PHILADELPHIA
ENERGY AUTHORITY

# Opportunity Assessment:

## Using Energy Performance Contracting to Address School Facility Needs in Philadelphia

March 20, 2017

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## Summary

- The Philadelphia Energy Authority (PEA) has identified up to $345 million of capital funding available to the School District of Philadelphia (SDP) under its current budget to help address their $4.5 billion capital needs.

- PEA determined that Energy Performance Contracting (EPC) could use energy savings to finance much-needed capital projects (e.g. boilers, windows, insulation, lighting, HVAC, etc.) at no additional cost to SDP beyond the current budget.

- This investment will produce hundreds of millions of dollars of savings over 20 years through reduced energy bills and maintenance costs.

- PEA recommends that SDP:

    a) Immediately begin to incorporate energy into the capital planning process by hiring an energy consultant to help determine which capital work could be included in an EPC and the energy implications of capital decisions, and

    b) Continue moving forward with an EPC pilot this year to demonstrate feasibility, validate assumptions and prepare for a scaled-up program.

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## Overview

In January 2017, the School District of Philadelphia (SDP) released their Facility Condition Assessments conducted by Parsons Environment & Infrastructure Group. The report estimated capital needs of more than $4.5 billion over the next 10 years. Current capital funding levels illustrate a significant shortfall ($3.4 billion over 10 years[1]) in funds available to restore major building systems and bring schools' built environment up to par for the more than 130,000 students citywide. Innovative approaches to address these capital needs will be required.

One such approach is to **leverage Pennsylvania's Guaranteed Energy Savings Act (GESA) to use energy savings to pay for capital improvements**. This approach is called "Energy Performance Contracting" or EPC. This mechanism would prioritize systems that provide a return on investment through reduced utility and other operating costs, while incorporating many urgent capital projects and reducing the gap between available and needed capital dollars.

The purpose of this whitepaper is to provide an initial assessment of the size of the opportunity and the types of capital needs that could be addressed to help in determining timing and approach. The goal of the Philadelphia Energy Authority is to provide support and resources to SDP to help improve facility conditions. This initial assessment is intended to spark further dialogue and project scope development, and does not provide a guarantee of services. We assume that any large EPC will require multiple years to implement and likely would be rolled out in multiple phases over 10 years or more.

Our initial findings show that **energy performance contracting is likely able to cover up to 10% of the capital needs deficit**. Most of the measures that would be covered incorporate repair or replacement to major building systems, meaning that the **EPC projects should be developed side by side with other capital projects** to ensure that any system replacement optimizes energy performance and takes advantage of savings as a revenue stream to pay back debt. These measures could include boilers, windows, building envelope work including roofs and insulation, lighting and much more.

Based on our analysis, we estimate that **$315 million to $345 million** in capital work at the School District of Philadelphia is likely able to be covered by energy performance contracts through GESA, whether rolled out in phases or all at once. **This work will result in up to $600 million in savings over 20 years, and will not require any out-of-pocket expense over and above SDP's existing utilities budget.**

PEA has been providing no-cost consulting services to SDP over the last 6 months to support an energy performance contract pilot at 3 schools that, with the continued support of SDP, will move forward this summer. We encourage SDP to use that pilot experience to inform the process for larger-scale implementation.

The School District of Philadelphia does not have any in-house staff focused on energy, and we strongly recommend hiring 1-2 energy engineers/managers or consultants to help integrate

[1] http://webgui.phila.k12.pa.us/uploads/Zm/-y/Zm-yHV4m8Rc_1Hy0FReBMw/2015-FCA-Final-Report-1.pdf, page 11

these efforts in the future. In the short term, the Philadelphia Energy Authority will continue to provide support as needed to get these projects off the ground.

In the following sections, we will provide an explanation of the GESA mechanism, an overview of the types of measures reviewed, further detail on our methodology for this analysis, and recommendations on moving forward.

## Background on SDP's Facility Needs Assessments

In 2015, SDP contracted Parsons Environment & Infrastructure Group to conduct a Facilities Condition Assessment of the District's 308 educational facilities. Parsons assessed the buildings' physical conditions through site visits and consultations with facilities managers. Across the School District's buildings, Parsons identified 11,480 overdue maintenance projects with a total cost of $4.5 billion. On top of the repairs that are already included in the capital budget, Parsons forecasted that an additional $3.2 billion in repairs would be required over the next 10 years.

Looking forward, as the School District incorporates the Facility Conditions Assessment findings into its Capital Improvement Plan, funding will be a key concern. Parson found that if the District maintains its current levels of capital spending over the next ten years, from 2018 to 2027 (at approximately $100 million per year), the District could only address 15% of the needed repairs. These spending levels would not keep up with the District's growing maintenance needs, and overall the condition of the District's building stock would continue to degrade.

## The Philadelphia Energy Authority (PEA)

The Philadelphia Energy Authority is a municipal authority focused on energy affordability and sustainability for the City and its residents, and provides support, contract management and services to City government and other key entities on energy-related matters. PEA has a 7-member board appointed by the Mayor and City Council.

In February 2016, under the leadership of City Council President Darrell Clarke, PEA launched the Philadelphia Energy Campaign, a $1 billion, 10-year initiative leveraging public and private funds for energy efficiency and clean energy projects in four sectors: City buildings, schools, low- and moderate-income housing and small businesses. The campaign will create 10,000 jobs, lower energy costs, reduce our carbon footprint and stabilize neighborhoods across Philadelphia.

As part of this initiative, PEA has been supporting the School District over the last six months to develop an energy performance contracting pilot, which we hope will move forward in 2017. PEA is committed to continuing this engagement to help SDP make the most of the latest energy opportunities, and to use energy as a vehicle for addressing building needs and improving learning environments.

## What is GESA?

The Pennsylvania Guaranteed Energy Savings Act (GESA) provides a mechanism for addressing large capital projects using an energy performance contract (EPC), also known as a

guaranteed energy savings contract. An EPC allows an entity to finance a bundle of measures such that the savings that result are equal to or more than the cost of the measures. GESA describes a guaranteed energy savings contract as:

> A contract for the evaluation and recommendation of energy conservation measures and for implementation of one or more such measures.

GESA is designed to facilitate simple procurement, which includes an exemption from the PA Separations Act that requires that all trades be procured separately, and to allow government entities, like school districts, to hire one Energy Services Company (ESCO) to design, scope, package, manage, implement and guarantee complete programs that include energy conservation measures across multiple systems. In some cases, ESCOs also provide financing. Energy Performance Contracts are designed to be turnkey, similar to “design/build” contracting.

The ESCO is not required to enter into an additional public bidding process for subcontractors, allowing them to work with trusted partners, although they are still subject to equal opportunity and participation requirements as designated by the government unit.

As part of the process, the ESCO provides a performance guarantee, ensuring that the savings promised are realized, and providing a guaranteed source of revenue to pay back the debt on the improvements.

GESA requires a payback term of less than 20 years, and allows inclusion of all energy-related costs and maintenance. Additionally, due to an amendment in 2016, GESA now also allows avoided capital costs to be included in the payback. 15% of the value of the project may include measures that are unrelated to energy, provided the total program payback remains 20 years or fewer. GESA describes the costs that can be included in payback as:

> (1) Reductions in expenses, including energy-related cost savings, related to energy and water consuming equipment or the building envelope.
> (2) The term includes:
> (i) Operating and maintenance savings.
> (ii) Capital funds budgeted for projects that, due to the energy services company project, will not be necessary.

In creating GESA, the Commonwealth recognized that using this model may not have the lowest upfront cost. Its purpose is to provide the highest long-term value and lowest lifecycle cost by reducing risk, completing construction quickly, ensuring adequate maintenance, and providing holistic design to maximize savings.

Energy projects are often not separate from other capital needs. For example, replacing an old boiler with a new, more efficient boiler achieves both capital and efficiency needs. It is common for energy performance contracts to work in tandem with other capital programs.

## EPC Financing

EPCs can be financed through several different vehicles, both on and off balance sheet. The industry has evolved such that billions of dollars of financing are available at very competitive rates and terms through large institutional lenders or through public financing.

Some examples of financing vehicles include[2]:

- Tax-Exempt Lease Purchase Agreements, also called Municipal Leases, which allow a customer to finance an EPC project without carrying a liability on its balance sheet.
- State or Local Government Leasing Pools (e.g. the PA Sustainable Energy Financing Program (PennSEF) run by PA Treasury), sometimes called Master Leases, which allow individual projects to lower their financing costs by participating in a larger aggregated financing.
- State or Local Government Bonds, which may offer slightly lower interest rates than Municipal Leases, but are time-consuming to execute. PEA is able to support this process if desired.
- Power Purchase Agreements (PPAs), in which the customer buys the output (e.g. kWh or pounds of steam) of a distributed generation project, rather than the actual project.

PEA will be available to SDP to bring in experts on various methods and provide support as needed with analysis and additional research comparing options.

## Opportunity Assessment Methodology & Findings

PEA conducted preliminary reviews of all 308 Facility Condition Assessments completed by Parsons on behalf of the School District. Fifteen major building systems were identified in the Parsons reports. Of those, at least nine of those categories are likely to have some impact on energy consumption and cost, including: Roof, Windows, Exterior Doors, Boilers, Chillers/Cooling Towers, Radiators/Unit Ventilators/HVAC, Heating/Cooling Controls, Electrical Service Distribution and Lighting. These systems represent $2.5 billion of the $4.5 billion in capital needed, and include some work that will reduce energy consumption, and some that will not.

The Parsons reports confirmed that there were opportunities for significant energy and utility consumption improvement. Many boilers, windows and other equipment were well past their useful life, and very rarely did schools have even basic weatherization measures installed, suggesting leaky building envelopes and old, outdated heating and cooling. Based on the qualitative assessments from Parsons, we estimate that an energy performance program could **reduce energy consumption by up to 50 percent**.

Though this reduction is more ambitious than standard EPCs, there are two reasons that this number is both feasible and important.

First, a review of SDP's Facility Condition Assessments showed many major building systems well past useful life and often in need of significant repair or replacement. This project would be

[2] https://www.energystar.gov/ia/partners/spp_res/Introduction_to_Performance_Contracting.pdf

focused on deep energy savings through retrofit, repair or replacement of these major systems. This will result in larger savings than the typical project, which often narrowly focus on lighting and building controls primarily.

Second, it is important to signal to the marketplace that we are setting a high bar for the Energy Services Companies (ESCOs) who will ultimately provide project scope. They must be creative and strategic to ensure that SDP gets the maximum value out of this mechanism, and integrate as much capital work as possible into the performance contract to help SDP close the gap between available and needed capital dollars.

We developed a **20-year cash flow** statement tracking that level of savings, starting with a 3-year average energy cost for SDP, and a **3% escalation rate on energy prices**. This number is less than the Department of Energy recommends for our region (3.25%). We ran the numbers showing a 2% escalator as well to determine the impact to the estimate, and determined that this is one important factor that determines the success of the program, though both escalators result in positive net present value. We recommend taking a conservative approach to energy price increases. Universally, markets and federal agencies all agree that over time, energy prices will increase significantly, but the exact annual rate remains a topic for some debate.

We included in our cash flow a **10% reduction in non-personnel maintenance costs**. SDP provided us with the projected number for FY2017. We did not include any increases or escalation of maintenance costs over time.

Because we do not know how the District will approach financing, we estimated the **cost of debt at both 3 and 4 percent interest** to develop a range for feasible project size.

We also developed a second cash flow to determine whether a phased rollout (which is the likeliest scenario for the District) would impact numbers significantly. We assumed 4 phases of roughly $80 million implemented in 3-year increments over 12 years, and found similar impact and return on investment. Both cash flow models are available upon request.

| Key Assumptions | |
|---|---|
| **Term** | 20 years |
| **Cost Savings** | 50% of utilities and 10% of non-personnel maintenance costs |
| **Energy Cost Escalator** | 3% annually |
| **Interest Rate** | 3% and 4% scenarios |

### Key Findings

Based on this analysis, we estimate **$315 million to $345 million** in work is likely to be able to be covered by energy performance contracts through GESA based on the above assumptions. **This work will result in up to $600 million in savings over 20 years, and will break even in Year 1.**

Energy performance contracting can cover roughly **10% of the total capital funds deficit** for the School District.

## Case Studies

The ESCO industry has completed more than $45 billion in projects since 1990 and there are success stories from school districts across the country demonstrating the viability of Energy Performance Contracting as a means of completing facilities improvements. We have provided some examples of K-12 EPC projects here.

In 2016, the **South San Francisco Unified School District** launched an energy savings project with OpTerra Energy Services serving as the ESCO. The project included upgrades to lighting and HVAC systems, as well as roof replacements. Alongside the facility improvement work, the School District installed 1.68 MW of solar across 15 schools. The South San Francisco Unified School District also partnered with OpTerra to pilot a Summer STEM Institute for K-8 students in the district, incorporating educational benefit into the larger energy project. The institute included lessons about energy efficiency, building engineering, and renewable energy, building on the recent work that OpTerra completed on school buildings.

The **Chicago Public School System** completed a $17.5 million Energy Performance Contracting project at their 18-story downtown administrative building. The ESCO (Schneider Electric) installed new boilers, windows, a chiller, lighting, and an automated building controls system. The project reduced the building's utility bills by an impressive 60% and resulted in $1.2 million in annual savings.

The **Portland Public School District** completed a pilot Energy Performance Contract with Ameresco in 2011. The District was seeking a budget-neutral approach to capital projects that could be applied across the whole district. This $2 million pilot project spanned four schools and included new lighting, building controls, HVAC improvements, and boiler replacement. Based on the success of this project, the Portland School District is expanding the program to the administration building and six additional schools.

Closer to home, in 2013, the **Norristown Area School District** in Pennsylvania completed $23 million worth of facility improvements through an Energy Performance Contract. The Norristown Area School District was struggling to meet its financial obligation in the context of state budget cuts for public education under the Corbett administration. As of 2011, Norristown Area School District balanced its budget by cutting its Teen Parenting and Day Care programs, laying off eight teachers, and raising the cost of tickets to athletic events. When the Norristown Area School District realized the need for a new air-conditioning systems at two middle schools, the District decided that Energy Performance Contracting was their best financing solution. The Chief Financial Officer of the District expressed the value of completing these capital projects through Energy Performance Contracting, stating, "It would have been too difficult for our district to execute an undertaking of this magnitude in an efficient period of time by any means other than a performance contract."

The Norristown Area School District project accomplished many of the repairs and replacements that are currently needed at Philadelphia schools. The facility improvements financed as part of the project included new roofs, windows, air conditioning, lighting, and building controls systems. The Norristown Area School District contracted with CM3 as the ESCO that completed most of the energy savings work; InsidelQ installed a building automation

system as part of the project (PR Newswire 2013). The Norristown Area School District paid for the middle school's air conditioning system using the energy, operating, and avoided capital cost savings from the overall project.

The **City of Philadelphia** has also already completed one major energy performance contract at the Quadplex, the City's four main office buildings, providing precedent and a local success story. That project produces $1.5 million in savings annually, and costs roughly $1 million per year in debt service, netting the City nearly half a million dollars in benefit.

## Conclusion

Of the $4.5 billion in school facility repairs needed over the next 10 years, SDP can currently afford to address $1.1 billion, or roughly $100M/year. **PEA has identified up to $345 million in additional facilities improvements that could be paid for through energy savings at no additional cost to the District, and work could begin as early as 2018.**

PEA commends the District for their work moving forward on an EPC Pilot which is currently in development, and as time is of the essence, we encourage the District not to wait until completion of that project to move forward with the larger opportunity. **PEA strongly recommends the District immediately contract with a consultant to begin to develop the scope and design of the full program, integrated with their capital planning process.**

Energy Performance Contracting will be a valuable tool as the School District moves towards improving the health, quality and performance of its buildings. EPCs are not new to K-12 portfolios, and there are myriad examples of successful projects nationwide, including here in Philadelphia. EPCs will be able to provide funds to pay for 10 percent of the capital needs deficit the District faces.

With the support and leadership of SDP and the City's Office of Sustainability, PEA recommends continuing to move forward with the EPC Pilot currently in development for this year. This pilot will allow the District to understand and align with the adjusted procurement mechanism and internal and external support necessary to effectively execute a GESA project. We encourage the District to engage key members from all affected departments in the planning and evaluation of the pilot, including Capital, Law, Finance, Procurement, Facilities, Capital Engineering, Maintenance, Environmental Health & Safety, Risk Management and others, to ensure that the pilot delivers the information needed to build enough confidence to move forward at a larger scale as soon as possible. The pilot will include a Measurement and Verification phase that will validate savings assumptions, and help set the parameters for a larger set of projects.

PEA looks forward to continuing to work with the School District to improve the condition of every public school in Philadelphia.

## Appendix A: The PA Guaranteed Energy Savings Act (full text)[3]

**TITLE 67, CHAPTER 37**
**SUBCHAPTER E**
GUARANTEED ENERGY SAVINGS CONTRACTS

**Sec.**


**§ 3751. Short title of subchapter.**

This subchapter shall be known and may be cited as the Guaranteed Energy Savings Act.

**§ 3752. Definitions.**

The following words and phrases when used in this subchapter shall have the meanings given to them in this section unless the context clearly indicates otherwise:

**"Allowable costs."** Equipment and project costs that:

(1) the governmental unit reasonably believes will be incurred during the term of the guaranteed energy savings contract; and

(2) are documented by industry engineering standards.

**"Energy conservation measure."** A program, facility alteration or technology upgrade designed to reduce energy, water, wastewater or other consumption or operating costs. The term may include, without limitation:

(1) Insulation of the building structure or systems within the building.

(2) Storm windows or doors, caulking or weather stripping, multiglazed windows or doors, heat-absorbing or heat-reflective glazed and coated window or door systems, additional glazing, reductions in glass area or other window and door system modifications that reduce energy consumption.

(3) Automated or computerized energy control systems.

(4) Heating, ventilating or air conditioning system modifications, extension of systems to new or renovated areas or system replacements.

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[3] http://www.legis.state.pa.us/cfdocs/legis/LI/consCheck.cfm?txtType=HTM&ttl=62&div=0&chpt=37

(5) Replacement or modification of lighting fixtures to increase the energy efficiency of the lighting system without increasing the overall illumination of a facility, unless an increase in illumination is necessary to conform to applicable State or local building codes for the lighting system after the proposed modifications are made.

(6) Energy recovery systems.

(7) Systems that produce steam or forms of energy such as heat as well as electricity for use within a building or complex of buildings.

(8) Energy conservation measures that provide operating cost reductions based on life cycle cost analysis.

(9) A training program or facility alteration that reduces energy consumption or reduces operating costs, including allowable costs, based on future reductions in labor costs or costs for contracted services.

(10) A facility alteration which includes expenditures that are required to properly implement other energy conservation measures.

(11) A program to reduce energy costs through rate adjustments, load shifting to reduce peak demand, and/or use of alternative energy suppliers, such as, but not limited to:

(i) changes to more favorable rate schedules;

(ii) negotiation of lower rates, same supplier or new suppliers, where applicable; and

(iii) auditing of energy service billing and meters.

(12) The installation of energy information and control systems that monitor consumption, redirect systems to optimal energy sources and manage energy-using equipment.

(13) Systems that provide indoor air quality improvements or improved climate control.

(14) Daylighting systems.

(15) Renewable and/or on-site distributed power generation systems.

(16) Water and sewer conservation measures, including, without limitation, plumbing fixtures and infrastructure.

(17) Equipment upgrades that improve accuracy of billable revenue generating systems.

(18) Automated, electronic or remotely controlled systems or measures that reduce operating costs.

(19) Other energy, water or wastewater measures as may provide measurable, long-term operating costs reductions or billable revenue increases.

**"Energy-related cost savings."** As follows:

(1) A cost saving, except for an energy saving, that results from the implementation of an energy conservation measure.

(2) Sources of energy-related cost savings shall include only the following:

(i) Avoided current or planned capital expense.

(ii) Avoided renovation, renewal or repair costs as a result of replacing old and unreliable equipment and systems or thermal improvements to the building envelope.

**"Energy services company."** A qualified provider of energy solutions, including designs and implementation of energy savings projects, retrofitting, energy conservation, energy infrastructure outsourcing, power generation and energy supply and risk management.

**"Guaranteed energy savings contract."** A contract for the evaluation and recommendation of energy conservation measures and for implementation of one or more such measures.

**"Governmental unit."** Any officer, employee, authority, board, bureau, commission, department, agency or institution of a government agency, including, but not limited to, any Commonwealth agency, State-aided institution or any county, city, district, municipal corporation, municipality, municipal authority, political subdivision, school district, educational institution, borough, incorporated town, township, poor district, county institution district, other incorporated district or other public instrumentality which has the authority to contract for the construction, reconstruction, alteration or repair of any public building or other public work or public improvement, including, but not limited to, highway work.

**"Industry engineering standards."** Industry engineering standards may include the following:

(1) Life cycle costing.

(2) The R.S. Means-estimated method developed by the R.S. Means Company.

(3) Historical data.

(4) Manufacturer's data.

(5) American Standard Heating Refrigeration Air-Conditioning Engineers (ASHRAE) standards.

**"Operating costs."** As follows:

(1) Reductions in expenses, including energy-related cost savings, related to energy and water consuming equipment or the building envelope.

(2) The term includes:

(i) Operating and maintenance savings.

(ii) Capital funds budgeted for projects that, due to the energy services company project, will not be necessary.

**"Qualified provider."** A person or business which is responsible and capable of evaluating, recommending, designing, implementing and installing energy conservation measures as determined by the governmental unit.

(July 15, 2004, P.L.703, No.77, eff. 60 days; July 2, 2010, P.L.243, No.39, eff. 60 days; Nov. 4, 2016, P.L.1216, No.163, eff. 60 days)

**2016 Amendment.** Act 163 amended pars. (4) and (13) of the def. of "energy conservation measure" and added the defs. of "energy-related cost savings," "energy services company" and "operating costs."

**2010 Amendment.** Act 39 amended the def. of "energy conservation measure."

**Cross References.** Section 3752 is referred to in section 3753 of this title.

**§ 3753. Contracting procedures.**

**(a) General rule.--**Notwithstanding any other contrary or inconsistent provision of law, a governmental unit may enter into a guaranteed energy savings contract with a qualified provider in accordance with the provisions of this subchapter or in accordance with another statutorily authorized procurement process.

**(b) Guaranteed energy savings contract.--**If in accordance with applicable law the award of a contract by a governmental unit requires action at a public meeting, a governmental unit may award a guaranteed energy savings contract at a public meeting if it has provided public notice in the manner prescribed under 65 Pa.C.S. Ch. 7 (relating to open meetings), the notice including the names of the parties to the contract and the purpose of the contract. For governmental units that are not required to take actions on contracts at public meetings, the governmental unit may award a guaranteed energy savings contract in accordance with the procedures adopted by the governmental unit and the requirements of all applicable laws.

**(c) Competitive sealed proposals.--**For the purpose of entering into a guaranteed energy savings contract, all governmental units are authorized to utilize the competitive sealed proposal method of procurement. The governmental unit shall evaluate any proposal that meets the requirements of the governmental unit and is timely submitted by a qualified provider. The request for proposals shall be announced through a public notice from the governmental unit which will administer the program. The request for proposals shall provide all interested parties with sufficient information necessary to submit a timely and responsive proposal.

**(d) Selection and notice.--**The governmental unit shall select the qualified provider that best meets the needs of the governmental unit in accordance with criteria established by the governmental unit. For governmental units that are not required to take actions on contracts at public meetings, the

governmental unit shall provide public notice of the award of the guaranteed energy savings contract within 30 days in the Pennsylvania Bulletin. The notice shall include the names of the parties to the contract and the purpose of the contract. For governmental units that are required to take actions on contracts at public meetings, the public notice shall be made at least ten days prior to the meeting. After reviewing the proposals pursuant to subsection (e), a governmental unit may enter into a guaranteed energy savings contract with a qualified provider if it finds that the amount it would spend on the energy conservation measures recommended in the proposal would not exceed the amount of energy, water or wastewater cost savings, operational cost savings or revenue increases resulting from the energy conservation measures within a period not to exceed 20 years from the date of final installation if the recommendations in the proposal were followed and the qualified provider provides a written guarantee that the energy, water or wastewater cost savings, or operational cost savings or revenue increases will meet or exceed the cost of the contract, provided, however, that, when determining the operational cost savings from any contract or project of the type defined in paragraphs (17), (18) and (19) of the definition of "energy conservation measure" in section 3752 (relating to definitions), the governmental unit shall not consider savings that result from reductions in the size of its work force if the reductions are related to or generated by outsourcing or using contract workers to perform tasks previously performed by employees of the governmental unit.

**(e) Report.--**

(1) Before the award of a guaranteed energy savings contract, the qualified provider shall provide a report as part of its proposal which shall be available for public inspection, summarizing estimates of all costs of installation, maintenance, repairs and debt service and estimates of the amounts by which energy or operating costs will be reduced.

(2) The report shall contain a listing of contractors and subcontractors to be used by the qualified provider with respect to the energy conservation measures.

**(f) Bond.--**A qualified provider to whom a contract is awarded shall give a sufficient bond to the governmental unit for its faithful performance. Commonwealth agencies shall obtain such bonds in accordance with the provisions of section 533 (relating to security and performance bonds). All other governmental units shall obtain such bonds in accordance with the act of December 20, 1967 (P.L.869, No.385), known as the Public Works Contractors' Bond Law of 1967.

**(g) Award of contract.--**Notwithstanding any other provision of law governing the letting of public contracts, a governmental unit may enter into a single guaranteed energy savings contract with each responsible provider selected in accordance with the provisions of this subchapter.
(July 15, 2004, P.L.703, No.77, eff. 60 days; July 2, 2010, P.L.243, No.39, eff. 60 days)

**2010 Amendment.** Act 39 amended subsec. (d).

**§ 3754. Contract provisions.**

**(a) General rule.--**A guaranteed energy savings contract may provide that all payments, except obligations on termination of the contract before its scheduled expiration, shall be made over a period of time. Every guaranteed energy savings contract that requires payments over a period of time shall provide that, after the initial year of the contract, the savings in every subsequent year are guaranteed to the extent necessary to make payments under the contract during that year. A guaranteed energy savings contract, in addition to the quantification and guarantee of energy savings, shall expressly state, quantify and validate the budgetary sources of all energy-related cost savings and operating costs utilized to satisfy the financial obligations and performance during the term of the agreement.

**(b) Written guarantee.--**A guaranteed energy savings contract shall include a written guarantee that savings will meet or exceed the cost of the energy conservation measures to be evaluated, recommended, designed, implemented or installed under the contract.

**(c) Payments.--**A guaranteed energy savings contract may provide for payments over a period of time not to exceed 20 years and for the evaluation, recommendation, design, implementation and installation of energy conservation measures on an installment payment or lease purchase basis.

**(d) Improvements not causally connected to an energy conservation measure.--**An improvement that is not causally connected to an energy conservation measure may be included in a guaranteed energy savings contract if:

(1) the total value of the improvement does not exceed 15% of the total value of the guaranteed energy savings contract; and

(2) either:

(i) the improvement is necessary to conform to a law, a rule or an ordinance; or

(ii) an analysis within the guaranteed energy savings contract demonstrates that there is an economic advantage to the governmental unit implementing an improvement as part of the guaranteed energy savings contract;

and the savings justification for the improvement is documented by industry engineering standards.

**(e) Other expenditures.--**A facility alteration which includes expenditures that are required to properly implement other energy conservation measures may be included as part of a guaranteed energy savings contract. In such case, notwithstanding any other provision of law, the installation of these additional measures may be supervised by the contractor performing the guaranteed energy savings contract.

(July 15, 2004, P.L.703, No.77, eff. 60 days; July 2, 2010, P.L.243, No.39, eff. 60 days; Nov. 4, 2016, P.L.1216, No.163, eff. 60 days)

**2016 Amendment.** Act 163 amended subsec. (a).

**2010 Amendment.** Act 39 amended subsecs. (a) and (c).

## § 3755. Funding.

**(a) General rule.--**Guaranteed energy savings contracts which have terms which extend beyond one fiscal year of the governmental unit must include a provision which allows the governmental unit to terminate the contract if in any fiscal year during the term of the contract the governmental unit does not receive sufficient funds in its annual appropriations to make the payments required under the contract.

**(b) Funds.--**A governmental unit may use funds designated for operating, utilities or capital expenditures for any guaranteed energy savings contract, including, without limitation, for purchases on an installment payment or lease purchase basis.

**(c) Grants, subsidies or other payments.--**Grants, subsidies or other payments from the Commonwealth to a governmental unit shall not be reduced as a result of energy conservation measure cost savings obtained as a result of a guaranteed energy savings contract during the life of the contract.

(Nov. 4, 2016, P.L.1216, No.163, eff. 60 days)

**2016 Amendment.** Act 163 amended subsec. (c).

## § 3756. Commonwealth contracts.

In connection with the letting of any guaranteed energy savings contract for a governmental unit under this subchapter, the department shall have the power to waive the process for selection of architects or engineers otherwise prescribed under section 905 (relating to procurement of design professional services). In exercising its discretion under this section, the department shall consider the best interests of this Commonwealth and any relevant circumstances peculiar to the proposed contract.

**§ 3757. Construction.**

This subchapter shall not be construed to abrogate any duty to comply with prevailing wage or residency requirements contained in any other act or part thereof.

**§ 3758. Review of proposed capital improvement projects.**

Prior to entering into a guaranteed energy savings contract, every governmental unit shall review all proposed capital improvement projects for potential applicability of this subchapter and shall consider proceeding with a guaranteed energy savings contract under this subchapter where appropriate. (July 15, 2004, P.L.703, No.77, eff. 60 days)

**2004 Amendment.** Act 77 added section 3758.

## Appendix B: EPC Cash Flow Analysis Inputs and Results*

| Inputs | |
|---|---|
| Annual Utility Cost (2014-2016 Average) | $43,777,525 |
| Utility Cost Escalator | 3% |
| Projected Utility Cost Savings | 50% |
| Annual Maintenance Cost (FY2017) (excluding personnel) | $7,176,378 |
| Maintenance Cost Escalator | 0% |
| Projected Maintenance Cost Savings | 10% |
| Required Payback Period | 20 years |

| Results | |
|---|---|
| **Loan Amount (break-even in year 1, 3% interest)** | **$345 million** |
| Year 1 (post-completion) Total Savings | $23,263,063 |
| Annual Debt Service (3% interest) | $23,189,419 |
| **Total 20-year Utility + Maintenance Savings** | **$620,156,783** |
| **Net Savings (20-years, nominal)** | **$156,368,401** |

* Complete Cash Flow Analysis (in .xls format) is available upon request both in 1-time outlay and in four phases over 12 years.