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Item No. 5
Halifax Regional Council
May 10, 2011

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: Original Signed
Councillor Peter Lund, Chair, Environment and Sustainability Standing Committee

DATE: April 26, 2011

SUBJECT: Amendments to the Energy-efficient Appliances Act

INFORMATION REPORT

ORIGIN

Motion of the Environment and Sustainability Standing Committee special meeting of April 26, 2011:

That the Environment and Sustainability Standing Committee forward the April 26, 2011 staff briefing note to Halifax Regional Council as an information report, identifying that the Standing Committee has requested staff to explore a business case for conversion of all existing street lights, both HRM owned and NSPI owned, to LED technology.

BACKGROUND

The Environment and Sustainability Standing Committee received a staff briefing note and discussed the amendments to the Energy-efficient Appliances Act. Additional information on the amendments to the Energy-efficient Appliances Act can be reviewed online at: <http://www.halifax.ca/boardscom/swrac/documents/BriefingNoteAmendmentstotheEnergyefficientAppliancesAct.pdf>

DISCUSSION

The Environment and Sustainability Standing Committee considered forwarding a recommendation to Halifax Regional Council directing staff to explore a business case for conversion of all existing street lights.

Discussion was held with staff responding to questions respecting:

- cost to purchase LED lights
- political impact
- flat rate - cost to maintain and cost of energy consumed
- health and safety impacts of LED lights
- potential impacts to HRM's 2011/2012 budget.

The Standing Committee suggested the following be identified within the business case:

- ownership of street lights along the Peninsula
- cost benefit of the conversion from existing technology to LEDs (ie. rural area)
- health and environmental impact of LED lights
- traffic safety impacts of LED lights

It was noted that staff could not confirm which direction HRM should proceed with, until the Province and the Nova Scotia Utility and Review Board has identified the rate structure.

The Standing Committee passed a motion to forward the April 26th staff briefing note to Council as an information report, identifying the Standing Committee's request to staff to explore a business case.

The Standing Committee will consider staff's report and forward it to Regional Council for final decision, once available.

BUDGET IMPLICATIONS

There are substantial financial impacts to HRM, as outlined in the April 26th staff briefing note. Further financial analysis is required as part of the business case recommended by the Standing Committee.

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

The Environment and Sustainability Standing Committee meetings are open to members of the public.

ATTACHMENTS

Staff Briefing Note dated April 26, 2011

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Krista Tidgwell, Legislative Assistant, Municipal Clerks Office, 490-6519



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BRIEFING FORM

SUBMITTED TO: Environment and Sustainability Standing Committee

DIRECTOR'S APPROVAL: Ken Reashor, Director, Transportation and Public Works

DATE OF MEETING: April 26, 2011

SUBJECT: Amendments to the Energy-efficient Appliances Act

INFORMATION REPORT

ORIGIN

On April 21, 2011, the Honourable Charles Parker, Minister of Energy for the Province introduced an amendment to the Energy-efficient Appliances Act, which authorizes regulations restricting or prohibiting the use of a designated appliance that does not meet the prescribed efficiency standard for that appliance, in this case, roadway lights

BACKGROUND

There are approximately 140,000 street and roadway lights in Nova Scotia and approximately 10% of those light fixtures are municipally owned. HRM street lights are comprised of about 25,000 utility owned street light fixtures, and about 15,000 municipally owned fixtures. HRM has converted approximately 2400, or about 16% of its street lights to LED technology. In addition, the municipality is partnering with LED Roadway Lighting in an application to Sustainable Development Technology Canada for financial support for an additional 3500 LED street lights to be installed in 2011.

LED street lights are a very recent adaption of the LED technology. They do offer significant energy savings. The province uses a figure of approximately 50%. HRM's recent LED conversion project has a calculated energy reduction of approximately 62%. In addition, because of the anticipated 20 year LED light source life, street light maintenance could be reduced by as much as 75%.

DISCUSSION

Because HRM is an owner as well as a leasee of street lights, it is necessary to understand the impacts of implementing this amendment to the Energy-efficient Appliances Act from both points of view.

As Owner, HRM will be required to convert all remaining street lights to compliant technology within the defined time frame, which appears to be 5 years. This direct impact would be in the order of about \$2.2 million/year for 5 years. At the end of the 5 years, annual energy savings, using today's unmetered energy rate, would be somewhere between \$500k and \$600k. Maintenance cost savings are more difficult to estimate. Present maintenance costs will be significantly impacted by rising fuel and operating costs. Extending the maintenance cycle by two or three times will help mitigate such cost pressures. However, with the much higher cost for LED fixtures, payback could be expected to be in the 10 to 15 year time frame. HRM's approach, to date has been to identify opportunities which would reduce HRM's financial contribution, which also reduces investment payback and project risk. In addition, a more cautious approach provides opportunity for the municipality to develop a better understanding of operational reliability of the technology, because there are about 2400 in operation, as well as take advantage of improved efficiencies and potential reductions in fixture cost.

As Leasee, HRM is required to pay through the Unmetered Rate, a cost to lease street lights, a cost to maintain those lights, and an energy cost. Based on present power bills, and depending on the wattage of the fixture, energy represents between 30% and 65% of the full charge rate. Lease rates represent between 30% and 45%. What is unclear is what the net impact of energy and maintenance cost reduction and increased fixture cost will have to the full charge rate. It will be necessary for NSPI to undertake a Cost of Service study to determine the new rates for LED street lights.

With the implementation of this legislation, HRM has been put into a situation where it is necessary to evaluate the most economical means by which street lighting service is to be provided to municipal residents. There is potential opportunity to take ownership of all street lights within HRM through a capital investment to replace existing fixtures, not in compliance with the new regulation. For example, the town of Amherst replaced all of the NSPI owned street lights with municipality owned LED street lights. The Town now maintains all street lights and only pays the utility an energy rate. Such a scenario would require HRM to purchase an additional 25,000 street lights and commit to maintaining a much more comprehensive street light system that would cover the entire municipality. Costs and benefits would need to be compared with the "Status Quo", the option which would have an ownership arrangement similar

to what now exists, with both owners replacing their own fixtures over the anticipated 5 year period. With the introduction of the legislation, there is no longer a “do nothing”, or a “look for opportunities” option.

The NS Utilities and Review Board has tentatively scheduled a General Rate Hearing for NSPI in September. Assuming that the utility will file for a rate increase this year, such a hearing will provide the utility an opportunity to introduce a rate structure for LED street lights. It will also enable customers to participate in the setting of these rates. In addition, the Department of Energy has indicated that it intends to introduce its regulations relating to the inclusion of street lights within the Energy-efficient Appliances Act in the same time frame. They intend to provide for a consultative process prior to this implementation. HRM needs to be actively engaged in both these processes to help shape the rates and regulation and to better understand a future direction for street light ownership/maintenance in the years to come for the municipality.

BUDGET IMPLICATIONS

Depending on the extent of street light replacements, the enacting of this legislation will require HRM to invest between \$8 and \$35 million over the next 5 years. Replacing municipality owned lights, the low capital cost option, will result in energy and operational savings. Expanding the replacement to include NSPI owned street lights would also eliminate the lease rate, which is built into NSPI's Full Charge rate. Until LED street light rates are set by the NSUARB and the regulations for the Energy-efficiency Appliances Act are implemented, it is not possible to fully understand the budget implications associated with the lease and own options.

ATTACHMENT

Attachment “A”	An Act to Amend Chapter 2 of the Acts of 1991, the Energy-efficient Appliances Act
Attachment “B”	Bill Briefing Remarks – Energy Saving Roadway Lighting(2011) Act. (An Amendment to the Energy-Efficient Appliances Act)

KEY STAFF CONTACT:

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