

The Corporation of the City of Kawartha Lakes

Council Report

Report Number ENG2018-007

Date: June 19, 2018
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier: All wards

Subject: LAS Proposal, LED Streetlight Replacement Program (Lindsay)

Recommendation(s):

RESOLVED THAT Report ENG2018-007 LAS Proposal, LED Streetlight Replacement Program (Lindsay), be received;

THAT staff be directed to enter into a contract with LAS and Realterm Energy to implement a staged LED streetlight replacement program in Lindsay in the amount of \$335,394 with options for the 2nd and 3rd phases of the project.

THAT the Mayor and Clerk be authorized to sign the agreement.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

In 2014/15 the Office of Strategy Management undertook a review of hydro billing for the City. An agreement was in place with Local Authority Service (LAS) and the City to allow for bulk purchasing of hydro for City's facilities and street lighting. A review and update of the agreement occurred so that all city hydro accounts would be included allowing maximum savings to be realized. As an arm of the Association of Municipalities for Ontario (AMO), LAS provides various programs to meet the needs of municipalities such as energy consumption data management, components of asset management and a street lighting program. The City engaged LAS in education programs for staff and because an existing agreement was in place, engaged LAS to audit our street light program.

LAS is an auxiliary group of AMO that works with Municipalities on energy supply partnerships such as bulk purchasing power, natural gas or diesel fuel and selling it back at costs to help moderate commodity increases for Municipalities. LAS has also developed a program through its partnership with Realterm Energy for working with and facilitating LED streetlight upgrade projects with Municipalities.

A meeting was set up with LAS, the Office of Strategy Management and Engineering and Corporate Assets to review LAS's proposal for the replacement of 2,247 streetlights in Lindsay. From this meeting Staff and LAS conducted an energy audit of the streetlights in Lindsay. Based on this audit it was found that there were 2,247 HPS (high pressure sodium) and decorative lights in Lindsay which consumed an estimate 1,347,019 kWh. Through the audit it was concluded the City could reduce its streetlight energy consumption by 58% through replacing its old HPS street lighting with newer, more efficient and longer life LED streetlights.

At the time of the audit it was estimated that streetlight energy and maintenance costs were in the range of \$372,000 yearly. After upgrading it was estimated the City would save \$229,000 yearly, reducing its energy and maintenance costs for streetlights yearly in Lindsay to \$143,000.

After reviewing this audit and projected capital budgeting for the City's current capital streetlight replacement program, staff requested LAS to revise the audit as a staged approach to replacing the existing streetlights in Lindsay over a three year period (see appendix B) in order to spread out the total estimated project cost of \$1,237,540. This phasing for the full implementation is proposed over 2018 to 2020. It is estimated that costs in phase 2 (2019) and phase three (2020) would be \$470,400 per year to implement.

The City had previously completed a LED Streetlight upgrade project of over 800 streetlights through the Energy savings performance contract the City had with Honeywell Ltd, over 2014 and 2015 (report ED2014-013). This saw the

replacement of older HPS streetlights in the communities of Fenelon Falls, Bobcaygeon and Coboconk.

Rationale:

This project falls within the Corporate Strategic Plan for providing responsible, efficient and effective services. In this situation it would mean the beginning of the effective upgrade of the City's streetlight service in Lindsay as well as responsibly reducing the City's energy consumption and costs for providing that streetlight service.

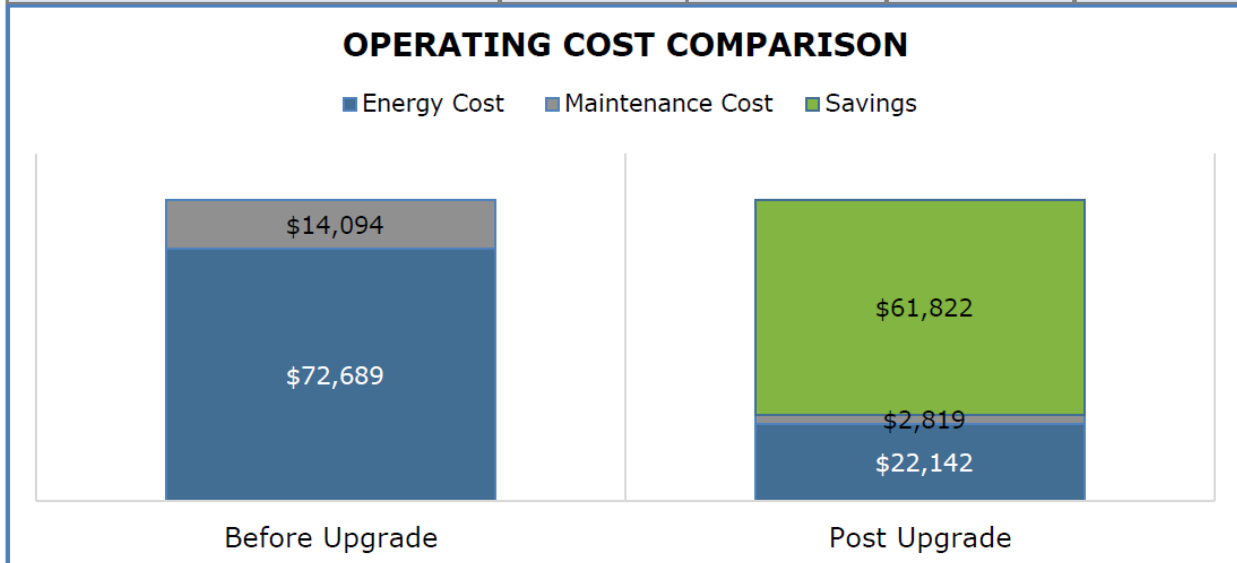
The first phase would include the replacement of 522 streetlight fixtures on the east side of Lindsay.

To fund the first phase of this project, the existing streetlight budgets from 2016-2018 in the amount of \$323,768.31 would be utilized. The estimated project cost after IESO grant is \$287,903.59.

The City has applied for an IESO (Independent Electricity System Operator) grant for the entire phase of the project which is approximately \$206,013. For the first phase the grant amount would be \$44,358.00.

The Chart below outlines the energy and operational savings the City will realize after phase 1 of the project is complete. Through upgrading 522 existing streetlights to LED lights the City will reduce its energy consumption by 215,456 kWh per year as well as reducing its overall operational and energy cost by \$61,822 yearly. This places the pay back period for the phase at 3.9 years based on operational and energy saving.

| PARAMETER | BEFORE UPGRADE | POST- UPGRADE | VARIANCE | PERCENT |
|--------------------------------------|-------------------|------------------|----------|---------|
| Number of Fixtures | 522 | 522 | | |
| Annual Electricity Consumption (kWh) | 308,794 | 93,338 | 215,456 | 70% |
| Annual Electricity Costs | \$72,689 | \$22,142 | \$50,547 | 70% |
| Annual Maintenance Cost | \$14,094 | \$2,819 | \$11,275 | 80% |
| Total Streetlights Expenditures | \$86,783 | \$24,961 | \$61,822 | 71% |
| Average Annual Cost per Fixture | \$166 | \$48 | \$118 | 71% |



If Council chooses to enter into an agreement with LAS for the implementation of this project, there would be no cost for the investment grade audit already completed by LAS. LAS would be responsible for the procurement process on behalf of the City, ensuring that they are in compliance with the City's Purchasing Policy and any applicable trade agreements. They would also be responsible for the contract administration and implementation of the replacement project. The City currently has a purchasing relationship with LAS in the form of bulk electricity purchasing for the City, established through Council Report T-FIN 2006-46. This new proposed agreement would be furthering the City's pre-existing relationship with LAS by helping the City advance its corporate energy management plan through the replacement of outdated streetlights.

Other Alternatives Considered:

If Council chooses not to enter into an agreement for implementation of this LED streetlight replacement project then the City would be responsible for the cost of the investment grade audit done by LAS in the amount of \$29,000. The City could look at implementing the project itself, however, it is recommended that the City utilize the expertise and bulk purchasing agreements that LAS has already established in order to complete this project.

Financial/Operation Impacts:

| Project | Budget | Other Committe d Funds | Balance | LAS Project Cost including HST | HST Rebate | Conting ency | IESO Incentive Rebate | Total Project Cost | Project Balance |
|-------------------------------------|-----------|------------------------------|-----------|--|---------------|-----------------|-----------------------------|--------------------------|--------------------|
| 983181001 983171001 983161301 | \$330,000 | \$6,232 | \$323,768 | \$335,394 | \$33,361 | \$30,203 | \$44,358 | \$287,878 | \$35,890 |

As stated in the background staff recommends using pre-existing Streetlight program accounts to fund the first phase of this project. Staff is recommending completing over 3 phases, as such the other 2 phases would be budgeted through future capital budgets under the Capital streetlight replacement program in 2019 and in 2020 in a estimated amount of \$470,400 per year to implement the entire project. It should be noted that in order to receive the full IESO grant all works need to be completed by 2020.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

The recommendations of this report align with the following goals of the Corporate Strategic Plan:

- Goal 1 – A Vibrant and Growing Economy: An effective helps support municipal infrastructure that is essential for a prosperous and growing economy, especially in the areas of the City.
- Goal 3 – A Heathy Environment: By reducing the City's overall energy consumption and reducing operating costs

Consultations:

Finance ,Purchasing,Office of strategic management

Attachments:



Investment grade
audit.pdf

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