TOWNSHIP OF LOWER MERION

Public Works Committee

Issue Briefing

Topic: Energy Savings Project - Consultant Recommendations

Prepared By: Ernie B. McNeely, Township Manager

Date: September 7, 2018

I. Action To Be Considered By The Board:

Authorize Township staff and Provident Energy/ICS Consulting Inc. to prepare and issue an RFP for guaranteed energy services to accomplish a list of energy savings projects at Township facilities.

II. Why This Issue Requires Board Consideration:

The Board of Commissioners needs to approve the issuance of an RFP for potential energy savings projects.

III. Current Policy Or Practice (If Applicable): N/A

IV. Other Relevant Background Information:

Provident Energy/ICS Consulting Inc. was contracted by the Board of Commissioners to provide consultant services to the Township to identify energy savings opportunities and provide recommendations for how to accomplish the projects. That report was provided to the Board of Commissioners on July 25, 2018 and staff was requested to review the report and provide recommended follow up actions to determine how to prioritize and proceed with energy savings projects.

There are a number of energy savings projects suggested by Provident Energy/ICS Consulting Inc. and they have varied payback periods. An LED street light project has the shortest payback while some boiler and HVAC projects have much longer payback periods. The list includes a number of projects that can substantially reduce the energy consumption at Township facilities and therefore the annual energy cost as well as the carbon footprint of the Township.

The consultant report provides options for how to proceed with energy savings projects including design/bid/build, in house construction or guaranteed energy savings contracting. There are some with such long payback periods that they should be completed with Township personnel as budgets allow. The consultant recommendation is initially to issue an RFP for a substantial

portion of the energy savings projects listed in the report. There is no cost to the Township to have Provident Energy/ICS Consulting Inc. prepare an RFP and review the proposals that would be received. If the Board of Commissioners decides to proceed using a guaranteed energy savings contract route, Provident Energy/ICS Consulting Inc. has indicated, they would oversee the project for a fee that would be negotiable but would be in the 4-6% of project cost range. Note this is less than the typical design/bid/build engineering fees the Township pays which are more typically in the 7-12% range depending on the project.

After the guaranteed energy savings proposals are opened, the Board of Commissioners could still decide not to proceed with this implementation method. If the project does not proceed with a guaranteed energy savings method after the RFP process, then Provident Energy/ICS Consulting Inc. has indicated they would negotiate a fixed fee for typical engineering service to perform the design-bid process. This would obviously be the more typical engineering fee likely in the 7-10% range. Using the more typical design/bid/build process means the project is subject to price escalation through change orders while that does not occur with the guaranteed energy savings approach.

The attached spreadsheet shows the projects recommended to be included in an RFP for guaranteed energy savings projects as well as a list of projects recommended to be left out of that process and accomplished by Township forces. The recommended list to be included in the RFP is labeled as the Recommended Core and totals an estimated $4,476,349. The RFP should include one alternate and that is to include new fixtures rather than retrofits for the Acorn decorative fixtures which would increase the estimate to $4,671,550 and is labeled Core Enhancement.

The remaining projects on the spreadsheet which total $1,669,826 and have very long payback periods should be left to Township forces or future design/bid/build process. Once RFP responses are received, additional culling of the list of projects to be included can be accomplished based on an evaluation of the responses. An annual savings of $120,000 is shown on the spreadsheet which enhances the project payback calculations because it is time to shop for new electric and natural gas pricing and that is the subject of a companion Issue Briefing.

Based on the estimates the Recommended Core projects, if all completed, could have a payback period of 9.14 years while the addition of the Core Enhancement would increase the payback to 9.56 years. This would mean if the guaranteed energy savings contract method is used that all of these capital improvements to Township facilities would be completed within a relatively short timeframe and the cost would be paid by the energy savings so there would be no net increase in the annual budget and the projects completed would not have to be worked into a future CIP (Capital Improvement Plan) funding and financing. If the decision is later made to cull the list of projects to just cobra head streetlights the cost could come down to $1.6 million and the payback would reduce to 7.6 years.

V. Impact On Township Finances:

The total cost of all the energy savings projects suggested by Provident Energy/ICS Consulting Inc. is approximately $6.3 million however this reflects a menu of options from which to select as was requested from the consultant. The impact on Township finances will depend on the projects selected and the method used for implementation. As stated above these capital improvements to Township facilities would be completed within a relatively short timeframe and the cost would be paid by the energy savings so there would be no net increase in the annual budget and projects completed would not have to be worked into a future CIP funding or financing.

If the Board of Commissioners wants to proceed with an energy savings project, a dollar figure should be placed into the 2019 CIP which can always be adjusted after the RFP process has been completed. The potential options for funding the projects can be discussed once the project details are decided and they could include typical general obligation bond financing, a municipal lease purchase, use of unreserved surplus, guaranteed revenue bond financing or some combination of methods.

VI. Staff Recommendation:

The recommendation is to approve the issuance of an RFP for potential guaranteed energy savings projects as reflected on the attached spreadsheet shown as the Recommended Core projects and the Core Enhancement project.

All Measures Reviewed							
ECM/FIM	Description	Cost	Rebates	Energy	Maintenance	Payback	CIP
1a	SL-Cobra	$1,656,250	$ 170,000	$ 178,238	$ 17,500	7.59	$ 195,000
1b	SL-Colonial	$ 653,801	$ 20,000	$ 18,007	$ 3,000	30.17	$ 40,000
1c	SL-Acorn Retrofits	$ 158,210	$ 4,200	$ 5,462	$ 1,500	22.12	$ 10,000
1d	SL-Acorn New	$ 195,201	$ -	$ -	$ -		$ 245,000
1e	SL-Controls	$ 721,809	$ 24,500	$ 20,023	$ (12,000)	86.91	$ -
2	Other Lighting	$ 439,901	$ 30,911	$ 42,470	$ 3,700	8.86	$ 50,000
3	Boiler Upgrades	$ 679,307	$ -	$ 11,253	$ 6,000	39.37	$ 97,000
4	Chiller Upgrades	$ 327,910	$ 2,860	$ 3,250	$ 8,000	28.89	$ -
5	Recommissioning	$ 250,675	$ 25,068	$ 12,000	$ 1,500	16.71	$ -
6	Controls Upgrades	$ 310,295	$ 31,030	$ 22,000	$ 5,000	10.34	$ -
7	HVAC Upgrades	$ 605,879	$ 2,660	$ 9,056	$ -	66.61	$ 35,000
8	Miscellaneous Upgrades	$ 342,138	$ -	$ 5,500	$ -	62.21	$ 95,000
9	Procurement	$ -	$ -	$ 120,000	$ -	0.00	$ -
	ALL Measures	$6,341,376	$ 311,229	$ 447,259	$ 34,200	12.52	$ 767,000

Recommended Package of Measures - Prioritized Review							
ECM/FIM	Description	Cost	Rebates	Energy	Maintenance	Payback	CIP
1a	SL-Cobra	$1,656,250	$ 170,000	$ 178,238	$ 17,500	7.59	$ 195,000
1b	SL-Colonial	$ 653,801	$ 20,000	$ 18,007	$ 3,000	30.17	$ 40,000
1c	SL-Acorn Retrofits	$ 158,210	$ 4,200	$ 5,462	$ 1,500	22.12	$ 10,000
2	Other Lighting	$ 439,901	$ 30,911	$ 42,470	$ 3,700	8.86	$ 50,000
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4	Chiller Upgrades	$ 327,910	$ 2,860	$ 3,250	$ 8,000	28.89	$ -
5	Recommissioning	$ 250,675	$ 25,068	$ 12,000	$ 1,500	16.71	$ -
6	Controls Upgrades	$ 310,295	$ 31,030	$ 22,000	$ 5,000	10.34	$ -
9	Procurement	$ -	$ -	$ 120,000	$ -	0.00	$ -
	Recommended Core	**$4,476,349**	**$ 284,069**	**$ 412,680**	**$ 46,200**	**9.14**	**$ 392,000**
1d	SL-Acorn New	$ 195,201	$ -	$ -	$ -		$ 245,000
	Core Enhancement	**$4,671,550**	**$ 284,069**	**$ 412,680**	**$ 46,200**	**9.56**	**$ 637,000**
7	HVAC Upgrades	$ 605,879	$ 2,660	$ 9,056	$ -	66.61	$ 35,000
8	Miscellaneous Upgrades	$ 342,138	$ -	$ 5,500	$ -	62.21	$ 95,000
1e	SL-Controls	$ 721,809	$ 24,500	$ 20,023	$ (12,000)	86.91	$ -
	ALL Measures	**$6,341,376**	**$ 311,229**	**$ 447,259**	**$ 34,200**	**12.52**	**$ 767,000**