

# THE REGIONAL MUNICIPALITY OF YORK

Housing York Inc.  
June 10, 2009  
Report of the  
General Manager

## ENERGY CONSERVATION PROGRAM STATUS REPORT

### 1. RECOMMENDATION

It is recommended that:

1. The Board approve, in principle, that available infrastructure funds be utilized to the extent possible to reduce energy management borrowing requirements from the Region's Innovation Reserve Fund.

### 2. PURPOSE

The purpose of this report is to provide an update on year one of the five-year energy management strategy approved by the Housing York Inc. (HYI) Board in 2007 and to seek agreement, in principle, that provincial infrastructure funds be used to fund as many projects as possible as an alternative to borrowing.

### 3. BACKGROUND

#### **Five-year Energy Retrofit Program approved in 2007**

In 2007, the HYI. Board approved a five-year energy retrofit strategy beginning in 2008, enabling Housing York Inc. to complete energy retrofits on 25 of its older buildings. Total costs were not to exceed \$3.5 million. Projected energy savings at the end of the program were estimated at \$500,000 per year.

The retrofit costs are to be funded through a loan from York Region's Innovation Reserve Fund, which would be repaid over an 8 to 11 year period from the energy savings realized during this period.

#### **Strategy designed to take advantage of incentives and partnerships**

The Energy Retrofit Program is structured to be flexible. The intent is to position the delivery of retrofits to take maximum advantage of incentive and partnership opportunities as they become available. This means jobs are advanced or deferred over the five year cycle depending on changing circumstances in the market place. This

approach allows HYI to achieve the greatest overall benefits with the lowest possible investment. Some adjustments were made to the 2008 work plan under this principle.

#### **4. ANALYSIS AND OPTIONS**

##### **HYI is well on its way to achieving overall financial benefits of the program; \$235,142 recognized in 2008**

At the end of the program's first year, HYI reported utility savings of \$235,142 on its financial statements. The five year goal of the program is to reduce utility costs by \$500,000 per year. HYI is positioned to meet the financial objectives on or before completion of the program.

The reported savings represent almost 1% of the 2008 utility budget. The actual savings achieved so far actually exceeds \$235,142. However, HYI does not recognize savings at townhouse sites where tenants are the direct beneficiaries of the retrofits. This is discussed in further detail later in this report.

##### **2008 retrofit costs were nearly \$200,000; fully funded without borrowing**

A total of \$191,800 was spent during 2008 which was 95% funded from in-year surplus operating funds and 5% from incentives. This deferred the need to execute borrowing arrangements with the Region, as originally intended, for at least a year.

The decision to self-fund the program in 2008 was largely due to the adjustments that were made to the annual work program. As noted earlier, there is some fluidity in scheduling work to accommodate available funding. The following factors influenced the rescheduling of several jobs:

Completed:

- Lighting retrofits were completed in 12 buildings ahead of schedule when Powerstream, in partnership with the Social Housing Services Corporation, offered an attractive, time-limited incentive. This program funded 100% of the costs and allowed HYI to realize savings of \$35,000 per year effective immediately.
- Nineteen jobs specifically scheduled under the energy management program were completed resulting in \$55,000 per year in savings.
- Additional conservation jobs that were scheduled under the 10-year capital plan were also completed resulting in significant utility savings.

Awaiting building permits or funding:

- Two solar wall installations were deferred to 2009 when building permits will be issued.
- A few 2008 jobs were delayed to take advantage of incentive funding when it becomes available from the Ontario Power Authority in 2009.

Any planned work not completed in 2008 will be rescheduled. All energy management jobs are constantly scrutinized for optimal timing, ongoing financial viability and new or alternative solutions. Two major jobs involving installations of a solar wall and solar domestic hot water system were cancelled when further studies suggested the paybacks would be much longer than originally projected. Other opportunities will be considered in lieu of these jobs, providing they meet the program criteria.

### **Prior year efforts are a sizable head start to financial savings and emission reductions**

HYI has methodically been making investments in energy conservation for years. The launch of the formal Energy Management Program in 2008 however, has led HYI to the point where savings can be reliably quantified and reported. Table 1 identifies savings that have been achieved since 2004.

**Table 1**  
Total Calculated Energy Savings to 2008

<b>Year</b>	<b>New Yearly Savings</b>	<b>Total Accumulated Energy Savings</b>
2004	\$ 17,843	\$ 17,843
2005	13,369	31,212
2006	26,706	57,918
2007	97,204	155,122
2008	\$114,755	\$269,877

Over the past five years a total in excess of \$530,000 was saved in energy costs.

The calculated energy savings shown above differs from reported energy savings in the 2008 financial statements. There is a difference of \$34,735 that HYI does not recognize as savings on its financial reports. This amount represents the utility savings at townhouse sites where tenants are direct beneficiaries of energy retrofits.

The savings noted in Table 1 are computed by energy consultants working with HYI. These calculations consider variances for temperature fluctuations as well as price changes so that a true saving attributable to lower consumption can be identified.

Jobs that were completed before the launch of the formal Energy Management Program were funded by one of the following means:

- Part of the 10-year capital plan and funded through the annual budget process.
- Use of third party incentive funding.
- Changes in service contracts.
- Completion of the energy management pilot program at Elmwood Gardens in the Town of Whitchurch-Stouffville and Founders Place in the Town of Newmarket.

The total annual reduction in green house gas emissions associated with the energy conservation measures is estimated at 705,000 tonnes, as shown in Table 2.

**Table 2**  
Reduction in Green House Gas Emissions

Year	New Yearly Reduction (Tonnes)	Accumulated GHG Reduction (Tonnes)
2004	32,370	32,370
2005	31,350	63,720
2006	44,106	107,826
2007	332,922	440,748
2008	264,771	705,519

According to conversion factors from Natural Resources Canada, the accumulated savings of 705,519 tonnes could be likened to one of the following:

- 141 light cars or trucks not being used.
- Nearly 290,000 litres of gasoline not being consumed.
- Nearly 600 acres of forest absorbing carbon.

**Funding alternatives may further reduce borrowing requirements for the next two years**

HYI is anticipating that federal/provincial infrastructure funds may be used to pay for several energy management projects over the next two years. The fluidity of HYI’s Energy Management Program and the state of readiness for projects already in the queue makes it appealing to take advantage of infrastructure funding.

This report seeks approval in principle to pursue this opportunity. A report to the Board of Directors would be provided identifying how infrastructure funding is used to fund capital repairs and energy retrofits.

**5. FINANCIAL IMPLICATIONS**

**2008 energy program capital expenditures**

Capital expenditures associated with year one of the strategic energy plan totalled \$191,818. Incentive funding in the amount of \$9,979 was received and the balance of \$181,840 was funded from current year surplus operating funds. Funding the 2008 costs in this manner made immediate use of quantifiable utility savings and also deferred borrowing funds from the Region.

The suite lighting upgrade in the twelve buildings, funded through the Powerstream/SHSC partnership, offset future planned expenditures for a total incentive of approximately \$121,000.

### **Amount borrowed to date from Region's Innovation Fund Reserve**

The accumulated energy savings were sufficient to cover the cost of energy initiatives expenditures incurred in 2008. This means that a 2008 draw on the Region's reserve was avoided.

The borrowing option continues to be in place as a financing alternative. However, HYI is attempting to utilize grants, incentives or infrastructure funds as a first choice to lessen borrowing requirements.

### **Partial repayment to Retained Earnings for Energy Management Pilot**

Of the total \$235,142 savings realized in 2008, \$181,840 was used to fund year one of the energy management strategy as noted above. Additionally, \$43,324 was repaid to HYI Retained Earnings to reimburse some of the original retrofit investment in the pilot buildings.

## **6. LOCAL MUNICIPAL IMPACT**

All municipalities benefit from the reduction of greenhouse gas emissions. The reduced electrical consumption and peak demand reduces the burden on local utility supply and infrastructure.

In townhouse locations where the retrofits benefit the tenants directly, the utility savings offset tenant housing costs, increasing income available to meet other basic needs.

## **7. CONCLUSION**

Significant reductions in utility consumption and greenhouse gas emissions have been achieved. It is expected that the completion of the measures identified in the energy management strategy will result in targeted utility savings of \$500,000 per year by the end of year five.

For more information on this report, please contact Sylvia Patterson, Assistant General Manager, Housing York Inc. at Ext. 2091.

The Senior Management Group has reviewed this report.

Recommended by:

Approved for Submission:

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May 28, 2009

KC/sb

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