

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 7, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>TRANSPORTATION ENERGY OPTIMIZATION PLAN (TEOP) PHASE 2 CONTRACT AWARD</b>

<b>RECOMMENDATION</b>
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That on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the award of the 2016 LED Street Light Upgrade Phase 2 Project:

- (a) The proposal submitted by Ameresco Canada Inc., **BE ACCEPTED** for the 2016 LED Street Light Upgrade Phase 2 in the amount of \$4,034,835.73 (excluding H.S.T.) in accordance with Section 12.2 (b) of the Procurement of Goods and Services Policy;
- (b) the financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix A;
- (c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- (d) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract with the consultant for the work; and
- (e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Environment and Transportation Committee - October 19<sup>th</sup>, 2009 - [Alternative Street Lighting Technology Review](#);
- Environment and Transportation Committee - October 18<sup>th</sup>, 2010 - [Alternative Street Lighting Technology Review – Update -](#)”;
- Civic Works Committee - April 28<sup>th</sup>, 2014 - [Transportation Energy Optimization Plan \(TEOP\)](#);
- Civic Works Committee - December 16<sup>th</sup>, 2014 - [Transportation Energy Optimization Plan \(TEOP\) Update](#);
- Civic Works Committee - May 20<sup>th</sup>, 2015 - [Transportation Energy Optimization Plan \(TEOP\) Phase 1 Financing](#); and

- Civic Works Committee – August 24<sup>th</sup>, 2015 - [Transportation Energy Optimization Plan \(TEOP\) Phase 1 Contract Award](#).

## 2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus areas of Strengthening Our Community, Building a Sustainable City and Leading in Public Service by supporting pedestrian activity with improved lighting levels, replacement of our aging street light infrastructure and reduced energy consumption which supports our natural and financial environment.

## BACKGROUND

In early 2014, RealTerm Energy Corp. was retained to develop a business plan for the upgrade of the City's cobra-style High Pressure Sodium (HPS) street lights to LED street lights. Phase 1 of the upgrade was completed in May 2015 and included cobra-style street lights on major roads at a cost of \$4,850,000. The 2017 energy costs avoided from the 9,276 LED street lights installed is \$950,000.00 based on projected energy rates

This report deals with the contract award for Phase 2 which will upgrade the remaining cobra-style street lights.

## DISCUSSION

### Project Description

Phase 2 of the LED Street Light Upgrade involves engineering design services, the supply and installation of LED street light fixtures and the provision of fixture data compatible with the City's street light database for the upgrade of approximately 10,600 High Pressure Sodium (HPS) street lights on minor roads. The project also includes the collection of all post-top street light fixture data to update the City's street light database.

A Request for Proposals (RFP) was published on October 20<sup>th</sup>, 2016 with a deadline of November 24<sup>th</sup>, 2016 for the submission of proposals. The RFP document was taken by 48 potential proponents and nine submissions were made by the deadline. One submission was rejected from further evaluation for failure to comply with the terms and conditions of the RFP.

### Proponent Selection

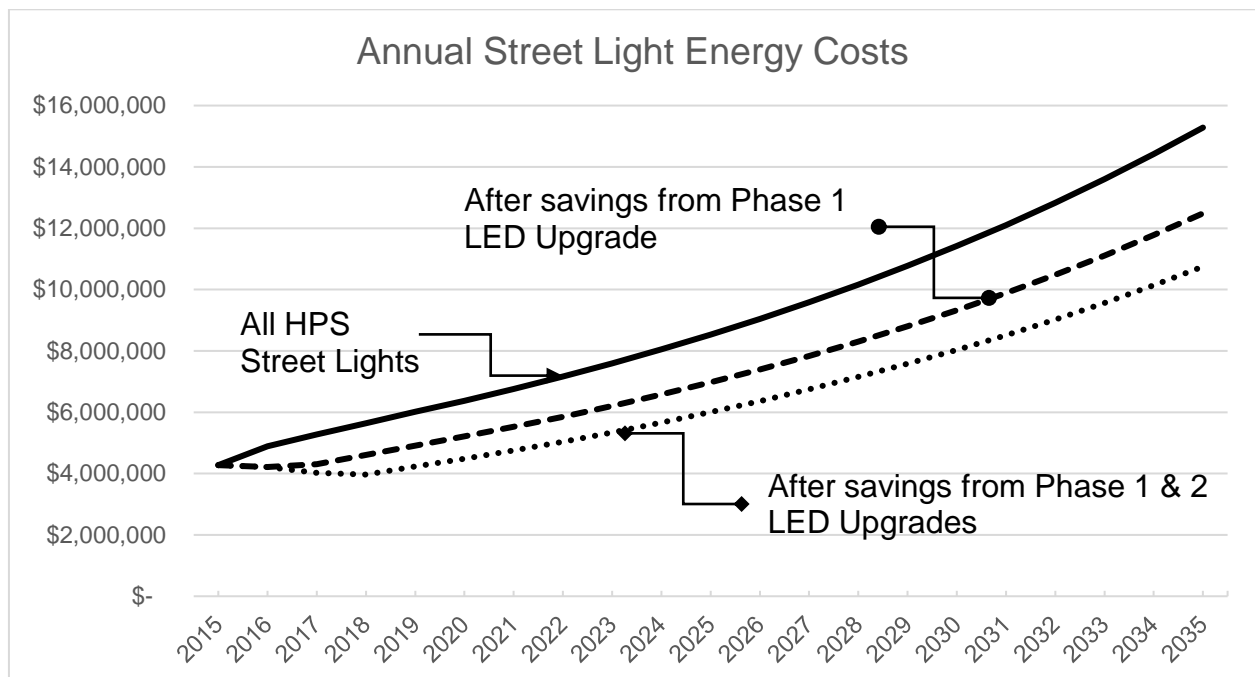
The remaining eight proposals were evaluated by a team comprised of staff from Roadway Lighting & Traffic Control, Transportation Planning & Design, Environmental Programs and Facilities. The evaluation criteria was provided to each proponent and considered experience, understanding of the project's objectives, work plan and cost.

The submission by Ameresco Canada Inc. in the amount of \$4,034,835.73 (excluding H.S.T.) meets the terms and conditions of the RFP and scored the highest number of

technical points and was the lowest cost. It should be noted the above price includes a contingency allowance of \$300,000 to address unexpected issues during the design and installation of the project as directed by the City.

Energy Savings

The 2017 energy cost avoided from Phase 1 is estimated to be \$950,000. Installation of Phase 2 is expected to begin mid-2017; therefore, the 2017 energy savings are expected to be \$280,000. The full year energy savings in 2018 for Phase 2 is expected to be \$620,000. The following graph shows the energy savings for Phase 1 and Phase 2.



Financial Impacts

The LED Street Light Upgrade - Phase 2 is eligible for an incentive of \$1,300,000 from SaveOnEnergy which reduces the net cost to \$2,734,835.73 (excl. HST). The balance will be self-financed by borrowing from the Efficiency, Effectiveness, and Economy Reserve at the City’s internal borrowing rate which will be fixed for the duration of payback period. The City’s current internal borrowing rate is 1.32%. The amount borrowed from this reserve will be paid back with interest through the annual cost avoidance realized in energy (\$620,000) and maintenance costs (\$30,000) which is estimated to be \$650,000 (full year savings). It is anticipated that the full payback for this initiative will occur in 2022.

**CONCLUSION**

The Phase 1 replacement of HPS street lights with LED street lights along major roads is proving to be a cost effective program with annual energy cost avoidance of \$950,000 with a payback period of 6 to 7 years. The energy savings from Phase 2 are not anticipated to be as large as Phase 1; however, it still remains a cost effective program with an anticipated payback period of 6 years. Energy savings will be used to finance Phase 2 of the upgrade program. The proposal submitted by Ameresco Canada Inc. was rated the highest by the proposal review team and meets all of the City’s requirements.

The following is a summary of the project costs and incentive for Phase 2:

Supply and Installation of LED street light fixtures for Phase 2 of the upgrade	\$4,034,835.73
Non-refundable portion of H.S.T.	\$71,013.10
SaveOnEnergy Incentive	(\$1,300,000.00)
<b>Net Cost to the City</b>	<b>\$2,805,848.83</b>
<b>Expected Annual Cost Avoidance</b>	<b>\$650,000.00</b>

Based on the thorough procurement process, it is recommended Ameresco Canada Inc. be awarded the contract for Phase 2 of the LED Street Light Upgrade project at a cost of \$4,034,835.73 (excluding H.S.T.).

### Acknowledgements

This report was prepared with the assistance of the Financial Business Administration Division and the Purchasing & Supply Division.

<b>PREPARED BY:</b>	<b>REVIEWED &amp; CONCURRED BY:</b>
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<b>REVIEWED &amp; CONCURRED BY:</b>	<b>RECOMMENDED BY:</b>
<b>ANNA LISA BARBON, CPA, CGA DIRECTOR, FINANCIAL SERVICES</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>

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Attach: Appendix A – Source of Financing

cc. Purchasing Division  
Tangible Capital Assets Division