Follow-Up on Recommendations from Report No. 15-18, *Audit of the Department of Transportation's Energy Performance Contracts: Improved Oversight is Needed to Ensure Savings*

A Report to the Governor
and the Legislature of
the State of Hawai'i

Report No. 18-14
October 2018

OFFICE OF THE AUDITOR
STATE OF HAWAI'I

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Constitutional Mandate

Pursuant to Article VII, Section 10 of the Hawaiʻi State Constitution, the Office of the Auditor shall conduct post-audits of the transactions, accounts, programs and performance of all departments, offices and agencies of the State and its political subdivisions.

The Auditor's position was established to help eliminate waste and inefficiency in government, provide the Legislature with a check against the powers of the executive branch, and ensure that public funds are expended according to legislative intent.

Hawaiʻi Revised Statutes, Chapter 23, gives the Auditor broad powers to examine all books, records, files, papers and documents, and financial affairs of every agency. The Auditor also has the authority to summon people to produce records and answer questions under oath.

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To improve government through independent and objective analyses.

We provide independent, objective, and meaningful answers to questions about government performance. Our aim is to hold agencies accountable for their policy implementation, program management, and expenditure of public funds.

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We report our findings and make recommendations to the governor and the Legislature to help them make informed decisions.

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Follow-Up on Recommendations from Report No. 15-18, *Audit of the Department of Transportation's Energy Performance Contracts: Improved Oversight is Needed to Ensure Savings*

Section 23-7.5, Hawai'i Revised Statutes, requires the Auditor to report to the Legislature annually on each audit recommendation more than one year old that has not been implemented by the audited department or agency. This report presents the results of our review of eleven recommendations made to the Department of Transportation in Report No. 15-18, Audit of the Department of Transportation's Energy Performance Contracts: Improved Oversight is Needed to Ensure Savings, *which was published in December 2015.*

We found that DOT implemented eight of the recommendations; two recommendations were partially implemented; and one was not implemented as it was no longer applicable (N/A).

Why we did the 2015 Audit

We conducted the audit pursuant to Act 119, Session Laws of Hawai'i 2015, which required the Auditor to conduct an audit of the energy performance contracts of the Department of Transportation (DOT), including an evaluation of the terms and conditions for monitoring utility consumption, a determination of utility cost savings to the State, and payments to the contractor. In response to that request, we issued Report No. 15-18, *Audit of the Department of Transportation's Energy Performance Contracts: Improved Oversight Is Needed to Ensure Savings*.

DOT Airports Division's Energy Performance Contract

An energy performance contract is a comprehensive agreement in which an energy services company performs an investment grade audit and develops, designs, arranges financing for, installs, and often operates and maintains energy- and water-saving improvements for a customer. The energy services company is compensated with a portion of resulting cost savings, lease payments, or specified revenues. The level of payment depends on verified energy savings, energy production, and avoided maintenance and equipment replacement costs.

A key feature of a typical energy performance contract is that an energy services company guarantees a certain dollar amount of energy and water savings. If savings levels are not met, the energy services company pays the difference between the estimated and actual savings to the agency. Measurement and verification services help an agency and an energy services company ensure that savings guarantees and equipment performance levels are met. This savings guarantee places performance risk on the energy services company rather than the agency.

State agencies face increasing energy costs and the need to replace or upgrade aging, inefficient, and obsolete energy- and water-consuming equipment. Capital improvement and operating budgets have typically been inadequate to fund such upgrades. Energy performance contracts are an innovative way to use guaranteed energy and water savings to finance and build energy and water conservation measures.

Procurement of DOT's energy contract started in 2011, when the department issued an Invitation for Proposals (IFP) to solicit proposals for energy efficiency services and equipment at statewide DOT facilities. The IFP used a State Procurement Office list of pre-qualified energy service companies. Johnson Controls, Inc. (Johnson Controls) was selected by an evaluation committee with approval from the director of the Department of Transportation. Johnson Controls is a global provider of products and services that include energy efficiency systems for buildings.

In late 2013, DOT chose to implement $150 million in airport energy conservation measures proposed by Johnson Controls. Construction on the DOT Airports Division's energy conservation measures commenced in January 2014 and was completed in November 2016.

What we found in 2015

In Report No. 15-18, *Audit of the Department of Transportation's Energy Performance Contracts: Improved Oversight Is Needed to Ensure Savings,* we found flaws in the design and implementation of the project that undermined the energy contract's $518 million savings guarantee and weakened the division's ability to challenge or dispute any savings issues discovered after a 90-day annual savings report review period expired. Among other things, we found that the contract contained conflicting termination dates, which jeopardized savings guarantees. According to DOT budget documents, the energy contract proposal solicitation, and a news release announcing the project, the division's deal with Johnson Controls was for a duration of 20 years. However, we found that, because of a drafting oversight, the energy contract actually ended after 19 years. Although savings guarantee details are specified in Schedule P of the contract – which runs for 20 years, from January 2014 to December 2033 – the contract itself terminates in December 2032. As a result of these conflicts, a 12-month guarantee period encompassing nearly $60 million in guaranteed savings occurs after the contract itself terminates. Because of that conflict, Johnson Controls may not have been required to reimburse the state for any savings potential shortfall that occurred during that period.

We also found the division lacked the procedures and expertise needed to evaluate annual savings reports. The audit did not evaluate separate DOT energy savings contracts with Johnson Controls involving the Harbors and Highways Divisions because, at the time of the audit, those contracts had just been executed or were still in negotiations. However, we did recommend that the DOT director take steps to ensure that the Harbors and Highways Divisions' contracts did not contain the same problems found in the Airports Division contract.

What we found this year

Our follow-up on DOT's implementation of the recommendations made in Report No. 15-18, conducted between February and May 2018, included interviews with selected personnel, examining relevant documents and records, and evaluating whether DOT's actions appeared to address the recommendations. We found that DOT implemented eight of the recommendations; two recommendations were partially implemented; and one was not implemented as it was no longer applicable (N/A).

Definition of Terms

WE DEEM recommendations:

Implemented

where the department or agency provided sufficient and appropriate evidence to support all elements of the recommendation;

Partially Implemented

where some evidence was provided but not all elements of the recommendation were addressed;

Not Implemented

where evidence did not support meaningful movement towards implementation, and/or where no evidence was provided;

Not Implemented - N/A

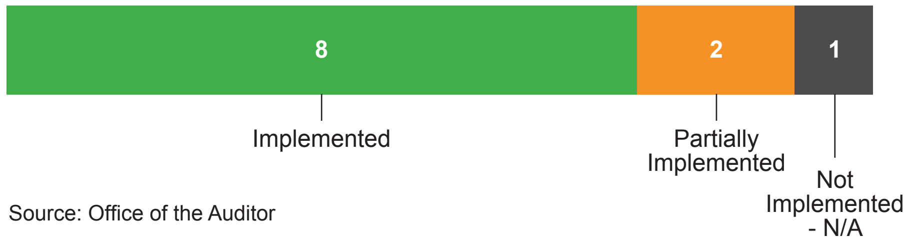
where circumstances changed to make a recommendation not applicable; and

Not Implemented - Disagree

where the department or agency disagreed with the recommendation, did not intend to implement, and no further action will be reported.

Exhibit 1

Audit Recommendations by Status



Source: Office of the Auditor

The first two of the following recommendations were to ensure that separate DOT energy performance contracts that had been recently executed, or were still under negotiation, did not contain flaws found in the Airports Division's contract. According to DOT, in July 2015, the Highways Division had executed a $60 million energy contract with Johnson Controls, and as of September 2015, the Harbors Division was negotiating a $26 million energy contract with Johnson Controls.

Recommendation 1

The director of transportation should review the DOT-Harbors and -Highways energy contracts with Johnson Controls to ensure they do not contain flaws found in the Airports Division's energy contract and revise those two agreements, as needed, to ensure that the duration of those contracts align with guaranteed savings schedules so that all savings are achieved within the contract term.

Implemented

Comments

DOT stated that the discrepancies found in the Airports Division's energy contract that resulted in nearly $60 million in guaranteed savings occurring after the contract expired had been addressed in the Harbors and Highways Divisions' contracts. This included ensuring that guaranteed savings schedules were aligned with contract terms. We reviewed the Harbors and Highways Divisions' energy contracts and found that the savings guarantee amounts fell within the term of the respective contracts.

Recommendation 2

The director of transportation should review the DOT-Harbors and -Highways energy contracts with Johnson Controls to ensure they do not contain flaws found in the Airports Division's energy contract, and revise those two agreements, as needed, to ensure that the contracts integrate State Procurement Office (SPO) guidelines calling for formal and written acceptance or rejection of deliverables, such as energy contract annual savings reports.

Implemented

Comments

We found that Section 5.3.2 of the Highways Division's $60.3 million energy contract, which relates to reconciliation, allowed for automatic acceptance of Johnson Controls' annual savings report if the Highways Division failed to respond within 90 days of its receipt of the report. We further found that the Harbors Division's $26.2 million energy contract contained the same provision. See Exhibit 2 for an example of the reconciliation language.

Exhibit 2

Excerpt from original Highways Division energy contract with Johnson Controls

> **5.3.2. Reconciliation**. Upon receipt of the Annual Savings Report, [the Highways Division] shall have ninety (90) days to approve or reject the Annual Savings Report. In the event that [the Highways Division] fails to respond within ninety (90) days from [Johnson Controls] providing the Annual Savings Report, the Annual Savings Report shall be deemed accepted.

Allowing acceptance of Johnson Controls' annual savings reports without explicit approval by the Harbors and Highways Divisions runs contrary to SPO guidelines that require formal and written acceptance or rejection of deliverables. Following our inquiries, DOT initiated the process to amend both contracts to eliminate automatic acceptance of the annual savings reports if DOT failed to respond within the respective response deadlines. Exhibit 3 below contains an excerpt of DOT's proposed amendment to the Highways Division energy contract dated July 24, 2018, which requires formal written acceptance of energy savings reports. The amendment to the Highways Division energy contract was executed on September 4, 2018. The Harbors Division's energy contract was similarly amended on June 18, 2018.

Exhibit 3

Excerpt from Highways Division's amended energy contract with Johnson Controls

> Upon receipt of the Annual Savings Report, [the Highways Division] shall, within ninety (90) days, provide written notice to [Johnson Controls] of [the Highways Division]'s acceptance or rejection of such Annual Savings Report. In the event [the Highways Division] has not provided such written notice within ninety (90) days, [Johnson Controls] may resubmit to [the Highways Division] the Annual Savings Report. If within thirty (30) days of the resubmittal, [the Highways Division] does not provide written notice to [Johnson Controls] of [the Highways Division]'s acceptance or rejection following such resubmission, [Johnson Controls] may pursue resolution under Section XXIV of this Agreement. Failure by [the Highways Division] to provide written notice shall not constitute acceptance of such Annual Savings Report.

Recommendation 3

The director of transportation should establish procedures for review and independent verification of annual savings reports delivered by Johnson Controls to ensure that such analysis is completed within required reconciliation periods.

Partially Implemented

Comments

Annual energy contract savings reports measure and verify whether the annual energy cost savings delivered by Johnson Controls meet or exceed guaranteed savings set forth in the contract. The Airports Division adopted a measurement and verification (M&V) report review procedure developed for State agencies by the Department of Business, Economic Development, and Tourism (DBEDT). Under the procedure, which took effect in December 2015, once the M&V report is received, the project manager shall coordinate with internal and contracted support resources to analyze the report and provide written notice to Johnson Controls within a 90-day reconciliation period. Despite these procedures, we found that only one of four such annual reports provided to the Airports Division had been accepted within the 90-day reconciliation period. The delays were due to the complex nature of the reports, according to the Airports Division's Engineering Program Manager. However, the impacts of such delays are reduced because, under the amended Airports Division's energy contract, the M&V report is no longer automatically accepted should the State fail to formally accept the report within 90 days.

Unlike the Airports Division, neither the Harbors nor Highways Divisions had adopted an M&V acceptance procedure by the end of our follow-up review. Under current contract terms, the Harbors Division energy contract's first annual savings report is due by November 30, 2018, and must be reviewed by February 28, 2019.

Under the Highways Division original energy performance contract, the first report was to be due by September 29, 2018, and DOT's review must have been completed by December 28, 2018. However, the issue is not as urgent at the Highways Division because that contract had been extended by 221 days with the installation of energy conservation equipment and services now scheduled to have been completed on August 21, 2018. The first savings report will be due 60 days later, then subsequently 60 days after each anniversary date. That report will serve as a means of determining whether the various energy savings measures installed by Johnson Controls, such as highway lighting, increase energy efficiency or reduce energy consumption at levels represented in the contract.

Both the Harbors and Highways Divisions said they planned to adopt an M&V procedure similar to that adopted by the Airports Division prior to the deadlines requiring Johnson Controls to submit the savings reports.

Recommendation 4

The director of transportation should ensure training is provided so that staff have sufficient expertise on measurement and verification processes, and other forms of performance and savings monitoring.

Partially Implemented

Comments

Airports Division staff were provided annual savings report review training on May 16, 2017, which was recorded for future use. Harbors Division staff also received the same training. The training included two-and-a-half hours of online webinars on evaluation of guaranteed performance, among other topics.

However, as of the end of our review in May, the training had not been provided for Highways Division staff, though the division planned to conduct such training prior to receipt of its first Johnson Controls savings report.

Recommendation 5

The Airports Division deputy director should amend the division's energy contract to align guaranteed savings with the contract terms and conditions while holding to the contract's $518 million savings guarantee.

Implemented

Comments

This recommendation called for DOT to address the discrepancy we found between the original contract term and savings guarantee schedule described above. DOT amended the Airports Division's energy contract on December 4, 2015, to clarify that the contract terminates one year later, i.e., at the end of 2033, without altering the overall energy savings guarantees contained in the contract.

Recommendation 6

The Airports Division deputy director should amend the division's energy contract to integrate State Procurement Office guidelines so that the acceptance or rejection of Johnson Controls' annual savings report is by formal and written means.

Implemented

Comments

We found that, subsequent to our 2015 audit, DOT amended its contract with Johnson Controls on December 4, 2015, to place responsibility for acceptance of the M&V report on Johnson Controls. Under the amendment, if the State does not accept the report, in writing, within the 90-day period, it is not automatically accepted and Johnson Controls must resolve any outstanding issues.

Exhibit 4
Airport solar panels

Photovoltaic panels on HNL rooftop, looking ‘Ewa

Source: Office of the Auditor

Recommendation 7

The Airports Division deputy director should review the energy savings measures in the contract with Johnson Controls to ensure the anticipated cost savings are reasonable and applicable throughout the contract term.

Not Implemented - N/A

Comments

We based this recommendation on a finding in Report No. 15-18 where we found that one of the energy savings measures called for in the contract would not generate $13.8 million in estimated savings. The Airports Division did not provide us with the recommended review of energy savings measures. However, the division did provide us with a November 9, 2016 Certificate of Final Completion, indicating that Johnson Controls completed all required work in the energy contract. Therefore, with the completion of the measures called for in the contract, this review is no longer applicable. Furthermore, all four annual savings reports filed by Johnson Controls through 2017 indicated that actual savings exceeded energy contract guaranteed savings for each period, which indicates that the anticipated cost savings were reasonable given the measures implemented under the contract.

Exhibit 5
Airports energy contract annual savings

Reporting period	Verified savings (in millions)	Guaranteed savings (in millions)	Surplus savings (in millions)
January 1, 2014 – December 31, 2014	$3	$1.9	$1.1
January 1, 2015 – December 31, 2015	$13.9	$11.8	$2.1
January 1, 2016 – June 30, 2016	$9.5	$9.2	$0.3
July 1, 2016 – June 30, 2017	$20.8	$18.8	$2
Total	**$47.2**	**$41.7**	**$5.5**

Source: Johnson Controls Inc. annual savings reports

Recommendation 8

The Airports Division deputy director should ensure staff are trained to understand measurement and verification processes and other forms of performance and savings so they can properly interpret Johnson Controls' annual savings report.

Implemented

Comments

The Airports Division's Engineering Program Manager said the three Airports Division employees responsible for M&V report reviews were provided the recommended training. Those attending included himself, a project manager, and the project manager's supervisor. The training included about two-and-a-half hours of video on topics such as evaluation of contract guarantee performance, use of data to increase savings, and ways to reduce operating and maintenance expenses.

Recommendation 9

The Airports Division deputy director should follow-through on plans to procure outside audit consultants to reconcile annual savings reports.

Implemented

Comments

The Airports Division reported that Contract No. 65621, in the amount of $250,000, was executed on April 6, 2017, with Mechanical Enterprises, Inc. We reviewed that contract, as well as its related solicitation notice and award letter and relevant work orders, and found that the contract provided the Division with Measurement and Savings Report review consulting services. Further, the one-year contract can be extended by up to two added one-year extensions, provided that the total contract cost does not exceed $750,000.

Recommendation 10

The Airports Division deputy director should ensure third-party consultants providing review and verification of Johnson Controls' annual savings reports are on contract with, or are directly accountable to, the division.

Implemented

Comments

The Airports Division reported that its contract with Mechanical Enterprises, Inc., Contract No. 65621, included provisions allowing for the review of savings reports. Our review of that contract, as well as its related materials, found that the contract provided the Division with Measurement and Savings Report review consulting services.

Recommendation 11

The Airports Division deputy director should establish procedures for review and independent verification of Johnson Controls' annual savings report to ensure the analysis is completed within the 90-day reconciliation period.

Implemented

Comments

The Airports Division told us that M&V review process procedures were established by DOT with assistance from Synchronous Energy Solutions, Inc. and DBEDT. We were provided a copy of the procedure, which was adopted December 4, 2015, and can be found at Exhibit 6. According to the procedure, once the M&V report is received, the Airports Division project manager is responsible for coordinating a response that includes formal acceptance or rejection within the 90-day reconciliation period. If the State does not accept the report within the 90-day period in writing, the report is not automatically accepted.

Exhibit 6

Airports Division M&V review procedure

For Project No. AS1060-15, Contract No. AIR-ESCO-14-001, Energy Savings Performance Contracting with Johnson Controls, Inc. (JCI), the Measurement and Verification (M&V) reports are due to the State 60 days after the end of the fiscal year performance period which occurs on August 29th of the calendar year. After submission to the State the project manager shall coordinate with internal and contracted support resources to analyze the report and provide written notice to JCI within the 90 day reconciliation period of acceptance or rejection of the M&V report.