



Development and Infrastructure Services - COMMISSIONER
Town of Newmarket www.newmarket.ca
395 Mulock Drive engineering@newmarket.ca
P.O. Box 328, STN Main T: 905.895.5193
Newmarket, ON L3Y 4X7 F: 905.953.5138

February 16, 2017

DEVELOPMENT INFRASTRUCTURE SERVICES INFORMATION REPORT – 2017-08

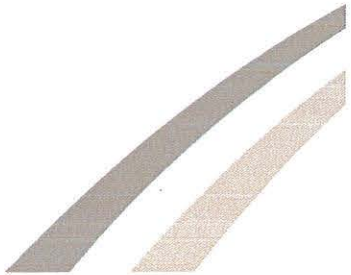
TO: Mayor and Members of Council
SUBJECT: Honeywell Update – Energy & Operational Savings Report
ORIGIN: Commissioner of Development Services

The purpose of this report is to provide an update on Phase 1 and Phase 2 of the Honeywell Retrofit Program that were initiated in 2007 and 2013 respectively.

The cost savings achieved during the period of November 2015 to October 2016 by Facility and Utility are provided in the following summary:

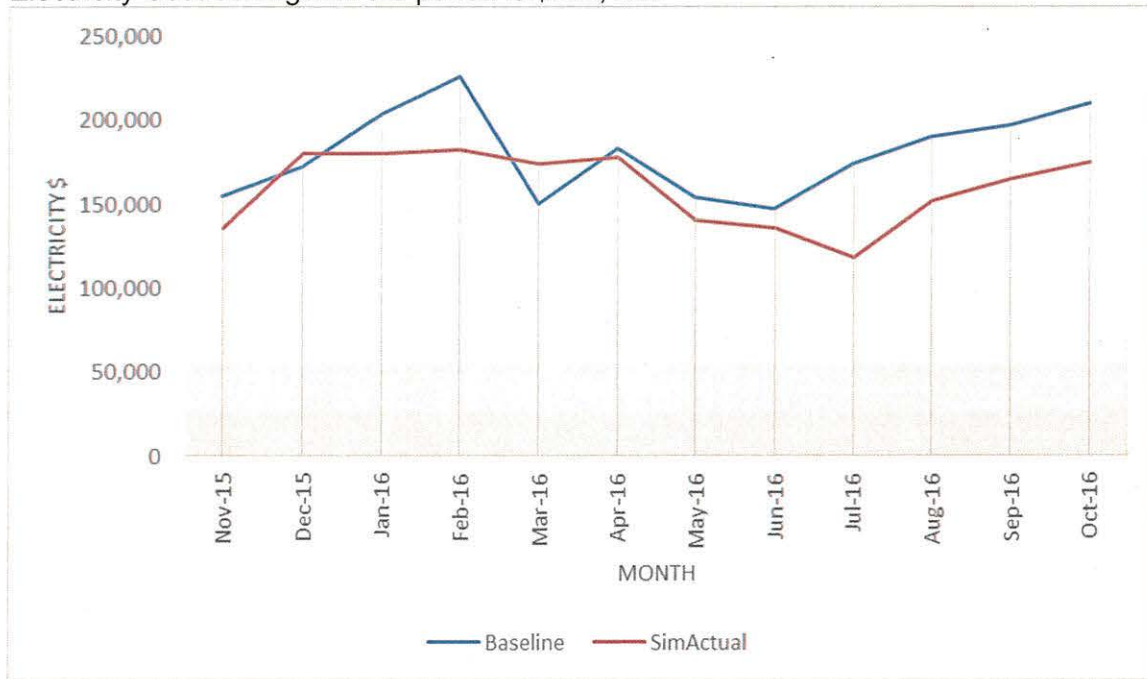
Building Name	Electricity, \$	Natural Gas, \$	Water, \$	Total Savings, \$
Lions/Gorman Pool	22,539	1,106	n/a	23,645
Municipal Office	26,421	856	n/a	27,277
Old Town Hall	n/a	5,082	n/a	5,082
Ray Twinney Rec	64,759	40,536	39,183	144,479
Seniors Meeting Place	6,936	581	n/a	7,517
Youth Centre	21,560	5,647	n/a	27,206
Magna Centre-Ph2 only	104,933	n/a	n/a	104,933
Total	247,149	53,808	39,183	340,139

Following is a graphical representation of the simulated actual utility consumption against the baseline utilities as established at the beginning of the project:



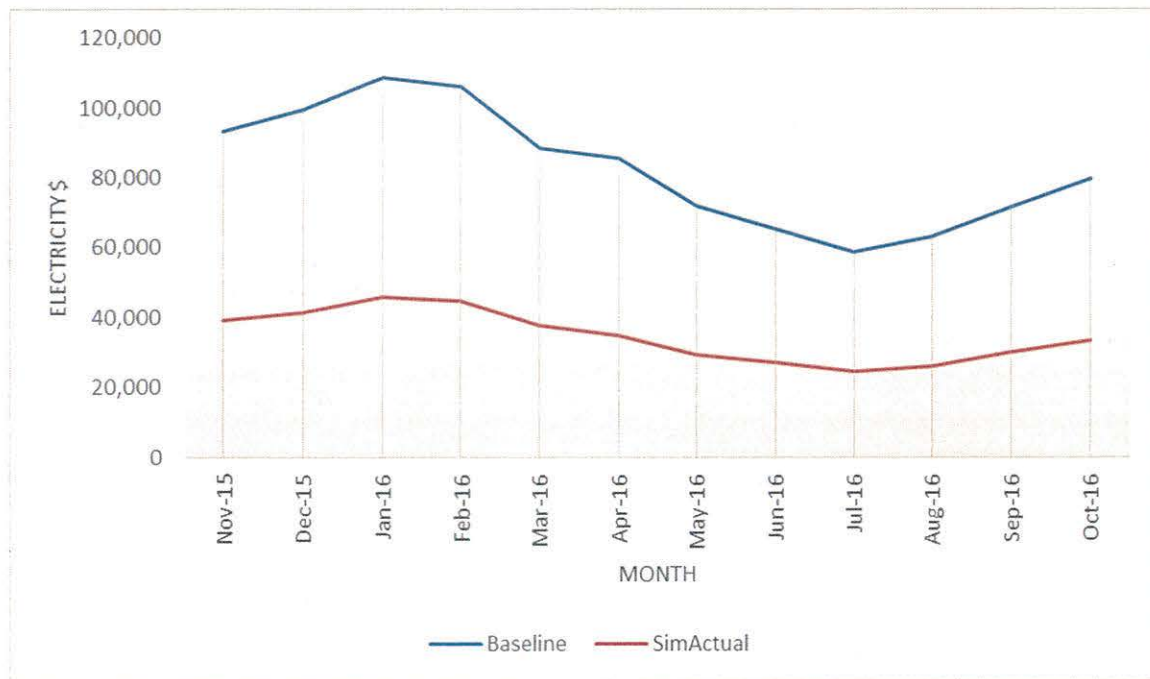
Electricity Consumption Cost (Excluding Streetlights)

Electricity Cost Savings for the period is \$247,149.



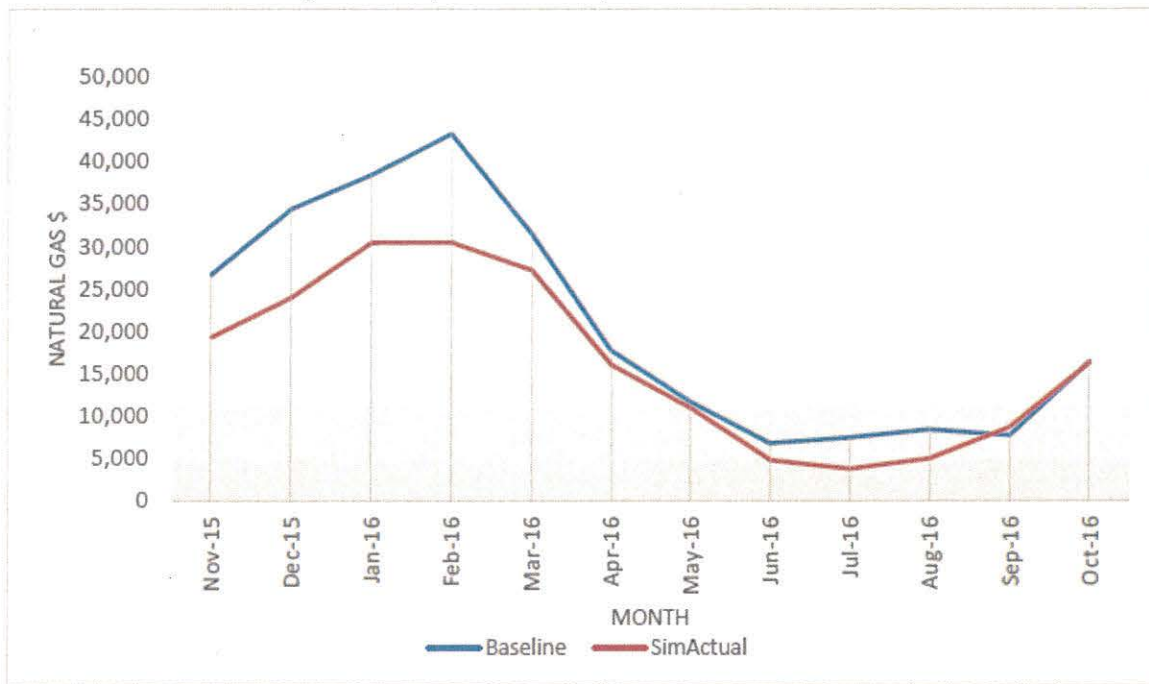
Streetlight Electricity Consumption Cost

Electricity cost avoidance savings for the period is \$577,845.



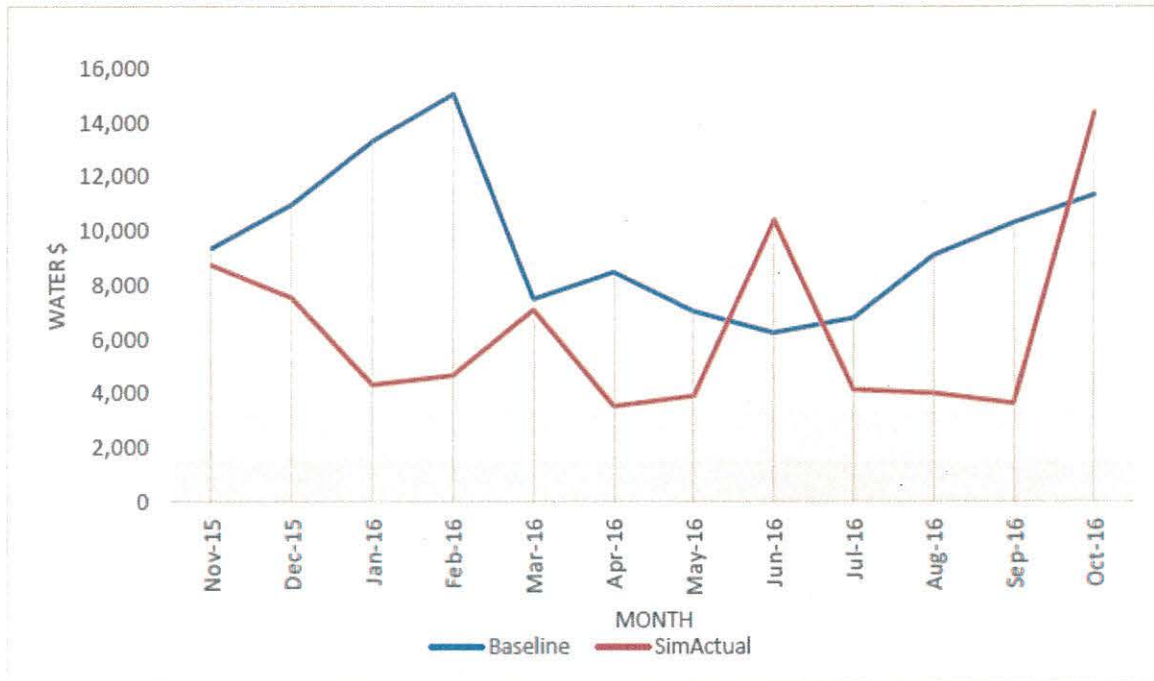
Natural Gas Consumption Costs

Natural Gas Cost Savings for the period is \$53,808.



Water Consumption Costs

Water Cost Savings for the period is \$39,183.



In addition to the utility cost avoidance indicated above operational cost savings were identified of \$334,447 due to lower maintenance activities indicated in the following chart:

Measure	Description of Savings	Average Maintenance Savings(\$)
Streetlighting Upgrade (LED)	Savings result from increased life expectancy of new LED street lights, and reduced forecasted maintenance cost as developed by Newmarket Hydro, Honeywell and the Town. Includes a 10 year warranty on new LED fixtures (material). See section 4.3.1 for more detail.	316,162
Lighting System Upgrades	The lamp and ballast lighting material savings are due to replacement. The new equipment is under warranty, and has a longer rated operating life.	15,188
Control System Upgrades & Scheduling	Measures result in reduced: wear and tear on scheduled motors; less frequent filter changes due to lower annual operating hours and wear on valves and dampers due to stable control and reduced hunting.	1,867
HVAC Upgrades	Less wear and tear and change out of pool cooling compressor due to shorter operating hours	1,129
Heating Plant Upgrades	Reduced maintenance costs due to less frequent repairs on linkages	100
Total		334,447

In conclusion the savings report ending 2016 is provided in appendix A for your reference. To date cumulative savings and/or cost avoidance realized is \$3,400,442. This is \$1,228,459 higher than anticipated at the beginning of the projects.

CONTACT

For more information on this report or to request a copy of Honeywell's Report please contact Lisa Ellis, Business Performance Coordinator, Community Services at 905-953-5300 extension 2515; lellis@newmarket.ca.



Lisa Ellis
Business Performance Coordinator,
Development & Infrastructure Services



Chris Kalimootoo
Director, Public Works Services



Peter Noehammer
Commissioner Development & Infrastructure Services



Energy and Operational Savings Report
for Ph1 Year 9 and Ph2 Year 1 Periods

Table 2 - Total Guaranteed Project Cost Savings

Guarantee Year	Ph1 Utility Savings Guarantee (\$)	Ph2 Utility Savings Guarantee (\$)	Ph1 Operational Savings (\$)	Ph2 Operational Savings (\$)	Total Savings Guarantee (\$)	Cumulative Savings Guarantee (\$)	Achieved Savings (\$)	Cumulative Achieved Savings (\$)	Cumulative Excess Savings (\$)
Ph1 CP	Jan 2007 - Nov 2007	n/a	n/a	n/a	n/a	n/a	n/a	126,989	126,989
Ph1 Yr 1	Nov 2007 - Oct 2008	159,232	n/a	(1,700)	n/a	157,532	157,532	217,683	344,672
Ph1 Yr 2	Nov 2008 - Oct 2009	159,232	n/a	(1,700)	n/a	157,532	315,064	211,221	555,893
Ph1 Yr 3	Nov 2009 - Oct 2010	159,232	n/a	(1,700)	n/a	157,532	472,596	213,969	769,862
Ph1 Yr 4	Nov 2010 - Oct 2011	159,232	n/a	(1,700)	n/a	157,532	630,128	210,420	980,282
Ph1 Yr 5	Nov 2011 - Oct 2012	159,232	n/a	(1,700)	n/a	157,532	787,660	218,006	1,198,288
Ph1 Yr 6	Nov 2012 - Oct 2013	159,232	n/a	(1,700)	n/a	157,532	945,192	193,719	1,392,007
Ph1 Yr 7	Nov 2013 - Oct 2014	159,232	n/a	(1,700)	n/a	157,532	1,102,724	184,937	1,576,944
Ph1 Yr 8 and Ph2 CP	Nov 2014 - Oct 2015	159,232	n/a	(1,700)	n/a	157,532	1,260,256	550,857	2,127,801
Ph1 Yr 9 and Ph2 Yr1	Nov 2015 - Oct 2016	159,232	477,662	(1,700)	276,593	911,727	2,471,983	1,215,127	3,342,508
Ph1 Yr 10 and Ph2 Yr2	Nov 2016 - Oct 2017	159,232	491,737	(1,700)	288,929	938,198	3,110,181	n/a	n/a
Ph1 Yr 11 and Ph2 Yr3	Nov 2017 - Oct 2018	38,432	505,813	(427)	301,920	845,738	3,955,919	n/a	n/a
Ph2 Yr4	Nov 2018 - Oct 2019	n/a	519,889	n/a	315,595	835,424	4,791,343	n/a	n/a
Ph2 Yr5	Nov 2019 - Oct 2020	n/a	533,965	n/a	329,803	863,768	5,655,111	n/a	n/a
Ph2 Yr6	Nov 2020 - Oct 2021	n/a	548,041	n/a	344,755	892,796	6,547,907	n/a	n/a
Ph2 Yr7	Nov 2021 - Oct 2022	n/a	562,116	n/a	360,426	922,542	7,470,449	n/a	n/a
Ph2 Yr8	Nov 2022 - Oct 2023	n/a	576,192	n/a	376,849	953,041	8,423,490	n/a	n/a
Ph2 Yr9	Nov 2023 - Oct 2024	n/a	590,268	n/a	394,060	984,328	9,407,818	n/a	n/a
Ph2 Yr10	Nov 2024 - Oct 2025	n/a	604,344	n/a	412,097	1,016,441	10,424,259	n/a	n/a
Ph2 Yr11	Nov 2025 - Oct 2026	n/a	618,419	n/a	290,241	908,660	11,332,919	n/a	n/a
Ph2 Yr12	Nov 2026 - Oct 2027	n/a	632,495	n/a	303,295	935,790	12,268,709	n/a	n/a
Ph2 Yr13	Nov 2027 - Oct 2028	n/a	646,571	n/a	316,975	963,546	13,232,255	n/a	n/a
Ph2 Yr14	Nov 2028 - Oct 2029	n/a	660,647	n/a	331,313	991,960	14,224,215	n/a	n/a
Ph2 Yr15	Nov 2029 - Oct 2030	n/a	674,722	n/a	346,398	1,021,060	15,245,275	n/a	n/a
Ph2 Yr16	Nov 2030 - Oct 2031	n/a	688,798	n/a	362,084	1,050,882	16,296,157	n/a	n/a

