ENERGY EFFICIENCY CONTRACTS 2019
MONITORING AND COST SAVINGS

PERFORMANCE AUDIT SERVICES
PROGRESS REPORT
ISSUED APRIL 8, 2020

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LOUISIANA LEGISLATIVE AUDITOR
DARYL G. PURPERA, CPA, CFE

April 8, 2020

The Honorable Patrick Page Cortez
President of the Senate
The Honorable Clay Schexnayder,
Speaker of the House of Representatives

Dear Senator Cortez and Representative Schexnayder:

This report provides the results of our performance audit of the three state energy efficiency contracts in effect as of June 30, 2019. These contracts include the Louisiana School for the Deaf and Visually Impaired (LSDVI), Southeastern Louisiana University (SELU), and the Louisiana Department of Corrections (LADOC).

The report contains our findings and conclusions. I hope this report will benefit you in your legislative decision-making process.

We would like to express our appreciation to the management and staff of LSDVI, SELU, and LADOC for their assistance during this audit.

Sincerely,

Daryl G. Purpera, CPA, CFE
Legislative Auditor

DGP/aa

EEC2019

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Louisiana Legislative Auditor

Daryl G. Purpera, CPA, CFE

Energy Efficiency Contracts 2019
Monitoring and Cost Savings

April 2020

Audit Control # 40190026

Introduction

Louisiana Revised Statute 39:1622 (E)(2) requires the Louisiana Legislative Auditor to conduct periodic performance audits of each performance-based energy efficiency contract entered into by a state agency and in effect on and after January 1, 2010. In accordance with this mandate, we performed a performance audit of the three state energy efficiency contracts in effect as of June 30, 2019. These contracts include:

- Louisiana School for the Deaf and Visually Impaired (LSDVI) with Johnson Controls, Inc. ("LSDVI - Johnson Controls")
- Southeastern Louisiana University (SELU) with Honeywell International, Inc. ("SELU - Honeywell")
- Louisiana Department of Corrections (LADOC) with Johnson Controls, Inc. ("LADOC - Johnson Controls")

The audit objective and results of our work are:

To determine if the energy service companies conducted their monitoring activities and achieved the cost savings required by their contracts as of June 30, 2019.

LSDVI - Johnson Controls. Johnson Controls, Inc. conducted its monitoring activities but did not achieve the annual cost savings required by the contract for Year 14. Johnson Controls will pay LSDVI $6,554, which is the difference between the savings guarantee and the actual savings, as specified in the contract.

SELU - Honeywell. Honeywell International, Inc. conducted its monitoring activities and achieved the annual cost savings required by the contract for Year 16.

LADOC - Johnson Controls. Johnson Controls conducted its monitoring activities and achieved the annual cost savings required by the contract for Year 6.

Appendix A details our audit scope and methodology, and Appendix B summarizes background information.

Objective: To determine if energy service companies conducted their monitoring activities and achieved the cost savings required by their contracts as of June 30, 2019.

Based on our analysis, Johnson Controls and Honeywell are in compliance with the monitoring requirements specific to their contracts. The energy service companies are providing the required cost-savings verification reports to the agencies. Johnson Controls did not meet its cost savings guarantee for the LSDVI - Johnson Controls contract. However, Honeywell met its cost savings guarantee for the SELU - Honeywell contract, and Johnson Controls met its cost savings guarantee for the LADOC - Johnson Controls contract. Each of these contracts is discussed in detail below.

LSDVI – Johnson Controls Contract

Contract Summary. On May 19, 2004, LSDVI entered into a contract with Johnson Controls for energy conservation equipment and consulting services. The term of the contract is 15 years with a total cost of $4,385,684. The contract specifies guaranteed savings of $4,421,960 that will be achieved through measurable savings of energy consumption, operational, and capital cost avoidance savings. Exhibit 1 summarizes the cost and savings guarantee terms of the contract.

Exhibit 1: Projected Financial Performance
LSDVI - Johnson Controls Contract

(A) Net Lease Payments	(B) Service Costs	(C) Total Costs (A+B)	(D) Energy Savings	(E) Operational Savings	(F) Capital Cost Avoidance Savings	(G) Total Guaranteed Savings (D+E+F)	(H) Projected Net Savings (G-C)
$3,285,739	$1,099,945	$4,385,684	$2,593,836	$936,180	$891,944	$4,421,960	$36,276

Source: Prepared by legislative auditor's staff using information from the LSDVI - Johnson Controls Energy Efficiency Contract.

Johnson Controls is in compliance with the monitoring requirement. The contract requires Johnson Controls to measure energy-related cost savings and provide a report on the cost savings to LSDVI within 60 days of each anniversary of the performance commencement date[1] or within 30 days of receiving the final electricity bill for the time period. Johnson Controls provides monitoring services for both the guaranteed cost savings and the equipment installed as part of this energy efficiency contract. Throughout the term of the agreement, or until the monitoring service is cancelled by LSDVI, Johnson Controls receives $15,677 per year for the portion of the service agreement that includes monitoring the associated energy and cost savings.

[1] The performance commencement date is the first day of the month after the month in which all equipment is installed per the contract.

LSDVI staff monitors energy consumption on a monthly basis by analyzing its energy bills to determine if any significant changes have occurred. LSDVI staff compares the energy consumption numbers in Johnson Control's cost-savings verification reports with the numbers from the energy bills to make sure Johnson Controls uses the correct numbers in its calculations. LSDVI uses the cost-savings verification reports to verify whether or not the guarantee has been met.

Johnson Controls did not achieve the annual guaranteed cost savings for Year 14 of the contract. The LSDVI - Johnson Controls contract contains a cost-savings guarantee for each year of the contract. To verify the accuracy of the cost savings in the cost-savings verification reports, we compared the energy consumption data in LSDVI's utility bills from July 2018 through June 2019 to the energy consumption data used by Johnson Controls to generate the annual cost-savings verification reports. The inputs used to generate the annual cost-savings verification reports for the LSDVI - Johnson Controls contract were reliable. Based on the cost-savings reports, Johnson Controls did not achieve the annual savings guarantee for Year 14 through June 2019. Johnson Controls will pay LSDVI $6,554, which is the difference between the savings guarantee and the actual savings, as specified in the contract.

Johnson Controls did not achieve the annual savings guarantee because of an unexpected 53% increase in water and sewer consumption from the previous year. Johnson Controls reported that the increase could be the result of an underground water leak or additional consumption due to water cooling tower blowdown, which was caused by saltwater intrusion into the Baton Rouge aquifer.[2] In response, LSDVI has worked to eliminate the possibility of leaks and installed chemical controllers on campus equipment to mitigate excessive blowdown of cooling towers. According to LSDVI, these changes have reduced water usage in the past six months.

Exhibit 2 is a summary of contract results to date, including whether the cost-savings guarantee was met for each year.

[2] According to the Federal Energy Management Program, cooling towers dissipate heat from recirculating water used to cool chillers, air conditioners, or other process equipment to the ambient air. Cooling tower blowdown occurs when water evaporates from the tower and dissolved solids remain in the recirculating water which can lead to corrosion problems and must be controlled by replacing the recirculating water with fresh water.

Exhibit 2: LSDVI - Johnson Controls Contract Cost-Savings Summary							
Year	**(A) Electricity Savings**	**(B) Gas Savings**	**(C) Water/Sewer Savings**	**(D) Operation Savings**	**(E) Total Actual Savings (A+B+C+D)**	**(F) Annual Guaranteed Savings***	**Savings in Excess of Guarantee (E-F)**
Installation (Nov 04 - Aug 05)	$44,412	$7,206	$3,799	$52,087	$107,504	$86,000	$21,504
Year 1 (Sept 05 - Jun 06)	84,717	35,962	1,445	100,806	222,930	240,887	(17,957)
Year 2 (July 06 - June 07)	111,602	86,641	12,522	124,026	334,791	289,064	45,727
Year 3 (July 07 - June 08)	130,441	69,969	23,989	125,641	350,040	289,064	60,976
Year 4 (July 08 - June 09)	125,797	51,666	23,352	119,832	320,647	289,064	31,583
Year 5 (July 09 - June 10)	79,517	59,866	27,190	124,259	290,832	289,864	968
Year 6 (July 10 - June 11)	120,919	56,648	17,882	122,305	317,754	289,864	27,890
Year 7 (July 11 - June 12)	100,906	35,010	15,422	125,352	276,690	280,541	(3,851)
Year 8 (July 12 - June 13)	111,262	47,279	28,112	124,528	311,181	289,064	22,117
Year 9 (July 13 - June 14)	121,685	57,634	32,528	119,206	331,053	289,064	41,989
Year 10 (July 14 - June 15)	110,748	42,718	38,436	121,044	312,946	289,064	23,882
Year 11 (July 15 – June 16)	117,117	35,120	41,135	126,039	319,411	289,064	30,347
Year 12 (July 16 – June 17)	120,091	30,591	46,961	125,123	322,766	289,064	33,702
Year 13 (July 17 - June 18)	99,394	50,986	42,053	126,689	319,122	289,064	30,058
Year 14 (July 18 - June 19)	82,549	21,558	50,109**	128,294	282,510**	289,064	(6,554)
Total	**$1,516,157**	**$688,854**	**$404,935**	**$1,765,231**	**$4,420,177**	**$4,077,796**	**$342,381**

Cost savings for the years highlighted in gray were reviewed in prior reports. The reports are available on the Legislative Auditor's website at http://www.lla.la.lgov.
*Year 7 included a reduction of $8,523 to reflect the fact that LSDVI was operating more buildings because the Louisiana School for the Deaf merged with the Louisiana School for the Visually Impaired after the contract was initiated. Modifications for Year 8 through Year 13 did not have a significant impact on the reported savings in excess of guarantee and were not included in the chart.
**Year 14 includes a savings modification of $17,280 to reflect the unforeseen increase in water usage.
Source: Prepared by legislative auditor's staff using information from LSDVI Cost-Savings Reports.

SELU - Honeywell Contract

Contract Summary. On December 19, 2001, SELU entered into a contract with Sempra Energy Services, now Honeywell, to design and install energy conservation measures and to provide monitoring and training services. The contract term is 20 years and has a total cost of $12,141,954 with projected savings of $12,581,651 which will be achieved over the duration of the contract.[3]

[3] Per the SELU-Honeywell contract, the Annual Energy Savings Guarantee equals the total lease payments. The total lease payments, over the term of the contract, equal $11,751,142. The contract lists the Total Projected Savings as $12,581,651.

Exhibit 3: Projected Financial Performance SELU - Honeywell Contract							
(A) Total Lease Payments	**(B) Service Costs**	**(C) Total Costs (A+B)**	**(D) Energy Savings**	**(E) Lighting Material Savings**	**(F) Mechanical Maintenance Savings**	**(G) Total Savings[3] (D+E+F)**	**(H) Projected Net Savings (G-C)**
$11,751,142	$390,813	$12,141,955	$11,823,501	$502,337	$255,813	$12,581,651	$439,696
Note: The calculations in this exhibit are based on rounded numbers. **Source:** Prepared by legislative auditor's staff using information from the SELU Energy Efficiency Contract.							

Honeywell is in compliance with the monitoring requirement. The SELU - Honeywell contract requires Honeywell to provide monitoring services on both the guaranteed cost savings and the equipment installed. As required by the contract, Honeywell monitors the energy savings and provides SELU with an annual performance report, typically issued within the first quarter of the calendar year, detailing the cost savings achieved for the prior year. Our evaluation of Honeywell's monitoring and the reliability of the inputs in the cost-savings report is based upon our review of the controls in place with SELU's energy monitoring system. Each report serves to identify cost savings achieved over the previous year relative to the agreed-upon baseline. SELU is required to pay Honeywell a fee for the monitoring work performed as specified in the contract. The fee is adjusted annually based on the Average National Consumer Price Index. For the first year following projection completion, SELU was required to pay a $27,608 fee for monitoring. In Year 16 of the contract, SELU was required to pay Honeywell $23,463 in monitoring fees.

Honeywell achieved the annual guaranteed cost savings for Year 16 of the contract. The SELU - Honeywell contract contains a cost-savings guarantee for each year of the contract. Based upon the cost-savings report, Honeywell exceeded the annual guaranteed savings for Year 16 of the contract through October 2019. SELU reported no issues with the reliability of the inputs used to generate the annual cost-savings verification reports. While SELU staff review monthly utility bills for energy usage and provide these to Honeywell for its cost savings verification report, SELU staff does not need the bills to know the energy usage on campus. This is because staff monitors real-time energy usage on the campus using a centralized energy monitoring system. Meters located in campus buildings allow staff to detect a spike in energy usage and investigate the reason for the increase. This system allows SELU to identify any inaccuracies in Honeywell's cost-savings report.

SELU has developed additional energy savings measures outside of the contract with Honeywell. For example, SELU began the process of switching to efficient LED light bulbs in buildings on the school's campus in calendar year 2014. This allows SELU to realize savings since LED light bulbs use less energy, but it also decreases labor costs because LED bulbs last longer and don't need to be changed as often. School officials stated that they have completely retrofitted four campus buildings and a softball field with LED lighting. Additionally, SELU's dormitories that operate on geothermal energy consume one-third of the electricity and one-half of the natural gas of its traditionally powered dormitories. These energy savings measures are beyond what is specified in SELU's contract with Honeywell and will further increase SELU's total energy savings over the life of the contract.

Exhibit 4 is a summary of contract results to date, including whether the cost-savings guarantee was met for each year. Overall, Honeywell exceeded the annual savings guarantees by $1,395,446 through October 2019.

Exhibit 4: SELU - Honeywell Contract Cost-Savings Summary						
Year	**(A) Energy Savings**	**(B) Lighting Material Savings**	**(C) Mechanical Maintenance Savings**	**(D) Total Savings (A+B+C)**	**(E) Annual Guaranteed Savings**	**(F) Savings in Excess of Guarantee (D-E)**
Interim (Feb 02 - Oct 03)	$691,729			$691,729		$691,792
Year 1 (Nov 03 - Oct 04)	613,252	$20,000	$10,185	643,437	$573,608	69,829
Year 2 (Nov 04 - Oct 05)	627,969	20,600	10,490	659,059	621,131	37,928
Year 3 (Nov 05 - Oct 06)	627,969	21,218	10,805	659,992	621,681	38,311
Year 4 (Nov 06 - Oct 07)	627,969	21,855	11,129	660,953	620,481	40,472
Year 5 (Nov 07 - Oct 08)	627,969	22,510	11,463	661,942	618,881	43,061
Year 6 (Nov 08 - Oct 09)	627,969	23,185	11,807	662,961	621,431	41,530
Year 7 (Nov 09 - Oct 10)	623,060	23,881	12,161	659,102	622,729	36,373
Year 8 (Nov 10 - Oct 11)	623,060	24,597	12,526	660,183	623,044	37,139
Year 9 (Nov 11 - Oct 12)	623,060	25,335	12,902	661,297	622,950	38,347
Year 10 (Nov 12 - Oct 13)	623,060	26,095	13,289	662,444	622,200	40,244
Year 11 (Nov 13 - Oct 14)	623,060	26,878	13,688	663,626	618,450	45,176
Year 12 (Nov 14 – Oct 15)	623,060	27,685	14,098	664,843	618,950	45,893
Year 13 (Nov 15 – Oct 16)	623,060	28,515	14,521	666,096	623,450	42,646
Year 14 (Nov 16 – Oct 17)	623,060	29,371	14,957	667,388	621,700	45,688
Year 15 (Nov 17 - Oct 18)	623,060	30,252	15,406	668,718	618,950	49,768
Year 16 (Nov 18 - Oct 19)	623,060	31,159	15,868	670,087	618,775	51,312
Total	**$10,675,426**	**$403,136**	**$205,295**	**$11,283,857**	**$9,888,411**	**$1,395,446**

Cost savings for the years highlighted in gray were reviewed in prior reports. The reports are available on the Legislative Auditor's website at http://www.lla.la.lgov.
Source: Prepared by legislative auditor's staff using information from the SELU Cost-Savings Reports.

LADOC - Johnson Controls Contract

Contract Summary. On September 22, 2011, LADOC entered into a performance-based energy efficiency contract with Johnson Controls. The contract term is 16 years. The original contract covered nine sites; however, the contract was amended in 2013 to compensate for the closure of Forcht-Wade Correctional Center and C. Paul Phelps Correctional Center.[4] The amendment reduced the total cost of the contract by $891,303 to $39,631,903 and the total guaranteed savings by $781,397 to $39,741,809. Act 51 of the 2017 Regular Legislative Session allowed LADOC to further amend its contract to deduct the guaranteed savings attributable to the closed sites. As such, LADOC and Johnson Controls amended the contract again on January 18, 2018, to reduce the total guaranteed savings by an additional $552,709.[5] The contract's amended total projected net savings is -$442,803 because LADOC incurred costs for

[4] The seven remaining sites are LADOC Headquarters, Dixon Correctional Institute, B.B. Rayburn Correctional Center, Elayn Hunt Correctional Center, Louisiana Correctional Institute for Women, David Wade Correctional Center, and Louisiana State Penitentiary.
[5] The amendment removed Phelps Correctional Institute from the Savings Measurement and Calculation Formula.

work Johnson Controls completed at Forcht-Wade Correctional Center and C. Paul Phelps Correctional Center before the agency closed the two sites, but no energy savings will actually be achieved.[6] Exhibit 5 summarizes the cost and savings guarantee terms of the amended contract.

Exhibit 5: Projected Financial Performance LADOC - Johnson Controls Contract							
(A) Net Lease Payments	(B) Service Costs	(C) Total Costs (A+B)	(D) Electricity and Natural Gas Savings	(E) Water Savings	(F) Operational Savings	(G) Total Guaranteed Savings (D+E+F)	(H) Projected Net Savings (G-C)
$33,079,706	$6,552,197	$39,631,903	$35,963,197	$945,948	$2,279,955	$39,189,100	$-442,803*

*The negative projected net savings is a result of LADOC incurring costs prior to the closure of Forcht-Wade Correctional Center and C. Paul Phelps Correctional Center but related savings will not be achieved as a result of the closure of the two sites. The Projected Net Savings does not take into account actual savings in excess of the guaranteed savings. See Exhibit 6 for the savings in excess of the guarantee through Year 6 which is $687,631
Source: Prepared by legislative auditor's staff using information from the LADOC Energy Efficiency Contract.

Johnson Controls is in compliance with the monitoring requirement. As agreed to in the 2013 contract amendment, LADOC will pay Johnson Controls a total of $6,552,197 for a service agreement, which includes measurement and verification, waste management compactor monitoring, and premium level services on identified facilities and equipment. The service agreement start date was March 1, 2013, and is paid in monthly installments that increase throughout the term of the contract. The total annual cost of Johnson Controls' service agreement for Year 6 was $427,312.

As part of the service agreement, Johnson Controls calculates the measured annual energy, operation, and maintenance savings achieved; reconciles the energy, operation, and maintenance savings with the guaranteed savings; and advises LADOC of whether there is a guaranteed savings shortfall or guaranteed savings surplus for the applicable guarantee year. As required, Johnson Controls provided LADOC an annual report that details this information for Year 6 of the contract.

Third-Party Monitoring. The Division of Administration (DOA), Office of Facility Planning and Control (FPC) contracted E/S3 Consultants, Inc. (E/S3) to serve as an independent third-party consultant on the energy efficiency contract between LADOC and Johnson Controls. E/S3 monitors measurement and verification services provided by Johnson Controls. Specifically, E/S3 reviews Johnson Controls' annual energy and costs savings/shortfall calculations, and measurement and verification methodology, as well as recommends adjustments to the baseline used to calculate cost savings.

DOA first entered into a contract with E/S3 on February 11, 2013, and the latest amendment to the contract is dated July 16, 2018, and covers three years. The cost for Year 2 of the contract is $18,216. The cost associated with the E/S3 contract is not included in the calculation of net cost savings because Louisiana Revised Statute 39:1622 requires that energy

[6] The LADOC - Johnson Controls contract contains an annual cost-savings guarantee for each year of the contract. Therefore, the negative projected net savings for the total contract term does not affect this guarantee. In addition, the projected net savings do not take into account actual savings in excess of the guaranteed savings.

savings companies pay a fee, not to exceed 2.5% of the contract, which goes into the Energy Performance Contract Fund to pay for contract oversight. The LADOC contract is the only existing energy efficiency contract with a third-party monitor.

Johnson Controls achieved the annual guaranteed cost savings for Year 6 of the contract. The LADOC - Johnson Controls contract contains a cost-savings guarantee for each year of the contract. Based on the cost-savings reports, Johnson Controls exceeded the annual savings guarantee for Year 6 through June 2019. The actual savings reported by Johnson Controls in its cost-savings verification report was independently reviewed by E/S3. According to E/S3, Johnson Controls exceeded the guaranteed savings for Year 6; however, the amount saved in Year 6 was approximately 75% lower than the amount saved in Year 5 of the contract. According to the E/S3, this reduction in energy savings appears to be driven by reduced savings related to natural gas, water conservation, and waste management. Additionally, E/S3 reports that Johnson Controls exceeded the guaranteed savings only after the non-routine adjustments were applied. Non-routine adjustments[7] were made to the baseline energy usage to account for new ice plants at the Louisiana State Penitentiary (LSP) and Elayn Hunt Correctional Center, the bagging plant and new air conditioner at LSP, and operation of facilities outside of the agreed-upon schedule in the contract which increased energy consumption.

Exhibit 6 is a summary of contract results to date, including whether the cost-savings guarantee was met for each year. Overall, Johnson Controls has exceeded the annual savings guarantees by $687,631 through June 2019.

Exhibit 6: LADOC - Johnson Controls Contract Cost-Savings Summary

Year*	(A) Electricity Savings	(B) Gas Savings	(C) Water/Sewer Savings	(D) Operation Savings	(E) Total Savings (A+B+C+D)	(F) Guaranteed Savings	Savings in Excess of Guarantee (E-F)
Construction (Jan 12 - Jun 13)	$370,885	$526,810	$95,553	N/A	$993,248	$559,951	$433,297
Year 1 (July 13 - Jun 14)	771,617	973,396	276,605	$143,901	2,165,519	2,294,181	(128,662)
Year 2 (July 14 - Jun 15)	799,337	1,009,879	274,351	143,901	2,227,468	2,335,772	(108,304)
Year 3 (July 15 – Jun 16)	797,568	1,240,544	283,352	143,901	2,465,365	2,340,543	124,882
Year 4 (July 16 – Jun 17)	855,445	1,334,776	272,890	143,901	2,607,012	2,383,060	223,952
Year 5 (July 17 – Jun 18)	969,694	1,190,433	235,103	143,901	2,539,130	2,426,427	112,703
Year 6 (July 17 – Jun 18)	1,028,645	1,117,338	210,599	143,901	2,500,483	2,470,661	29,822
Total	**$5,593,191**	**$7,393,176**	**$1,648,453**	**$863,406**	**$15,498,226**	**$14,810,595**	**$687,631**

Cost savings for the year highlighted in gray was reviewed in a prior report. The report is available on the Legislative Auditor's website at http://www.lla.la.gov.
Source: Prepared by legislative auditor's staff using information from LADOC Cost-Savings Report.

[7] Adjustments are applied to the energy baseline when calculating savings in order to compensate for factors that have changed since the original baseline for the contract was determined. Examples of non-routine adjustments include increase or decrease in facility size, increase or decrease in number of occupants, or use of facilities outside agreed-upon periods.

APPENDIX A: SCOPE AND METHODOLOGY

Louisiana Revised Statute 39:1622 (E)(2) provides that the Louisiana Legislative Auditor (LLA) shall conduct annual performance audits of performance-based energy efficiency contracts entered into by state agencies. LLA shall establish a written schedule for the execution of such performance audits, with the schedule posted on LLA's website no later than February 1 of each year.

Audits shall be conducted on each performance-based energy efficiency contract in effect on and after January 1, 2010. LLA shall coordinate with the Commissioner of Administration to develop a description of information to be included as part of each energy efficiency contract performance audit. In accordance with this legislative mandate, we performed a performance audit of the energy efficiency contracts currently in place as of June 30, 2019. The audit objective was:

To determine if the energy service companies conducted their monitoring activities and achieved the cost savings required by their contracts as of June 30, 2019.

To answer the audit objective, we conducted the following procedures:

- Researched and reviewed state laws on energy efficiency contracts.
- Researched and summarized various aspects of current energy efficiency contracts, including contracts held by Southeastern Louisiana University (SELU), the Louisiana Schools for the Deaf and Visually Impaired (LSDVI), and the Louisiana Department of Corrections (LADOC).
- Contacted LSDVI, SELU, and LADOC staff to determine the status of the state agency energy efficiency contracts in effect as of June 30, 2019, including any new contract amendments.
- Obtained cost-savings verification reports from the energy savings companies to determine compliance with the contract monitoring requirements.
- Obtained the Year 6 independent review report prepared by the third-party monitor (E/S3 Consultants. Inc.) for the LADOC - Johnson Controls contract.
- Used cost-savings verification reports to summarize the cost savings achieved for the energy efficiency contracts held by SELU, LSDVI, and LADOC.
- Communicated with officials at SELU, LSDVI, and LADOC to develop an understanding of the processes used to track and verify the energy consumption associated with the equipment installed as part of the contract.

- Compared the energy consumption data received from LSDVI to the energy consumption data used in the cost-savings verification reports to verify the accuracy of the energy consumption inputs used.

- Gained an understanding of SELU's energy monitoring system and controls in place over the system.

We conducted this performance audit in accordance with generally accepted *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

APPENDIX B: BACKGROUND

Louisiana Revised Statute (R.S.) 39:1622 provides that Louisiana state agencies are allowed to enter into performance-based energy efficiency contracts for services and equipment. The state agency awards a contract to an energy service company through a request for proposal process and the contract extends for a period equal to the lesser of 20 years or the average life of the equipment installed by the performance contractor. The energy service company provides equipment and services to the agency intended to reduce the agency's energy consumption.

Current Energy Efficiency Contracts. There are three energy efficiency contracts in effect as of June 30, 2019. These contracts include the following:

- Louisiana School for the Deaf and Visually Impaired (LSDVI) with Johnson Controls, Inc. ("LSDVI - Johnson Controls")
- Southeastern Louisiana University (SELU) with Honeywell International, Inc. ("SELU - Honeywell")
- Louisiana Department of Corrections (LADOC) with Johnson Controls, Inc. ("LADOC - Johnson Controls")

These contracts range from 15 to 20 years in length. Below is a summary of state energy efficiency contracts in effect as of June 30, 2019.

Active State Energy Efficiency Contracts
As of June 30, 2019

State Agency	Energy Service Company	Contract Initiation	Contract Length	Performance Commencement Date*	Total Cost	Total Guaranteed Savings	Projected Net Savings
LSDVI	Johnson Controls, Inc.	May 19, 2004	15 Years	September 1, 2005	$4,385,684	$4,421,960	$36,276
SELU	Honeywell International, Inc.	December 19, 2001	20 Years	November 1, 2003	$12,141,954	$12,581,651	$439,697
LADOC	Johnson Controls, Inc.	September 22, 2011	16 Years	July 1, 2013	$39,631,903	$39,189,100	$-442,803**

*****The first day of the month after the month in which all energy savings equipment is installed and operating per each contract, and the date that the first guarantee year and calculation of savings commences.
**The negative projected net savings is a result of LADOC incurring costs prior to the closure of Forcht-Wade Correctional Center and C. Paul Phelps Correctional Center before related savings could be achieved. The Projected Net Savings does not take into account actual savings in excess of the guaranteed savings which was $687,631 through Year 6 of the contract.
Source: Prepared by legislative auditor's staff using information from the LSDVI - Johnson Controls, SELU - Honeywell, and LADOC - Johnson Controls.

Monitoring. All three existing contracts, in accordance with Louisiana Administrative Code 34:V.2505(D), require that the energy service company use the International Performance Measurement and Verification Protocol standard to measure the financial performance of the respective contracts. The energy service companies provide the agencies with quarterly or annual reports throughout the term of the contract that summarize the contractor's performance relative to the guaranteed cost savings. These reports compare the actual energy consumed for the given time period to an agreed-upon energy consumption baseline to determine the amount of energy saved.

Cost Savings. R.S. 39:1622 (C)(1) requires energy efficiency contracts to include a method to establish their guaranteed cost savings. These savings, at a minimum, must ensure a total annual savings sufficient to fully fund any financing arrangement entered into to fund the contract. [8] In the event that the guaranteed savings are not met, the energy service company must pay the agency the difference between the guaranteed savings amount and the actual savings amount. This arrangement helps agencies finance equipment and system upgrades that they might otherwise not be able to afford.

[8] ACT 869 of the 2004 Regular Legislative Session established this cost savings requirement.