

COUNTY OF BRUCE

Energy Conservation and Demand Management Plan January 1, 2014 to December 31, 2018

Projects

Updated 06/2019

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/yr)	Save (\$)	ROI
Replace Existing Boiler with Higher Efficiency Unit	Administration Building	Mike Berberich, Environmental Services Manager	2014-07-01	2018-12-31	Completed [100%]	60000.00	0	0.00	0
Details	Replacement of old and aging equipment. Savings yet to be determined as this project completed late fall of 2018.								
Install Occupancy Sensors	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2014-09-10	2015-07-31	Completed [100%]	0.00	9338	0.00	0
Details	Install 70 occupancy sensors in lower use rooms and resident rooms. Incentives received from Hydro One.								
Replace A/C Unit with More Energy Efficient Model	Bruce County Library HQ		2014-03-07	2014-11-09	Completed [100%]	0.00	855	0.00	0
Details	Two Keeprite CHGK125 air conditioning units were installed at the Library HQ in 1995. One unit was replaced in 2012. The remaining unit needs to be replaced in the short-term. New unit selected is Lennox single-stage, 5ton, model XC 17-060-230 with 5 ton cased coil model CH33-60D-2F. 12.7 EER								
Replace Gas Furnace with More Energy Efficient Model	Bruce County Library HQ		2014-08-01	2014-11-09	Completed [100%]	0.00	0	0.00	0
Details	The Library HQ had two Lennox G61MP-60D-135-08 94.1 % AFUE gas-fired furnaces installed in 1995. One furnace was already replaced a few years ago. The other unit needs to be replaced in the short-term due to increased service calls. Lennox currently provides various furnace models ranging up to 98% AFUE (energy efficiency). Installed new Lennox 2 stage gas furnace with ECM motor EL296UH135XV60D and new digital programmable thermostat. Furnace rated 96% AFUE.								
Lighting Retrofit	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2016-07-01	2018-02-01	Completed [100%]	124700.00	192400	32200.00	3
Details	Instant Fit LED retrofit for T8's, CFL, MR16, HID floodlights, wall packs and outdoor pole lights. Included in Energy Performance Savings (EPS) Contract with EcoSystem. Incentives received included in cost.								
Replace Boiler	Administration Building	Mike Berberich, Environmental Services Manager	2017-07-01	2017-12-04	Completed [100%]	52000.00	71400	1700.00	30
Details	Replace Non-Condensing Boiler with Condensing Boiler. Cost includes incentive rebate received. Est. savings 6,800 m3 natural gas.								
Install LED Lights	Administration Building	Mike Berberich, Environmental Services Manager	2017-07-01	2018-07-15	Completed [100%]	73000.00	89400	14400.00	5
Details	Instant Fit LED retrofit for T8 lights throughout building and downlights in Council Chambers. LED retrofit for 100W and 400W incandescent lights. LED retrofit for HID floodlights, wall packs and outdoor pole lights. Included in Energy Performance								

	Savings (EPS) Contract with EcoSystem. Cost includes incentive rebate received.								
BAS Replacement	Administration Building	Mike Berberich, Environmental Services Manager	2016-07-01	2017-08-31	Completed [100%]	42000.00	32700	5900.00	7
Details	Add Building Automation System controls to the boiler, cooling tower and pumps in the mechanical room. Included in EPS Contract with Ecosystem. Incentive rebate included in price.								
Heat Pump Replacement	Administration Building	Mike Berberich, Environmental Services Manager	2016-07-01	2017-12-19	Completed [100%]	87800.00	10500	1600.00	54
Details	Replace 13 heat pumps that are 28 years old or older. Included in Energy Savings Performance (ESP) contract with Ecosystem. Incentive rebate included in price.								
Variable Frequency Drives	Administration Building	Mike Berberich, Environmental Services Manager	2017-10-01	2018-01-15	Completed [100%]	10600.00	7500	1100.00	9
Details	VFDs will be installed on the 15HP cooling tower motor. Included in Energy Performance Savings (EPS) contract with Ecosystem. Cost includes incentive rebate received.								
Low Flush Fixtures	Administration Building	Mike Berberich, Environmental Services Manager	2017-09-01	2018-03-31	Completed [100%]	10000.00	3150	800.00	12
Details	Replace 6L/flush toilets with 3.8L/flush urinals with 0.5 L models. Included in Energy Performance Savings (EPS) Contract with Ecosystem. Incentive rebate included in price.								
Lighting Retrofit	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2016-07-01	2017-08-31	Completed [100%]	132600.00	231000	33900.00	3
Details	Instant Fit LED retrofit for T8's, CFL, MR16, HID floodlights, wall packs and outdoor pole lights. Included in Energy Performance Savings (EPS) Contract with Ecosystem. Price includes incentive rebate received.								
BAS Replacement	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2016-07-01	2017-08-31	Completed [100%]	249000.00	140400	24500.00	10
Details	Replace existing Building Automation System Replacement with an upgraded controls system. Included in Energy Performance Savings (EPS) Contract with Ecosystem. Cost includes incentive rebate received.								
Control System Recommissioning	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2016-07-01	2017-08-31	Completed [100%]	14900.00	67900	11800.00	1
Details	Optimize ventilation system airflow. Included in Energy Performance Savings (EPS) Contract with EcoSystem. Price includes incentive rebate received.								
Replace Booster Pump Set (VFDs)	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2017-11-01	2018-01-01	Completed [100%]	45300.00	26100	3600.00	12
Details	Domestic booster pump skid replaced with a new skid equipped with RFDs. Included in Energy Performance Savings (EPS)								

	with Ecosystem. Incentive rebate included in cost.								
Variable Frequency Drive	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2017-09-01	2018-01-01	Completed [100%]	33000.00	24300	3350.00	9
Details	Domestic booster pump skid replaced with a new skid equipped with VFDs. VFDs will be installed on the two 5 HP primary heating pumps and on the two 10 HP chilled water pumps. Included in Energy Performance Savings (EPS) contract with Ecosystem. Cost includes incentive rebate.								
Chiller Replacement	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2017-08-01	2017-08-31	Completed [0%]	172600.00	37000	5100.00	33
Details	Current chiller uses refrigerant R-22 that will no longer be available in Canada by 2020. Replacement chiller would use R-410 or equivalent refrigerant. Included in Energy Performance Savings (EPS) contract with Ecosystem. Incentive rebate included in price.								
Partial Boiler Replacement	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2018-05-01	2018-12-23	Completed [100%]	319100.00	291900	6700.00	47
Details	Retrofit measure to include: 3 new boilers, piping modifications, and controls to suit. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included with price.								
BAS Replacement	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2016-07-31	2017-08-31	Completed [100%]	192900.00	115000	22900.00	8
Details	Replace existing Building Automation System with an upgraded controls system. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Control System Recommissioning	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2016-07-01	2018-01-15	Completed [100%]	19800.00	51000	9900.00	2
Details	Optimize ventilation system airflow. Included in Energy Performance Savings (EPS) contract with Ecosystem. Incentive rebate included in savings cost.								
Install "Smart" Kitchen Hood Controls	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2016-07-01	2018-01-01	Completed [100%]	16600.00	12700	4500.00	3
Details	Install sensors in kitchen hoods and a VFD to the exhaust motor to improve efficiency. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Variable Frequency Drives	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2016-07-01	2018-06-15	Completed [100%]	24500.00	14900	2300.00	10
Details	VFD's will be installed on the two 3 HP primary heating pumps and on the two 7.5 HP chilled water pumps. Included in Energy Performance Savings (EPS) contract with Ecosystem. Incentive rebate included with price.								
Partial Boiler Replacement	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2018-05-01	2018-12-23	Completed [100%]	231098.00	150150	3500.00	66

Details	Retrofit measure to include: 2 new boilers, piping modifications, and controls to suit. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Kitchen & Laundry A/C	Gateway Haven Nursing Home	Ron Logan, Environmental Services Manager	2018-05-01	2018-06-01	Completed [100%]	13019.00	0	0.00	0
Details	Add additional cooling capacity in these two rooms. Included in Energy Performance Savings (EPS) contract with EcoSystem. There is no savings expected from this measure.								
Chiller Replacement	Brucelea Haven Nursing Home	Frank Prospero, Environmental Services Manager	2016-07-01	2017-08-31	Completed [100%]	173205.00	31000	4900.00	35
Details	Current chiller uses refrigerant R-22 that will no longer be available in Canada by 2020. Replacement chiller would use R-410 or equivalent refrigerant. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Lighting Retrofit	Bruce County Museum	Wayne Tanner, Maintenance Supervisor	2016-07-01	2018-06-15	Completed [100%]	23400.00	43100	7200.00	3
Details	Instant Fit LED retrofit for T8 lights throughout building and retrofit exit signs from incandescent to LED. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
BAS Replacement	Bruce County Museum	Wayne Tanner, Maintenance Supervisor	2016-07-01	2017-10-31	Completed [100%]	78800.00	123700	20100.00	3
Details	Put four Liebert units on the Building Automation system. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Low Flush Fixtures	Bruce County Museum	Wayne Tanner, Maintenance Supervisor	2016-07-01	2017-12-01	Completed [100%]	7800.00	8400	2100.00	3
Details	Replace 6L/flush toilets with 3/L and 3.8L/flush urinals with 0.5 L models. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								
Humidifier Replacement	Bruce County Museum	Wayne Tanner, Maintenance Supervisor	2016-07-01	2018-06-15	Completed [100%]	66098.00	82000	11500.00	5
Details	Replace the four electric humidifiers on each of the four air handling units with evaporative media humidification. Included in Energy Performance Savings (EPS) contract with EcoSystem. Incentive rebate included in price.								