



SUSTAINABLE SCHOOLS

saving our energy for education

2011 Top Energy Performing Schools

The Sustainable Schools list of Top Energy Performing Schools for 2011 recognizes some of the most energy efficient schools in North America. The competition was open to school boards across Canada and the United States. In this third annual report, the focus is on profiling exceptional elementary and secondary schools, and also on those schools achieving the greatest year-on-year savings.

The Good Get Better

Median energy use for the 2011 Top 20 is down by a remarkable 11% since 2010, and is at 10.3 ekWh/sf (35.1 kBtu/sf).

With six schools in the Top 20, the York Catholic District School Board (YCDSB) again demonstrates their management effectiveness in energy efficiency. Prince of Peace CES in Keswick, Ontario moved up to the #2 spot with an impressive 9.4 ekWh/sf, saving an additional 9% since 2010.

Simcoe County District School Board (SCDSB) held on to the #1 spot with Mundy's Bay Public School in Midland, Ontario achieving a further 3.8% energy savings since 2010.

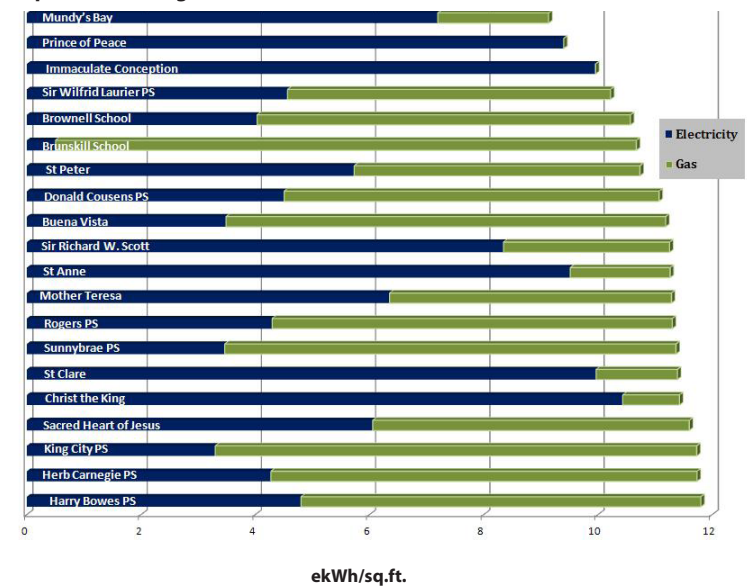
York Region District School Board's (YRDSB's) Sir Wilfrid Laurier PS comes in at #4, and is the most energy efficient school with conventional heating. With high efficiency natural gas boilers and an energy recovery ventilation system it achieved 10.22 ekWh/sf.

Saskatoon Board of Education's (SBE's) Brownell Public School (#5) and Halton Catholic District School Board's (HCDSB's) St. Peter Elementary School (#7) are new to the Top 20, also scoring below 11 ekWh/sf with conventional gas-fired heating.



Sir Wilfrid Laurier PS, YRDSB, Markham, ON

Top 20 Performing Schools



Rising Star

Opened in April 2011, Samuel Brighthouse features displacement ventilation, triple-glazed windows, geo-exchange heating, daylight harvesting with solar shades and hot water solar collectors. Energy bills to date indicate an impressive 8.6 ekWh/sf annual consumption, which could place it at the very top of the 2012 list. Stay tuned on this one!



Samuel Brighthouse Elementary, Richmond SD38, Richmond, BC

Top 20 Energy Performing Schools

School Board	School Name	Year Built	Heat Type	Area (sf)	2011 Total Energy Intensity (ekWh/sf)
Simcoe County DSB	Mundy's Bay PS	2008	GSHP	56,834	9.13
York Catholic DSB	Prince of Peace ES	2008	GSHP	40,487	9.40
York Catholic DSB	Immaculate Conception PS	1999*	Electric	55,413	9.96
York Region DSB	Sir Wilfrid Laurier PS	2007	NGB	58,881	10.22
Saskatoon Board of Education	Brownell PS	1985	NGB	44,802	10.57
Saskatoon Board of Education	Brunskill PS	1999*	NGB	58,480	10.67
Halton Catholic DSB	St. Peter ES	2009	NGB	64,831	10.73
York Region DSB	Donald Cousens PS	2008	NGB	63,219	11.07
Saskatoon Board of Education	Buena Vista PS	1962*	NGB	57,921	11.18
York Catholic DSB	Sir Richard W. Scott CES	1999	NGB	39,795	11.25
York Catholic DSB	St. Anne CES	1984	GSHP	41,786	11.26
Halton Catholic DSB	Mother Teresa ES	1999	NGB	60,277	11.29
York Region DSB	Rogers PS	2006	NGB	52,474	11.30
Simcoe County DSB	Sunnybrae PS	1990*	NGB	42,249	11.37
York Catholic DSB	St. Clare CES	1991	GSHP	48,557	11.39
York Catholic DSB	Christ the King CES	2000	GSHP	48,557	11.43
Halton Catholic DSB	Sacred Heart of Jesus ES	1999	NGB	60,277	11.60
York Region DSB	King City PS	2009	NGB	57,264	11.73
York Region DSB	Herbert Carnegie PS	2008	NGB	62,853	11.74
York Region DSB	Harry Bowes PS	2006	NGB	62,525	11.81

*The school underwent major renovations that year. Heat Type: GSHP - ground source heat pump; NGB - natural gas boilers.

Most Improved Schools

This year's report also analyzed energy savings in 2011 compared with 2010 to determine the Top 5 Most Improved Schools. YCDSB's Immaculate Conception tops the list with 22% savings through improved lighting and building automation controls and on-going commissioning of systems. With three of the five most improved schools, SCDSB is demonstrating the effectiveness of its comprehensive, multi-year energy efficiency plan.

Top 5 Most Improved Schools

School Board	School Name	Year Built	Heat Type	Area (sf)	2011 Total Energy Intensity (ekWh/sf)	Total Energy Savings in 2011 vs 2010
York Catholic DSB	Immaculate Conception PS	1999*	NGB	55,413	10.0	22.3%
Simcoe County DSB	Nantyr Shores SS	2001	NGB	169,092	14.4	21.8%
York Catholic DSB	St. Emily CES	2002	GSHP	69,051	14.8	17.2%
Simcoe County DSB	Clearview Meadows ES	2001	NGB	32,087	13.1	16.3%
Simcoe County DSB	Trillium Woods ES	2005	NGB	54,703	12.0	15.4%

*The school underwent major renovations that year. Heat Type: GSHP - ground source heat pump; NGB - natural gas boilers.

Also new to this year's report is separate recognition of the most energy efficient secondary schools. The top performer is Marion Graham Collegiate in Saskatoon, Saskatchewan, again underscoring that older schools can achieve wonderful results with well-designed renovations and operational excellence. With three of the top-performing secondary schools, the SBE



Marion M. Graham Collegiate, SBE, Saskatoon, SK

Top 5 Secondary Schools

School Board	School Name	Year Built	Heat Type	Area (sf)	2011 Total Energy Intensity (ekWh/sf)
Saskatoon Board of Education	Marion M. Graham Collegiate	1984	NGB	136,799	12.07
Saskatoon Board of Education	Centennial Collegiate	2006	NGB	121,328	12.63
Saskatoon Board of Education	Evan Hardy Collegiate	1977*	NGB	149,306	12.88
Simcoe County DSB	Twin Lakes SS	1970	NGB	136,800	13.10
York Catholic DSB	Cardinal Carter CHS	1992	NGB	188,514	13.73

*The school underwent major renovations that year. Heat Type: GSHP - ground source heat pump; NGB - natural gas boilers.

Every School Can Be Green

With more conventionally heated schools in the Top 20 than ever before, and remarkable savings in schools across the benchmarking spectrum, the evidence is growing to support a maximum energy target for all schools of 15 ekWh/sf of total energy use, weather-normalized to Toronto, ON. The target for elementary schools can be lower still.

Sustainable Schools offers benchmarking, performance monitoring and training in best practices to help school boards set and achieve energy conservation goals.

For more information, please visit www.trca.on.ca/sus

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