STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER
110 STATE STREET
ALBANY, NEW YORK 12236

THOMAS P. DiNAPOLI
COMPTROLLER

GABRIEL F. DEYO
DEPUTY COMPTROLLER
DIVISION OF LOCAL GOVERNMENT
AND SCHOOL ACCOUNTABILITY
Tel: (518) 474-4037 Fax: (518) 486-6479

August 2015

Charles J. Murphy, Superintendent of Schools
Members of the Board of Education
Island Trees Union Free School District
74 Farmedge Road
Levittown, NY 11756

Report Number: P7-15-40

Dear Dr. Murphy and Members of the Board of Education:

The Office of the State Comptroller works to help school district officials manage their resources efficiently and effectively and, by so doing, provides accountability for tax dollars spent to support district operations. The Comptroller oversees the fiscal affairs of districts statewide, as well as compliance with relevant statutes and observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations and Board of Education governance. Audits also can identify strategies to reduce costs and to strengthen controls intended to safeguard district assets.

In accordance with these goals, we conducted an audit of five school districts in Nassau and Suffolk Counties. The objective of our audit was to determine whether energy performance contracts (EPCs) entered into by school districts achieved the cost and/or energy savings projected by the vendor who executed the contract. We included the Island Trees Union Free School District (District) in this audit. Within the scope of this audit, we examined the District's EPC and reviewed energy consumption and costs for the period June 1, 2007 through March 31, 2013. This audit was conducted pursuant to Article V, Section 1 of the State Constitution and the State Comptroller's authority as set forth in Article 3 of the New York State General Municipal Law.

This report of examination letter contains our findings and recommendation specific to the District. We discussed the results of our audit with District officials and considered their comments, which appear in Appendix A, in preparing this report. District officials generally agreed with our recommendation. At the completion of our audit of the five school districts, we prepared a global report that summarizes the significant issues we identified at all of the districts audited.

Summary of Findings

The District will likely achieve the energy cost savings projected and guaranteed by the energy service company (ESCO) that executed the EPC. The energy cost savings are projected to total

approximately $6.43 million over the life of the EPC, while total project expenditures are approximately $6.33 million, resulting in a net savings of approximately $101,000. When grants and rebates are included, the District is projected to save a total of over $347,000. As a result of the 12 energy improvement measures installed in five buildings, the District's energy consumption has decreased. For example, an analysis of just three of the District's five buildings shows that use of heating oil decreased by 27 percent and use of electricity decreased by 20 percent in the first year after completion of the EPC, even though the temperatures experienced that year required a greater need for energy than in the base year. More than a third of the District's cost savings are a direct result of improvements to its light fixtures.

Background and Methodology

New York State Energy Law establishes procedures to be used by school districts in initiating and administering EPCs. An EPC is an agreement by an ESCO for the provision of energy services in which energy systems are installed, maintained or managed to improve the energy efficiency of, or produce energy for, a facility in exchange for a portion of the energy savings or revenues. EPCs are not subject to voter approval or competitive bidding requirements, and the length of the contract must not exceed the useful life of the equipment (which the New York State Education Department has established as 18 years). New York State Education Law (Education Law) requires that the ESCO agree to guarantee that the improvements will generate cost savings sufficient to pay for the project over the term of the EPC. This payback period is calculated using the simple payback method, which divides the total project cost by the projected first year energy cost savings.[1] The simple payback method does not take into account the time value of money, which discounts the value of future dollars relative to today's dollars in order to properly compare the economic benefits of competing long-range upgrade projects. Furthermore, the simple payback method does not take into account additional cost savings that a school district may continue to realize after the EPC ends as a result of the energy improvements. For this reason, school districts should establish procedures to monitor the cost savings achieved by the EPCs.

The District is located in Nassau County and operates five buildings. It has approximately 2,400 students and its general fund expenditures for the 2013-14 fiscal year totaled approximately $59.3 million. The District is governed by a seven-member Board of Education (Board). The Board is responsible for conducting the District's business within the State's laws and the New York State Commissioner of Education's regulations.

In August 2010, the Board entered into an EPC with an 18-year contract term from January 2013 through December 2031.[2] The State Education Department approved the project in May 2011 and the related project work, completed in December 2012, involved 12 facility improvement measures in the District's five buildings, including several upgrades to the District's boilers, lighting, heating, ventilation and air controls. The ESCO guaranteed an energy cost savings of $6,528,495 over the life of the EPC. The capital project cost of this EPC, excluding financing and ongoing maintenance and verification costs, totaled approximately $5 million.

[1] Education Law specifies that any State building aid attributable to the project cannot be included in the determination of cost savings.

[2] The EPC was amended on April 18, 2011.

To accomplish our objective, we interviewed District officials. We also reviewed the EPC to obtain the work scope, project cost, contract length, contracted ongoing maintenance and verification costs and guaranteed energy cost savings over the life of the project. We obtained utility data, including consumption, costs and rates for the EPC's base year, which was July 2008 through June 2009. We also obtained utility data for the first year after substantial completion of the EPC and compared the consumption and costs for this year to that of the base year to determine the first-year consumption and cost savings for the EPC. We then compared our calculations to the ESCO's first-year measuring and verification report to ensure what the ESCO had reported as actual savings was reasonable. Using the U.S. Department of Commerce's prescribed formula for projecting present value cost savings, we applied the U.S. Department of Energy's utility price indices to the base year and first-year actual energy costs to project the District's potential cost savings over the life of the EPC. We compared our projection to that which the ESCO had made using engineering industry standards to determine if the ESCO's projections appeared reasonable. We used our professional judgment to determine the reasonableness of the difference between our projection and the ESCO's, considering the differing calculation methods used. We also documented the lease payments to be made over the life of the contract. We determined the expenditures related to the EPC and subtracted them from the total cost savings calculated to identify any potential savings.

We conducted our audit in accordance with generally accepted government auditing standards (GAGAS). 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 based on our audit objective.

Audit Results

The District's EPC is projected to achieve the guaranteed energy cost[3] savings of over $6.4 million[4] over the life of the EPC, as shown in Figure 1. The ESCO did not guarantee the associated energy consumption savings.[5]

Figure 1: Projected Energy Cost Savings Over the Life of the EPC	
Projected Energy Cost Savings	$6,427,495
Less: Capital Costs Including Lease Interest	($6,291,433)
Less: Ongoing Maintenance and Verification Costs	($34,890)
Net Savings Before Grants and Rebates	**$101,172**
Add: Grants Received	$0
Add: Rebates Received	$246,200
Net Savings With Grants and Rebates	**$347,372**

District expenditures to implement the EPC's terms totaled approximately $6.3 million, for a net gain to the District of approximately $101,000 before any grants or rebates. With the receipt of

[3] Energy cost is the amount the District pays for energy (i.e., electricity and heating oil).

[4] The ESCO also guaranteed an additional $101,000 of savings from rebates.

[5] Energy consumption savings would be a reduction in the quantity of energy (i.e., kilowatts of electricity or gallons of heating oil) that the District uses. While the goal of the EPC is to reduce consumption, the ESCO did not guarantee that consumption would decrease by a specific number of kilowatts or therms.

grants and rebates,[6] the total savings will amount to $347,372. To further illustrate the energy costs associated with the EPC, Figure 2 compares a projection of what utility costs would be over the 18-year contract period had the EPC not been undertaken to a projection of post-EPC utility costs for the 18-year term of the EPC.

Figure 2: Comparison of Projected Utility Costs[a]

	Electricity	Heating Oil	Total
Costs – No EPC (2013-2031)	$5,346,723	$5,399,494	$10,746,217
Costs – Post-EPC (2013-2031)	$4,525,230	$8,395,526	$12,920,756
Cost Savings From EPC	**$821,493**	**($2,996,032)**	**($2,174,539)**

[a] Projections made using U.S. Department of Commerce formula for projecting present value of future cost savings using U.S. Department of Energy utility price indices. This yielded a projection reasonably close to the energy cost savings projected by the ESCO using engineering industry standards.

Because our projections relied on annual District energy costs recorded prior to and immediately following the EPC, our projections were subject to fluctuations in the oil market over a five-year period.[7] As a result, savings based on projected utility costs are not apparent. However, we were able to identify a significant consumption savings for both electricity and heating oil achieved by the District. For example, by looking at three[8] of the District's five buildings, the EPC resulted in a 27 percent decrease in consumption of heating oil and a 20 percent decrease in electricity consumption. The EPC improved the District's energy efficiency so that this decrease in both consumption and electricity costs was achieved even though the number of heating days only decreased by approximately 4 percent and the number of cooling days[9] increased by approximately 15 percent in the first year after substantial completion of the EPC, as compared to the base year. The improvements to just the District's light fixtures accounted for approximately 39 percent of the District's first-year energy cost savings. The District is planning to convert from oil to natural gas; if it does make this change, the District will need to factor this into its calculation of any future energy cost savings.

Although the District is guaranteed to realize a certain amount of energy cost savings, and it is projected to achieve energy consumption savings, the District has no effective monitoring procedures in place to ensure that those cost savings are achieved beyond the three-year maintenance and verification period. The District has an agreement in place with its engineering firm to verify the accuracy of the ESCO's annual verification reports that the ESCO must provide for the first three years of the EPC. However, if District officials do not implement procedures to monitor the District's cost savings after that three-year maintenance and verification period, they

[6] This amount does not include approximately $3.1 million of State aid that the District might have received because Education Law specifically excludes State building aid attributable to the project from the calculation of cost savings under the EPC.

[7] Between 2008-09 and 2013-14, average District heating oil costs increased from $1.63/gallon to $3.44/gallon.

[8] One high school, one middle school and an elementary school

[9] Heating and cooling days are a way to relate each day's temperatures to the demand for energy to heat or cool buildings. To calculate the heating degree days for a particular day, find the day's average temperature by adding the day's high and low temperatures and dividing by two. If the number is above 65, there are no heating degree days that day. If the number is less than 65, subtract it from 65 to find the number of heating degree days. Cooling degree days are also based on the day's average minus 65.

will have limited assurance that the guaranteed savings have truly been achieved and that they do not, therefore, need to seek recourse for any difference.

Recommendation

1. District officials should implement monitoring procedures to ensure the actual cost savings guaranteed by the ESCO are achieved over the life of the EPC. If the guaranteed cost savings are not achieved, District officials should seek recourse, in accordance with the terms of their EPC.

The Board has the responsibility to initiate corrective action. Pursuant to Section 35 of General Municipal Law, Section 2116-a (3)(c) of Education Law and Section 170.12 of the Regulations of the Commissioner of Education, a written corrective action plan (CAP) that addresses the findings and recommendations in this report must be prepared and forwarded to our office within 90 days. To the extent practicable, implementation of the CAP must begin by the end of the next fiscal year. For more information on preparing and filing your CAP, please refer to our brochure, *Responding to an OSC Audit Report*, which you received with the draft audit report. The Board should make the CAP available for public review in the District Clerk's office.

We thank the officials and staff of the Island Trees Union Free School District for the courtesies and cooperation extended to our auditors during this audit.

Sincerely,

Gabriel F. Deyo
Deputy Comptroller

APPENDIX A

RESPONSE FROM DISTRICT OFFICIALS

The District officials' response to this audit can be found on the following page.

ISLAND TREES PUBLIC SCHOOLS

Board of Education
516-520-2100

Superintendent
Charles J. Murphy

ADMINISTRATIVE OFFICES, 74 FARMEDGE ROAD, LEVITTOWN, NEW YORK 11756-5202

April 26, 2015

Ira McCracken, Chief Examiner
Division of Local Government and
School Accountability
State of N.Y. Office of the State Comptroller
Hauppauge Regional Office
250 Veterans Memorial Highway
Hauppauge, NY 11788

Dear Chief Examiner McCracken:

The Island Trees Union Free School District accepts the findings of your preliminary draft report in connection with an audit of our "Energy Performance Contract." In fact, we appreciate all of the work your examiner did on behalf of the Island Trees school community. Fittingly, the comprehensive report and findings validates our decision to enter into an "Energy Performance Contract." For this, we thank the Comptroller's Office.

Again, we appreciate the State Comptroller's Office assistance and resources in this Energy Performance Contract audit.

Sincerely,

Charles J. Murphy
Superintendent of Schools

CJM:cc

cc: Gabriel Deyo, Deputy Comptroller