

Renewable Energy	Define	Number of systems in asset portfolio	Total size (kW)	Total number of ekWh generated annually	Actual or Estimated Generation (ekWh)
Solar photovoltaic					
Solar air					
Solar water	Solar Thermal DMHW	2	10.53	4512	4512
Wind Turbine					
Biomass					
Other					

Design, Construction and Retrofit Strategies												
Lighting	Quantity of Time that Measure will be in place (years)	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
High Efficiency Lighting Systems (T-8, T-5, CFL, LED ...)	15	\$ 500,000	493,827	\$ 1,180,000	1,165,432	\$ 100,000	98,765	\$ 100,000	98,765	\$ 100,000	98,765	7,723,457
Daylight Sensors	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Outdoor Lighting	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Occupancy Sensors	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Daylight Harvesting	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
HVAC	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Efficient Boilers (near condensing)	30	\$ 2,150,000	3,722,581	\$ 1,950,000	3,376,295	\$ 2,000,000	3,462,866	\$ 1,000,000	1,731,433	\$ 1,000,000	1,731,433	47,700,982
High Efficiency Boilers (condensing)	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High-efficiency boiler burners	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Geothermal	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Heat recovery/enthalpy wheels	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Economizers	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Energy efficient HVAC systems	30	\$ 1,500,000	237,494	\$ 1,137,000	180,021	\$ 1,500,000	237,494	\$ 1,500,000	237,494	\$ 1,500,000	237,494	3,332,522
Energy efficient Rooftop units	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High Efficiency Domestic Hot Water	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Efficient Chillers and Controls	25	\$ 1,000,000	74,074	\$ -	-	\$ 500,000	37,037		-	\$ -	-	481,481
High-efficiency motors	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
VFD	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Demand Ventilation	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Entrance Heater Controls	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Controls	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Building Automation Systems - New	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Building Automation Systems - Upgrade	10	\$ 250,000	197,912	\$ 585,000	463,114	\$ 300,000	237,494	\$ 300,000	237,494	\$ 300,000	237,494	4,266,983
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Building Envelope	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Glazing	30		-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Increased Wall Insulation	50	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
New Roof	25	\$ 3,200,000	297,730	\$ 4,000,000	372,162	\$ 3,000,000	279,122	\$ 3,000,000	279,122	\$ 3,000,000	279,122	4,652,028
New Windows	30	\$ 153,000	35,588	\$ 400,000	93,041	\$ 250,000	58,150	\$ 250,000	58,150	\$ 250,000	58,150	899,004
Treatments	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Shading Devices	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Design, Construction and Retrofit Strategies Total		\$ 8,753,000	5,059,207	\$ 9,252,000	5,650,064	\$ 7,650,000	4,410,930	\$ 6,150,000	2,642,459	\$ 6,150,000	2,642,459	69,056,458

Operations and Maintenance Strategies												
Policy and Planning		Quantity of Time that Measure will be in place (years)	2013-14		2014-15		2015-16		2016-17		2017	
			Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	
New school design/construction guidelines and specifications			5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	
Day and Night Temperature Guidelines for all Schools			10	\$ 1,000	3,722	\$ 1,000	3,722	\$ 1,000	3,722	\$ 1,000	3,722	
Night time blackout of sites	Interior	10	\$ 500	529	\$ 500	529	\$ -	-	\$ -	-	\$ -	
	Exterior	10	\$ 500	529	\$ 500	529	\$ 500	529	\$ 500	529	\$ 500	
Procures only Energy Star certified appliances			5	\$ 2,000	2,963	\$ 2,000	2,963	\$ 2,000	2,963	\$ 2,000	2,963	
Daylight Harvesting (servicing)			3	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	
Demand Ventilation (servicing)			3	\$ -	-	\$ -	-	\$ -	-	\$ -	-	
Other (Describe)				\$ -	-	\$ -	-	\$ -	-	\$ -	-	
Energy Audits		Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017	
			Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	
Walk Through Audit			5	\$ 25,000	297	\$ 25,000	297	\$ 25,000	297	\$ 25,000	297	
Engineering Audit			5	\$ 25,000	297	\$ 25,000	297	\$ 25,000	297	\$ 25,000	297	
Other (Describe)					-		-		-		-	
Real Time Monitoring			Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017
				Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation
Real-time energy data for operators to identify and diagnose building issues			5	\$ 36,000	104,634	\$ 36,000	104,634	\$ 36,000	104,634	\$ 36,000	104,634	
Other (Describe)				\$ -	-	\$ -	-	\$ -	-	\$ -	-	
Operations and Maintenance Strategies Total				\$ 100,000	127,786	\$ 100,000	127,786	\$ 99,500	127,257	\$ 99,500	127,257	
											\$ 67,100	

\$0.135 = cost of 1 ekWh electricity

\$0.0334 = cost of 1 ekWh natural gas

0.0955 m³ = 1 ekWh

\$0.35 = cost of 1 m³ of natural gas

7-18	2013/14-2017/18
Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
-	-
3,722	55,824
-	4,762
529	7,937
2,963	44,444
14,815	222,222
-	-
-	-

Energy Payback Period	% related to Electricity	% related to Natural Gas
5	50	50
5	20	80
7	100	0
7	100	0
5	100	0
5	100	0
5	50	50
0		100

7-18	2013/14-2017/18
Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
297	4,453
297	4,453
-	-

Energy Payback Period	% related to Electricity	% related to Natural Gas
1000	50	50
1000	50	50
0		100

7-18	2013/14-2017/18
Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
10,463	1,475,346
-	-

Energy Payback Period	% related to Electricity	% related to Natural Gas
3	80	20
0		100

33,086	1,819,441
--------	-----------

Occupant Behaviour Strategies

Training and Education	Quantity of Time that Measure will be in place (years)	2013-14		2014-15		2015-16		2016-17	
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)
Building Operator Training	3	\$ 5,000	17,661	\$ 5,000	17,661	\$ 5,000	17,661	\$ 5,000	17,661
NRCan Benchmarking Program	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-
Building Automation Training (site specific)	3	\$ 28,000	296,704	\$ 28,000	296,704	\$ 28,000	296,704	\$ 28,000	296,704
Ongoing training and awareness programs for energy conservation	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-
Provide detailed information on Building Operational costs	1	\$ 1,000	12	\$ 100	1	\$ 1,000	12	\$ 1,000	12
Provide detailed information on energy consumption (e.g. via the Utility Consumption Database or other database)	1	\$ 3,000	36	\$ 3,000	36	\$ 3,000	36	\$ 3,000	36
Participate in environmental programs, such as EcoSchools, Earthcare	1	\$ -	-	\$ -	-	\$ -	-	\$ -	-
Other tools (Define)		\$ -	-	\$ -	-	\$ -	-	\$ -	-

Occupant Behaviour Strategies Total	\$ 37,000	314,413	\$ 36,100	314,402	\$ 37,000	314,413	\$ 37,000	314,413
-------------------------------------	-----------	---------	-----------	---------	-----------	---------	-----------	---------

\$ 0.135 = cost of 1 ekWh electricity
\$ 0.0334 = cost of 1 ekWh natural gas
0.0955 m³ = 1 ekWh
\$0.35 = cost of 1 m³ of natural gas

2017-18		2013/14-2017/18
Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
\$ 5,000	17,661	264,915
\$ -	-	-
\$ 28,000	296,704	4,450,567
\$ -	-	-
\$ 1,000	12	135
\$ 3,000	36	534
\$ -	-	-
\$ -	-	-

\$ 37,000	314,413	4,716,151
-----------	---------	-----------

Energy Payback Period	% related to Electricity	% related to Natural Gas
3	60	40
1000	50	50
1	60	40
10	90	10
1000	50	50
1000	50	50
5	90	10
0		100

Conservation Goal

	FY2013
Total Building Area (includes portables) (m²)	821,253
Total Building Area (includes portables) (ft²)	8,840,178
Energy Consumption for the board (ekWh)	103,314,454

1 ft² = 0.0929 m²

	2013-14		2014-15		2015-16		2016-17		2017
	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation
Appendix B; Design, Construction and Retrofit Strategies Total	\$ 8,753,000	5,059,207	\$ 9,252,000	5,650,064	\$ 7,650,000	4,410,930	\$ 6,150,000	2,642,459	\$ 6,150,000
Appendix C; Operations and Maintenance Strategies Total	\$ 100,000	127,786	\$ 100,000	127,786	\$ 99,500	127,257	\$ 99,500	127,257	\$ 67,100
Appendix D; Occupant Behaviour Strategies Total	\$ 37,000	314,413	\$ 36,100	314,402	\$ 37,000	314,413	\$ 37,000	314,413	\$ 37,000
TOTAL	\$ 8,890,000	5,501,405	\$ 9,388,100	6,092,252	\$ 7,786,500	4,852,599	\$ 6,286,500	3,084,129	\$ 6,254,100
Percentage reduction		5		6		5		3	
Conservation Goal (ekWh/m²)		6.70		7.42		5.91		3.76	
Conservation Goal (ekWh/ft²)		0.62231839		0.689154943		0.548925502		0.34887635	

7-18	2013/14-2017/18
Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
2,642,459	69,056,458
33,086	1,819,441
314,413	4,716,151
2,989,958	75,592,050
3	14.63339294
3.64	92.04
0.338223737	8.550964666