

COMMITTEE OF THE WHOLE - AUGUST 31, 2010

NATIONAL DEMONSTRATION OF STREET LIGHT OPTIMIZATION TECHNOLOGY

Recommendation

The Commissioner of Engineering and Public Works recommends:

That the staff commitment to participate in the National Demonstration of Street Light Optimization Technology program be confirmed by Council and that a further report be submitted to Committee of the Whole following the conclusion of the program.

Contribution to Sustainability

The City has approximately 24,000 fixtures in its network of street lights which consume electricity at a cost to the City of approximately \$1.5 million per year. Implementation of a system to be able to control/adjust lighting levels has the potential to allow the City to effectively manage energy utilized in street lighting. The potential reduction in energy cost would contribute to a reduction in green house gas emissions.

Economic Impact

Participation in the program would require some staff time and installation and removal of fixtures and equipment supplied to the City at no cost. Shipping of the equipment is paid for by the proponent of the program and not by the City. The City would incur a cost of approximately \$1500 to have its contractor install the 10 light fixtures supplied for the program and to remove them on completion. This cost can be absorbed in the approved 2010 Public Works Department Operating Budget.

Communications Plan

When a location for the program has been selected, area residents/business owners would be contacted to advise them of the program and potential lighting level adjustments. One of the desired outcomes of the program is public feedback regarding the use of the street light optimization technology. Accordingly, a communications program would be developed and implemented to solicit feedback. Information would be placed on the City's website where the public could read about the program and make comments, similar to the process implemented in obtaining public feedback for the energy efficient streetlight trial undertaken earlier this year in Kleinburg.

Purpose

To advise Committee of the opportunity to participate in the demonstration program and to confirm the City's participation.

Background - Analysis and Options

Recently, the City received an invitation to participate in a program funded by National Resources Canada to encourage cities across Canada to participate in a demonstration of adaptive street lighting technology. The demonstration would take place over 2 or 3 months and would provide Vaughan with the opportunity to evaluate energy and operational savings potential in street lighting.

There would be no cost to the City to participate other than a small amount of staff time and some nominal cost to install and remove street light fixtures and equipment supplied for the program. There are 20 kits available for municipalities.

National Resources Canada is supporting this project in collaboration with a firm called Streetlight Intelligence Inc. from Victoria, B.C to evaluate adaptive lighting control for effective light energy management, improved lamp performance as well as system wide communication for centralized asset management. The objective of the National Demonstration Program is to provide several Canadian municipalities the opportunity to experience first hand how this innovative technology works. The project features small turnkey installations in a number of municipalities across Canada for 2 or 3 months in each location.

We would not be charged for the equipment to be utilized in the program. City staff would be trained in the use of the equipment and would manage the trial. There is not a significant time requirement for this activity. The City's street light maintenance contractor would be used to install the fixtures and equipment supplied for the program and would remove the equipment at the end of the program. The cost of this activity based on the hourly rates in the City's contract is estimated to be no more than \$1500. This cost can be absorbed in the Public Works Department approved 2010 operating budget. The street light fixtures and equipment to be used in the program would be supplied and delivered at no cost to the City. Return shipping is also prepaid.

On conclusion of the program, the City will be required to provide performance data and qualitative responses to a series of technical and social questions related to the technology. At the end of the project, the collected information from all jurisdictions will be assembled by an independent consulting firm, at no cost to the City, into a report that summarizes the associated cost/opinions surrounding the technology.

Staff have discussed the program requirements with representatives both of Natural Resources Canada and Streetlight Intelligence Inc. This is a good opportunity to see first hand how the technology works and to assess its applicability in Vaughan's street light network. A report on the program and outcomes would be prepared by staff and submitted to a future Committee of the Whole meeting.

The program is intended to commence shortly and confirmation of the City's agreement to participate was required by the end of August. Accordingly, staff have signed and returned the participation acceptance form to the program organizers so as to not miss this opportunity.

Relationship to Vaughan Vision 2020/Strategic Plan

Participation in this program relates directly to the priorities set forth in Vaughan Vision 2020 in particular the following:

Goal: Service Excellence

Objective: Pursue Excellence in Service Delivery

Objective: Lead and Promote Environmental Sustainability

Goal: Management Excellence

Objective: Enhance Productivity, Cost Effectiveness & Innovation

The necessary resources have been allocated and approved.

Regional Implications

None

Conclusion

Participation in the National Demonstration of Street Light Optimization Technology is a good opportunity to experience and evaluate a new emerging technology that contributes to the reduction of energy consumption. The technology has potential to optimize the performance of the street lighting network while maintaining a high level of public safety. The cost to the City to

participate is nominal and can be absorbed within the approved resources and budget of the Public Works Department.

Attachments

None

Report prepared by:

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Respectfully submitted,

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