not ensured adequate management existed for individual orders; the Department had not implemented an effective training program for contract and technical support personnel; and the Federal Energy Management Program had not developed specific guidance regarding estimates of the costs of energy improvements.

- Inspection Report on *Los Alamos National Laboratory Steam Plant Energy Savings Performance Contract – Phase One (DOE/OIG-22-26, February 2022)*. We found that NNSA could not support $75 million of the $128 million in guaranteed cost savings identified in the LANL Steam Plant ESPC – Phase One. Specifically, the Los Alamos Field Office: (1) could not provide documentation to support that the operation and maintenance labor savings would be realized, putting $32 million in guaranteed energy savings at risk; (2) had documentation to support the initial electric baseline rate used to determine the guaranteed energy savings of the ESPC; however, declines in the electric rates before the contract was finalized put approximately $31 million in guaranteed energy savings at risk; and (3) could not provide sufficient documentation to support the 3 percent electric escalation rate used in the investment grade audit, putting an additional $12 million in guaranteed energy savings at risk.

Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585

April 29, 2024

MEMORANDUM FOR TERI L. DONALDSON
INSPECTOR GENERAL
OFFICE OF THE INSPECTOR GENERAL

FROM: JILL HRUBY

SUBJECT: Response to the Office of Inspector General (OIG) Draft Report *The National Nuclear Security Administration's Energy Savings Performance Contract with NORESCO, LLC at the Pantex Plant* (A22AL016)

Thank you for the opportunity to review and comment on the subject draft report. We appreciate the auditor's early engagement with the Contracting Officer, which identified the need to strengthen the Energy Savings Performance Contract controls. As noted in the report, NNSA has taken immediate and definitive action to address the OIG's concerns.

The attached management decision outlines actions taken and planned in response to the OIG recommendations. We have also provided technical comments under separate cover for your consideration to enhance the accuracy and clarity of the report. If you have any questions regarding this response, please contact Mr. Dean Childs, Director, Audits and Internal Affairs, at (202) 836-3327.

Attachment

Attachment

NATIONAL NUCLEAR SECURITY ADMINISTRATION
Management Decision

The National Nuclear Security Administration's Energy Savings Performance Contract with NORESCO, LLC at the Pantex Plant (A22AL016)

The Office of Inspector General (OIG) recommended that the National Nuclear Security Administration's (NNSA) Contracting Office strengthen its oversight role and ensure effective administration of Energy Savings Performance Contracts (ESPC) by:

Recommendation 1a: Validating the completion of the Pantex NORESCO ESPC contract termination process;

Management Response: Concur. As indicated in the audit report, NNSA's Office of Partnership and Acquisition Services (NA-PAS) initiated termination actions during the audit. NORESCO and NNSA have agreed to terminate the contract and negotiated a termination cost. The contract will be officially terminated once funding is available. This is expected to be completed by September 30, 2024.

Recommendation 1b: Enhancing controls to ensure NNSA contract oversight reviews measurement and verification (M&V) reports and takes appropriate actions;

Management Response: Concur. While the Contracting Officer Representative (COR) provided evidence that M&V reports had been reviewed, NNSA will enhance the M&V review process by requiring a positive attestation from the COR that a walkthrough of all Energy Conservation Measures has taken place, and that the M&V report is accurate and compliant with the task order requirements. The estimated date for completing this action is September 30, 2024.

Recommendation 1c: Monitoring when guaranteed savings are not being achieved and correcting any deficiencies;

Management Response: Concur. The enhanced M&V review process outlined in response to Recommendation 1b will help ensure timely identification of instances where guaranteed savings are not being met. Where guaranteed savings are not being achieved, NNSA will adjust contract payment schedules as necessary to recover overpayments and reflect a lower performance level, consistent with ESPC contract terms. These actions will be considered closed with the completion of dependent actions in Recommendation 1b.

Recommendation 1d: Implementing an active contract continuity plan for NNSA Contracting Office personnel who have oversight of ESPCs;

Management Response: Concur. NNSA will develop a deliberate process to ensure continuity and proper training when new CORs are assigned to an ESPC. This process will include signed delegations and annual reverifications, which have already been updated in the Contracting Office's self-assessment checklist. The estimated date for documenting and institutionalizing these changes is December 30, 2024.

Attachment

Recommendation 1e: Communicating roles and responsibilities among the management and operating (M&O) contractor, the energy service company, and NNSA during the term of the contract;

Management Response: Concur. When initiating an ESPC, NNSA establishes tri-party agreements between NA-PAS, the M&O Contractor, and the Energy Service Company to communicate roles and responsibilities. Going forward, NNSA has updated the Contracting Office's self-assessment checklist to ensure that the tri-party agreement is signed and executed prior to ESPC award. Additionally, NNSA will ensure that roles and responsibilities are thoroughly discussed during the post-award conference. NNSA considers this recommendation closed.

Recommendation 1f: Establishing onsite representation from NNSA's Contracting Office [i.e. COR] for future ESPCs;

Management Response: Concur. For future ESPCs, NNSA will implement process enhancements to ensure both the CO and Field Office Manager sign COR delegation memos, which also acknowledge the assigned individual is located on-site. The NNSA Contracting Office will then conduct an annual COR reverification to ensure continuity. These process improvements are expected to be completed by June 30, 2024.

Recommendation 2: Direct NNSA's Office of Partnership and Acquisition Services to exercise necessary oversight over the Contracting Office's verification and award practices for future ESPCs;

Management Response: Concur. NNSA is currently developing NNSA Supplemental Directive 436.1, *Energy Performance Contracts*, to establish the requirements, processes, and procedures for developing and implementing Energy Performance Contracts within NNSA. Among other things, the Supplemental Directive will require NA-PAS, NA-ESH, and the applicable field office to participate in Integrated Project Team discussions on Energy Conservation Measure selection, M&V, and risk assumption, as appropriate. NA-PAS, NA-ESH, and the field office will review findings from the annual M&V reports for status of performance. Additionally, NA-PAS, NA-ESH, and the Field Office will participate in discussions of change orders that may affect scope, energy savings, or contract terms throughout the life of the contract. These actions, combined with the enhanced oversight procedures outlined in Recommendation 1, should help ensure future ESPC contracts are effectively awarded and administered. The Supplemental Directive is expected to be finalized by December 31, 2024.

FEEDBACK

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