THE REGIONAL MUNICIPALITY OF YORK

Housing York Inc.
September 14, 2005
Report of the
General Manager

ENERGY MANAGEMENT STRATEGY

1. RECOMMENDATIONS

It is recommended that:

1. A draw of up to $500,000 of retained earnings be approved to:
   - Fund the development of an Energy Management Strategy for Housing York Inc.
   - Provide seed money for Energy Pilots at 540 Timothy Street in the Town of Newmarket and 325 Elm Road in the Town of Whitchurch-Stouffville
   - Fund a staff position to manage these initiatives.

2. The Region be requested to increase its staff complement in the 2006 budget year by one permanent full-time employee (FTE) to secure a resource to be dedicated to the Housing York Inc. portfolio for the purposes of developing and implementing a Energy Management Strategy. This position is to be funded from retained earnings for an initial period of up to two years, following which the position will be funded from energy conservation savings.

3. Staff be directed to make application to potential funding entities to offset the cost of energy conservation programs, where possible.

2. PURPOSE

The report seeks the Board’s approval for the development and resourcing of a strategic energy management program for Housing York Inc. (HYI) to reduce the overall consumption of electricity, gas and water within its buildings in an effort to minimize the impact of energy cost increases on it operation as well as the tenant population.

3. BACKGROUND

In response to the deregulation of the energy industry, York Region’s commitment to its Clean Air Policy, and the economic need to reduce overall energy consumption, it has become a priority to establish new measures for energy management within HYI’s portfolio.

Although a number of energy conservation retrofits have been undertaken as part of the ongoing program of updating and renovating the buildings, there is a need to implement a more strategic approach to energy management. Energy audits have been completed on 10 of the Corporations 28 buildings in preparation for retrofitting and in order determine the feasibility of pilot initiatives. The results of the energy audits indicated that significant reductions in energy and related greenhouse gas emissions could be achieved through the implementation of a variety of energy initiatives in these 10 buildings. Reductions of 23 % in electricity, 13% in gas and 12% in water were identified as possible if all the proposed initiatives were implemented.

Since the studies were completed, in late 2003, electricity and gas costs have risen dramatically. Electricity has increased from 4.3 cents per kilowatt hour to 5.8 cents per kilowatt hour representing an increase of 35%. Enbridge Gas rates have risen 34% over the same period of time. In addition to the increases in the cost of energy commodities, the delivery charges for electricity and gas have also risen.

Energy cost increases are also having a direct impact on HYI tenants who pay their own utilities. HYI owns 366 townhouses that are rented to low and moderate income households. All of the townhouse residents pay their own gas and electricity. As energy prices increase the ability of these households to meet the increasing costs associated with maintaining their housing is being seriously challenged.

The energy market has also changed significantly over the last decade providing new opportunities for energy management and cost reduction. For example, the electricity market now offers incentives to those who manage their load according to time-of-use rates and provides opportunities to utilize emergency power generation for revenue generating purposes.

At the same time, sector organizations that support the work of non-profit housing providers, have begun to establish programs to support energy conservation. These include bulk purchasing arrangements for fuel through the Ontario Non-Profit Housing Association (ONPHA) and the Social Housing Services Corporation (SHSC), in which HYI is a participant, as well as initiatives to assist housing providers in planning and funding energy upgrades being led by the SHSC.

Added to this are increasing opportunities to obtain funding to assist in undertaking retrofits being made available through senior levels of government and utility providers. As an example, Housing York Inc. is participating with Newmarket Hydro in developing energy conservation programs specifically aimed at non-profit housing providers and their residents in the Town of Newmarket. As well, two of HYI's buildings have been designated as pilots under the SHSC initiative in order to demonstrate the processes involved in completing a retrofit and how funding can be accessed from various sources.

4. ANALYSIS AND OPTIONS

4.1 HYI Energy Management Strategy

This initiative is designed to create a comprehensive approach to energy management for HYI, including the use of new technologies, improved consumption management, tenant education and participation, maximizing funding opportunities and project management for building retrofits.

Strategy components are described below.

4.1.1 Tenant Education

It is fundamental to HYI's success in managing energy effectively that our consumers (i.e. our tenants) are educated about current environmental and energy issues and equipped with the necessary knowledge to enable them to participate in energy and greenhouse gas reduction strategies. Many residents have been tenants with HYI or within the community for many years and are simply unaware of the current costs and issues associated with energy, as they are not on the receiving end of utility bills.

As well, our family residents, who pay their own utility costs, are increasingly suffering from energy poverty, unable to cope with rising costs from their limited incomes. More and more often HYI is approached by utility companies to assist residents who have fallen behind in their energy bills. It is critical to assist these households in identifying actions they can take to reduce energy consumption and to implement energy retrofits that will support them.

Information materials, tenant education programs, and local programs to support our family residents in managing their own utility consumption will form a part of this program.

4.1.2 Building Retrofits

A key component of this initiative will be to take the energy audits already completed and develop a program of energy retrofits for HYI's 28 residential buildings to maximize conservation opportunities in existing buildings as well as providing necessary expertise to guide the development of new energy standards for both existing and new construction.

The projected cost of the energy upgrades for the HYI housing developments buildings as detailed in the energy audits is approximately $2.2 million. Based on the expected reduction in energy costs, a simple payback of 6.5 years would be achievable. Various energy incentive programs are available that could provide up to 25% of the capital cost associated with the energy upgrades which would result in an even shorter payback period. It is further anticipated that these savings can be increased as new strategies and technologies are introduced.

4.1.3 Funding Opportunities

There are currently a variety of opportunities available through the provincial and federal governments, local utilities and other funding entities. These funds are meant to help offset the costs associated with financing energy management strategies including retrofit costs, capital funding for new projects, funds for studies, etc. It is also expected that through the Social Housing Services Corporation (SHSC) there will soon be a low cost financing program available to non-profit housing providers to fund retrofits. A key component of the overall strategy will be to identify and take advantage of funding opportunities as they present themselves.

4.1.4 Consumption Management Initiatives

There are opportunities to improve energy consumption through increased use of consumption management. HYI is already enrolled in the Region's Energy and Environmental Management System (EEMS), however the opportunity to use this tool effectively to analyze utility data and act on opportunities to conserve or to manage utility accounts more effectively has not yet been maximized. As well, new technologies continue to emerge that demand consideration and review for their appropriateness as a tool to serve the housing portfolio.

Market changes have spurred the introduction of new technologies meant to assist consumers in shifting and shedding load in accordance with time-of-use rates. For example, enabling technologies such as smart meters, which provide finer-grain electricity data, and load control devices that introduce remote links between buildings to allow immediate system adjustments, would allow HYI to adjust consumption in real time in response to time-of-use electricity rates leading to utility cost savings.

HYI could also partner with the Region in exploring potential revenue generating mechanisms offered by the marketplace. These include utilization of emergency back up power to alleviate system wide emergencies on the power grid, as well as engagement in the Ontario Power Authority procurement processes.

As part of HYI's continued development of its Performance Management Framework, the implementation of these initiatives will support the development of energy consumption measurements and conservation targets that will be regularly reported to the Board and the resident community. The results of the overall program would form part of an annual report to the Board documenting progress and resulting savings.

4.1.5 Linkages with Regional Initiatives and Strategies

HYI has informal linkages with the Region's Corporate Energy Services Group through Property Services. It is intended that this initiative will strengthen those linkages to ensure that expertise and opportunities are shared. It is proposed that a portion of the funding set aside for the pilot initiative will be made available to Property Services to provide consulting and system development support for HYI. As well, HYI is engaged in the Region's Corporate Clean Air Task Force, the EEMS software, Water for Tomorrow and other Regional initiatives.

4.2 Energy Management Pilots

Also planned are two energy pilots to be undertaken over the next 18 months at 540 Timothy Street in the Town of Newmarket and 325 Elm Road in the Town of Whitchurch-Stouffville, where energy audits are completed and a variety of initiatives are planned. Each building requires between seven and ten individual upgrades representing a variety of initiatives such as energy efficient lighting, high efficiency boilers, building automation systems, LED emergency lighting, energy efficient appliances etc.

These buildings have been selected by SHSC as pilots for their energy conservation initiative. The Timothy Street building also offers the opportunity to link to the work being undertaken with Newmarket Hydro. These pilots provide the opportunity to examine the process of retrofitting older apartment buildings, securing funding from other sources and laying ground work for a broader initiative. As well, through the pilots standards and processes can be developed to support future initiatives.

It is proposed that the seed money for these pilots be allocated from HYI's retained earnings and that staff seek other sources of funding to offset these costs. Initial funding requirements are in the range of $250,000 to $300,000. HYI is eligible to offset up to 25% of those costs by various funding opportunities. It is anticipated that new sources of funding and financing may be available within the next year that will allow HYI to expand its work in additional buildings by reducing the capital requirement without having to rely on funding being available up front.

5. FINANCIAL IMPLICATIONS

The rapid increase in the cost of utilities over the past few years continues to place pressure on HYI's operating budget with electricity, gas and water costs representing 23% of the operating budget (excluding mortgage, taxes, and public housing capital). In the 2005 budget, energy costs represented $ 1.9 million dollars.

An energy management program that takes advantage of current funding opportunities can significantly reduce the existing energy costs on an ongoing basis. Setting aside funds from retained earnings to fund the energy conservation pilot initiatives and the cost of project management resource would allow HYI to establish a long-term energy management program. As part of this initiative, program targets and performance would be tracked and reported, including measurement and verification of energy savings, in order to provide accountability and transparency to the taxpayer.

It is proposed that a total of $500,000 be allocated from retained earnings to fund these initiatives over the upcoming two years. It is anticipated that this is an upset limit and that as the program gains momentum, this requirement could be reduced. The Retained Earnings account has a balance of $3,068,774 as at December 31, 2004 and funds are available for this purpose.

6. LOCAL MUNICIPAL IMPACT

Improved energy efficiency will reduce the pressure on utilities and Regional water systems to increase available energy sources to meet rising consumer demand. As well, this initiative will contribute to the benefits of reduced greenhouse gas emissions. At the same time, controlling costs in the housing program ensures that the financial impact on municipalities through tax levy is minimized.

7. CONCLUSION

The approval of this request will ensure that HYI is able to meet the challenges presented by spiralling energy prices and enable HYI to substantially contribute toward the Region's overall goal of reducing greenhouse gas emissions and responsible use of energy.

The Senior Management Group has reviewed this report.

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SP/dm

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