

INFORMATION REPORT

TO: Chair and Members Public Works Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: June 4, 2012	
SUBJECT/REPORT NO: Report on Energy Initiative Capital Projects and Future Impact on Levy (PW12025a) - (City Wide) (Outstanding Business List Item)	
SUBMITTED BY: John Mater, C.E.T. Acting General Manager Public Works Department	PREPARED BY: Tom Chessman Manager Office of Energy Initiatives 905-546-2424, Extension 2494
SIGNATURE:	

Council Direction:

At the April 2nd Public Works Committee meeting, staff was directed to report back with a schedule including the completion and repayment timelines for Energy Initiative Capital Projects and the projected future impacts on the municipal tax levy.

Information:

This report highlights energy conservation projects or energy capital initiatives that have been funded in part by City Reserves. This report also outlines the energy savings achieved and how they, along with utility incentives are used to pay back funds borrowed from City reserves, the timing of the paybacks and when they benefit the municipal tax levy.

This report will also summarize the direct energy savings and avoided cost for 2011 and the cumulative results from 2006 to 2011.

There have been four major energy conservation projects completed by the Office of Energy Initiatives (OEI) that utilized funding borrowed from a reserve. These projects are:

1. Energy Retrofit Pilot (PW06078 / FCS06067)
2. District Cooling (Phases 1, 2 & 3 PW08109)
3. Energy Efficiency Projects (PW10099)
4. Hamilton Public Library Lighting (Central and Branches)

Funds to complete these projects are often secured through a combination of client departmental capital budgets, City reserves and various incentives programs. Once the

loans have been repaid to City Reserves the energy savings are then removed for the corresponding energy line item in the next budget year.

Energy Retrofit Pilot

In June 2006 the City of Hamilton entered into an energy performance contract with Honeywell Limited for an energy pilot program where energy efficiency retrofits were completed in nineteen City owned facilities. The project was completed in March 2008. The facilities selected were a cross section of City buildings, (Arenas, Recreation Centres, Libraries, Fire Stations, Public Works Operation Centres, Social Housing stock, and Municipal Centres). The total project cost was \$2.65 million. Original funding for the project came from a combination of the Enterprise Reserve Fund (112243), Affordability Fund (60005555102) and Capital Levy Reserve (108020). The project received \$97,803 in incentives from Horizon Utilities and Union Gas. In 2010 all remaining funds were repaid through year end City surpluses and the direct energy savings (reductions) were applied to the Levy budget energy line items for each facility in the 2011 budget. The combined municipal levy reduction was \$321,500.

District Cooling (Phases 1 to 3)

In September 2008, Council approved \$8.5 million for the development and expansion of a District Cooling project which currently supplies chilled water to cool a number of buildings in the City's downtown core. These locations include: City Hall, Copp's Coliseum, Central Library, Hamilton Wentworth School Board Building, Hamilton Place, Hamilton Convention Centre, Ellen Fairclough Building, Farmers Market and Art Gallery. Prior to the project approval the City had \$7.0 million allocated from capital to replace fourteen existing chillers. Through district cooling option the City was significantly able to reduce energy consumption, lower operating costs; improve reliability and lower green house gas emissions. The District Cooling Project (Phases 1 to 3) was funded from a combination of 2009 Block Funding (\$0.5 million), Energy Reserve 112272 (\$0.6 million), Capital Reserve 108020 (\$4.9 million) and Corporate Buildings and Technical Services 2008 Capital Budget (\$2.5 million). To date the expected utility incentives have exceeded upside estimates of \$500,000. This project received \$603,307 in incentives from Horizon Utilities which will go directly to pay down the monies borrowed from the City's Capital Reserve 108020 (\$4.9 million). The resulting annual energy and operational savings of \$540,960 will be used to pay down the remaining capital. The Capital reserve is expected to be fully repaid in 2018 and the resulting \$540,960 in savings will be used as directed to Levy reduction or reserves by Policy or Council at that time.

Energy Efficiency Projects

In October 2010 Council approved a funding request of \$1.37 million from the City's Enterprise Reserve (112243) to implement various energy efficiency projects. These projects were completed at the end 2011. In addition to the Enterprise Reserve Fund 112243, \$125,000 was used from the Recreation Account 7101054536. These projects upgraded the lighting and controls at Fire Stations, Arena's, Hamilton Convention Centre, and the Wentworth Operations Centre. A water retrofit was also completed at

Macassa Lodge. These projects will result in an annual savings of \$334,000, along with a one-time incentives contribution from Horizon Utilities of \$273,000. The savings and incentives from these projects will be used pay down the borrowed capital funds, which are expected to be repaid by 2014. The savings then revert to the Energy Reserve. As per the Council Report (PW07127) savings and incentives will be used for funding the Office of Energy Initiatives, payback future capital projects, off set future unforeseen energy budget increases, fund energy audits and feasibility studies, fund pilot projects for new technology and renewable energy projects, fund incremental retrofit projects costs and future website, educational and awareness programs.

Hamilton Public Library Lighting (Central and Branches)

This project was approved by the Library Board in May 2010. This project included energy efficient lighting and capital upgrades retrofits in the branches and the Central Library. This project was fully funded by the Hamilton Public Library Board in the amount of \$995,000. The annual savings is \$144,760, with a one-time incentive from Horizon utilities of \$109,000. This project has a simple payback of six years and upon repayment of capital the Library Board will decide how to direct savings.