



SUSTAINABLE SCHOOLS

saving our energy for education

JUNE 2017

2017 Top Energy Performing School Boards Report

Toronto & Region Conservation is pleased to announce the top twenty most energy efficient school boards in Ontario, based on reported data for the September 2014 – August 2015 school year.

The report uses analysis of energy use and building information for Ontario's 5,000 schools and board administration buildings, as publicly reported by the 72 school boards. Energy targets are set for every building based on top quartile (good practice) standards, normalized for building type and area, weather differences and a number of site-specific variables. The energy savings potential is determined for each building as the difference between actual energy use and the target, and the energy efficiency of the school board is determined by rolling up results for all of their buildings. For the white paper outlining the methodology, visit www.sustainableschools.ca.

The Top Twenty School Boards

The savings potential across all boards ranges from a little over 10% for the most efficient to more than 40%. The top twenty boards with the least savings potential are recognized below, along with their rankings in the 2016 report, and their remaining potential for energy, utility cost and greenhouse gas emissions savings.

The total energy savings potential across all boards is 29.8%, worth over \$70 million annually at 2015 utility rates, accounting for 294,000 tonnes of avoidable greenhouse gas emissions. Natural gas has a bigger percentage savings potential than electricity, and offers the larger share of emissions reductions.

Every school board, even the top-performers, has individual buildings with high savings potential which are identified through this analysis. The best way to achieve the greatest energy, economic and environmental returns is to focus resources on these high-potential buildings. Across all of Ontario's boards, 41% of buildings (1,987 facilities) have annual utility cost savings potential of \$10,000 or more, and account for 83% of total utility cost savings and 72% of greenhouse gas emissions reductions.

About Sustainable Schools

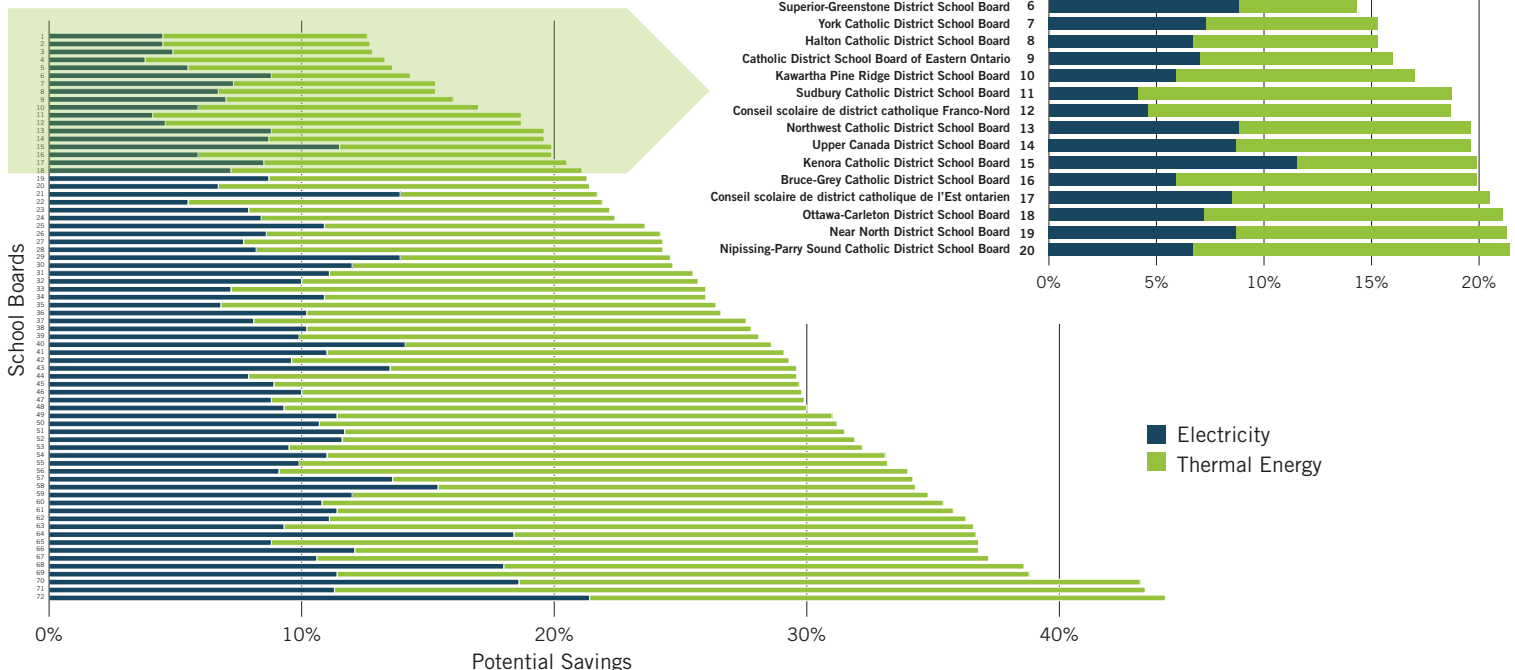
The Sustainable Schools program assists school boards in evaluating their energy performance, monitoring progress, and informing the business case and strategy for investment of resources to make substantial and lasting improvements. Since 2007, Sustainable Schools has been reporting on top performing schools across Canada, establishing the magnitude of energy savings potential and directing school boards and utility companies to where the savings are to be found. It is a program of The Living City delivered across Canada by Toronto and Region Conservation with technical direction by Enerlife Consulting Inc.



FOR MORE INFORMATION, PLEASE VISIT:

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2017 Top Energy Performing School Boards



2017 Ranking	School Board	Number of Buildings	Total Area (sf)	Total Energy Savings Potential (%)	Total Cost Savings Potential (\$)	GHG Emissions Savings Potential (tonnes/year)	2016 Ranking
1	Durham District School Board	135	9,040,762	12.6%	\$628,967	2,708	7
2	York Region District School Board	221	15,841,028	12.7%	\$923,737	5,206	3
3	Peterborough Victoria Northumberland and Clarington Catholic District School Board	37	2,083,103	12.8%	\$197,471	650	13
4	Conseil scolaire de district catholique du Nouvel-Ontario	34	1,457,218	13.3%	\$101,725	596	5
5	Ottawa Catholic District School Board	89	5,762,226	13.6%	\$830,393	1,871	1
6	Superior-Greenstone District School Board	15	644,388	14.3%	\$103,033	272	2
7	York Catholic District School Board	103	7,312,482	15.3%	\$970,308	2,813	8
8	Halton Catholic District School Board	57	3,981,791	15.3%	\$600,424	1,483	6
9	Catholic District School Board of Eastern Ontario	39	1,604,086	16.0%	\$330,484	664	4
10	Kawartha Pine Ridge District School Board	95	4,785,333	16.9%	\$401,224	2,235	10
11	Sudbury Catholic District School Board	20	993,543	18.6%	\$95,124	702	21
12	Conseil scolaire de district catholique Franco-Nord	14	712,734	18.7%	\$68,609	502	28
13	Northwest Catholic District School Board	8	189,748	19.6%	\$35,720	125	29
14	Upper Canada District School Board	94	4,748,312	19.6%	\$864,789	2,825	12
15	Kenora Catholic District School Board	6	219,101	19.9%	\$93,150	125	18
16	Bruce-Grey Catholic District School Board	14	597,076	20.0%	\$58,399	384	17
17	Conseil scolaire de district catholique de l'Est ontarien	39	2,094,969	20.5%	\$692,776	1,194	22
18	Ottawa-Carleton District School Board	152	11,254,905	21.1%	\$2,321,115	7,258	15
19	Near North District School Board	40	1,778,342	21.3%	\$331,144	1,324	25
20	Nipissing-Parry Sound Catholic District School Board	14	612,061	21.4%	\$87,579	474	9
	Total	1205	74,894,857	17.0%	\$9,621,456	32,722	

Changes in Energy Efficiency since 2013-14

Actual year-on-year savings achieved were estimated by comparing the 2014-15 results with the data reported for the previous year. Overall, 0.7% electricity savings were achieved, offset by a net 2.6% increase in natural gas used. 43 of the 72 boards showed net energy savings. The net effect was utility cost increase of \$168,000 and an increase of 14.9 thousand tonnes of greenhouse gas emissions.

Delivering the Savings

Some buildings will present challenges in meeting these targets. However, the largest part of the savings can be expected to be achieved through operational, maintenance and building automation improvements, testing and retrofits of building systems and replacement of end-of-life plant and equipment, with financially attractive returns on investment. Directing the recently announced cap and trade funding to the high potential buildings can deliver a substantial part of the overall savings.

It takes time and effort to bring all of a board's buildings to a good standard of energy efficiency. Multi-year planning is called for, focused on high-potential buildings and with steady progress and ever increasing savings each year. Most of Ontario's school boards have been actively engaged in energy efficiency for many years and have accumulated considerable collective experience. The results of this analysis can provide a powerful platform to support collaboration between boards in identifying and sharing best practices.

Ontario's utility companies have the mandate, funding and technical resources to help school boards deliver deep energy savings. Individual boards and their utility companies are invited to take part in free webinars to review the detailed results for all their buildings, identify the high potential buildings and discuss strategy for delivering the full energy, cost savings and environmental benefits of their portfolios.

Energy Type	2014/15 Actual energy use	Estimated savings / increases (vs 2013/14)	Estimated savings / increases % (vs 2013/14)
Electricity (kWh)	1,759,644,960	12,012,226	0.7%
Thermal energy (m3 of NG)	328,265,900	-8,566,277	-2.6%
Total energy (ekWh)	5,157,197,025	-76,648,740	-1.5%
Utility costs (\$)	\$339,447,901	-\$168,410	-0.05%
Greenhouse gas emissions (tonnes CO2e)	813,327	-14,852	-1.8%

The Size of the Prize	All facilities	High savings potential facilities (over \$10,000 per year)	
School Boards	72		
Number of Buildings	4,886	1,987	41% of total
Total Energy Savings Potential	29.8%		
Electricity Savings Potential	262,000 MWh per year 13.0%	247,000 MWh per year	94% of total
Gas Savings Potential	140.5 million m3 per year 38.6%	98.4 million m3 per year	70% of total
Total Energy Cost Savings Potential	\$71.7 million per year	\$59.7 million per year	83% of total
GHG Emissions Reduction	294 thousand tonnes CO2e/year	213 thousand tonnes CO2e/year	

Looking Forward to 2018

School boards, utility companies, governments and other stakeholders are invited to provide feedback and engage with us to refine the methodology and build the knowledge and practice of effective conservation action in schools.