



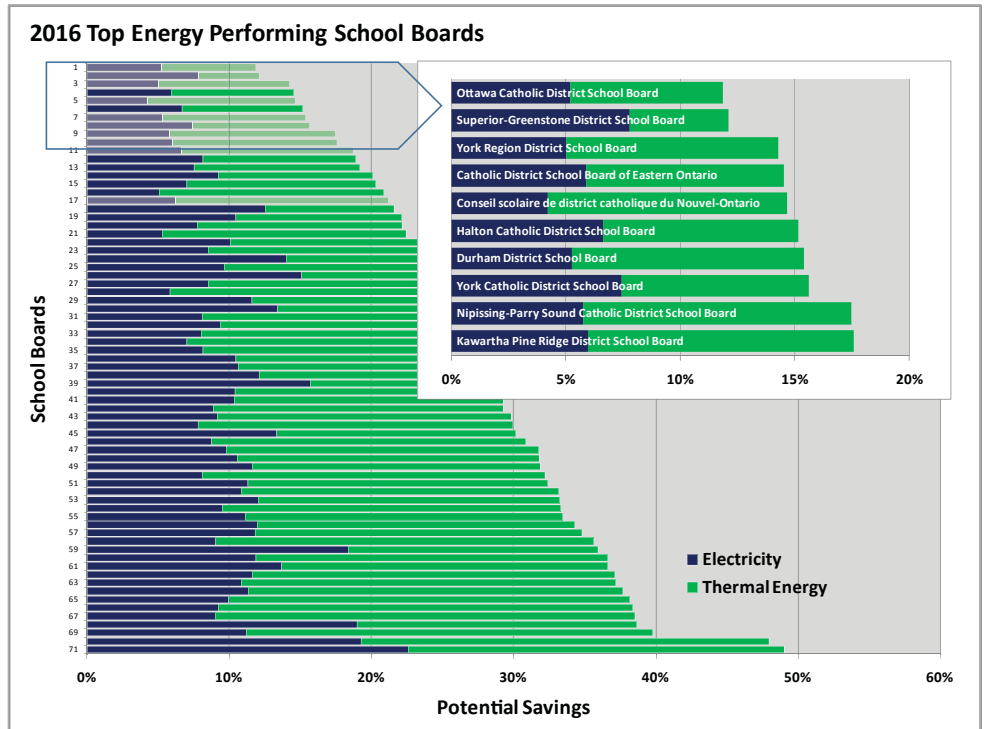
SUSTAINABLE SCHOOLS

saving our energy for education

2016 Top Energy Performing School Boards Report

April 2016

Toronto & Region Conservation Authority is pleased to announce the 2016 top ten most energy efficient school boards in Ontario, updating and refining the results of last year's report. In this report, we continue to recognize the school boards whose overall energy efficiency is closest to the target energy use for all of their schools – that is, those with the lowest savings potential. Our assessment is based on energy use data provided by 71 Ontario school boards for the September 2013 to August 2014 period. For the white paper outlining the methodology behind this report, please visit www.sustainableschools.ca.



	School Board	Number of Buildings	Total Area (sf)	Electricity Potential Saving (%)	Electricity Savings Potential (kWh/yr)	Gas Savings Potential (%)	Gas Savings Potential (m ³ /yr)	Total Energy Savings Potential (%)	Total Cost Savings Potential (\$)	GHG Emissions Savings Potential (tonnes/year)
1	Ottawa Catholic District School Board	83	5,641,938	11.1%	4,508,382	12.5%	554,394	11.9%	\$ 696,969	1,543
2	Superior-Greenstone District School Board	15	644,388	8.2%	549,135	17.2%	84,944	12.1%	\$ 88,376	221
3	York Region District School Board	219	15,284,495	2.8%	2,485,695	21.0%	3,011,890	14.3%	\$ 925,518	5,960
4	Catholic District School Board of Eastern Ontario	44	1,746,779	10.6%	1,368,762	17.5%	291,989	14.5%	\$ 236,337	702
5	Conseil scolaire de district catholique du Nouvel-Ontario	30	1,316,731	1.4%	91,113	19.9%	326,041	14.7%	\$ 77,053	626
6	Halton Catholic District School Board	55	3,838,143	13.9%	4,092,827	16.3%	533,401	15.2%	\$ 638,748	1,457
7	Durham District School Board	134	9,141,681	4.8%	2,269,383	21.3%	1,734,439	15.4%	\$ 641,908	3,524
8	York Catholic District School Board	104	7,341,257	8.9%	4,971,201	22.1%	1,251,659	15.6%	\$ 896,588	2,910
9	Nipissing-Parry Sound Catholic District School Board	15	630,405	5.9%	253,707	23.6%	186,081	17.5%	\$ 70,198	379
10	Kawartha Pine Ridge District School Board	94	4,715,985	4.0%	983,461	23.9%	1,205,023	17.6%	\$ 368,855	2,383
	Total	793	50,301,802	7.2%	21,573,665	19.5%	9,179,861	14.9%	\$ 4,640,549	19,705

About Sustainable Schools

The Sustainable Schools program assists school boards in evaluating their energy performance, monitoring progress, and providing the tools required to make substantial and lasting improvements. Since 2007, Sustainable Schools has been reporting on the top performing schools across Canada, establishing the magnitude of energy savings potential and directing them to where these savings can 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.

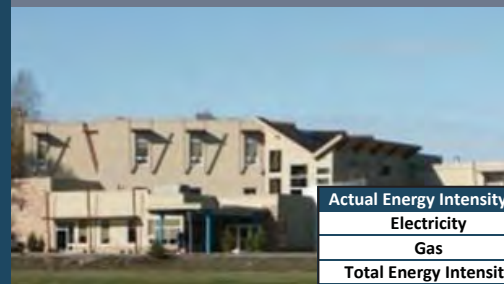
**Lydia Trull Public School
Kawartha Pine Ridge District School Board**



Actual Energy Intensity, 2013-2014 School Year	
Electricity	5.2 ekWh/sf
Gas	7.0 ekWh/sf
Total Energy Intensity	12.2 ekWh/sf
Weather-normalized	14.4 ekWh/sf
Total Energy Target	

Weather-normalized to Peterborough, ON

**École secondaire du Sacré-Cœur
Conseil scolaire de district catholique du Nouvel-Ontario**



Actual Energy Intensity, 2013-2014 School Year	
Electricity	7.4 ekWh/sf
Gas	11.3 ekWh/sf
Total Energy Intensity	18.7 ekWh/sf
Weather-normalized	19.9 ekWh/sf
Total Energy Target	

Weather-normalized to Sudbury, ON

Ontario School Boards

For this report, we analyzed a total of 4,868 buildings from 71 school boards, covering almost 290 million square feet. Out of those, there are 3,937 elementary schools, 764 secondary schools, and 167 administrative and maintenance buildings. Average conservation potential is estimated at 14% for electricity and 37% for natural gas, for an overall total energy savings potential of 29.3%. Realization of this potential could generate over \$64.7 million per year in utility cost savings, and could lower provincial greenhouse gas emissions by more than 296 thousand tonnes of CO₂e per year.

A total of 1,879 buildings have energy conservation potential of more than \$10,000 per year, 124 of which are within the top ten boards. By focusing on a portion of their schools, the boards could realize the majority of their savings potential. At 39% of the total, these facilities account for 81% of the \$64.7 million annual cost savings potential, and for 93% of the electricity savings potential.

	All facilities	High savings potential facilities (over \$10,000 per year)	
			% of total
School Boards	71		
Number of Buildings	4,868	1,879	39%
Total Energy Savings Potential	29.3%		
Electricity Savings Potential	281,568 MWh per year	262,749 MWh per year	93%
	14.0%		
Gas Savings Potential	140.5 million m ³ per year	92.9 million m ³ per year	66%
	37.2%		
Total Energy Cost Savings Potential	\$64.7 million per year	\$52.7 million per year	81%
GHG Emissions Reduction	296 thousand tonnes CO ₂ e/year		

Achievable Targets

Across all school boards, there are 285 elementary schools (out of 3,937) already meeting the 12 equivalent kilowatt-hours per square foot (41 kBtu/sf) total energy intensity target (weather-normalized to the board's location, and to the 2013-2014 school year). As well, 87 secondary schools (out of 764) are at or under the 15 ekWh/sf (51 kBtu/sf) total energy intensity target. Kawartha Pine Ridge DSB's Lydia Trull Public School and École secondaire du Sacré-Coeur of Conseil scolaire de district catholique du Nouvel-Ontario are examples of schools meeting the intensity target.

For more information on the Sustainable Schools program, please contact:
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www.sustainableschools.ca

Methodology

For this project we analyzed data provided directly to TRCA by 71 Ontario school boards. The assessment of energy efficiency is based on rational electricity and natural gas targets established for individual elementary and secondary schools and administration buildings. The targets were derived from top-quartile benchmarks from the Sustainable Schools database. They were then weather-normalized to the 2013-2014 heating and cooling degree days of specific weather stations assigned to each of the analyzed facilities, and adjusted for building-specific variables including heating source, swimming pools and portable classrooms. The savings potential for individual buildings was then determined as the difference between actual energy use intensity and the weather-normalized target, and was rolled up for each board to arrive at our ranking of the boards. For more information on the methodology, please refer to the white paper published on the Sustainable Schools website.

Looking Forward to 2017

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.

