

## "Saving Our Energy for Education" The Enerlife 2008 List of Top Energy Performing Schools

Stan Laba, Superintendent of Facilities at Saskatoon Public Schools Division, says his department aims to get the best performance they can out of all their schools, even with limited funding. So he was happy to hear that his Buena Vista Public School had come in at #9 on the Enerlife 2008 list of top energy performing schools. "Originally built in 1913 and renovated on a fairly tight budget in 2003-2004, this is quite a feat for one of our beautiful, old castle schools."



Buena Vista Public School, Saskatoon

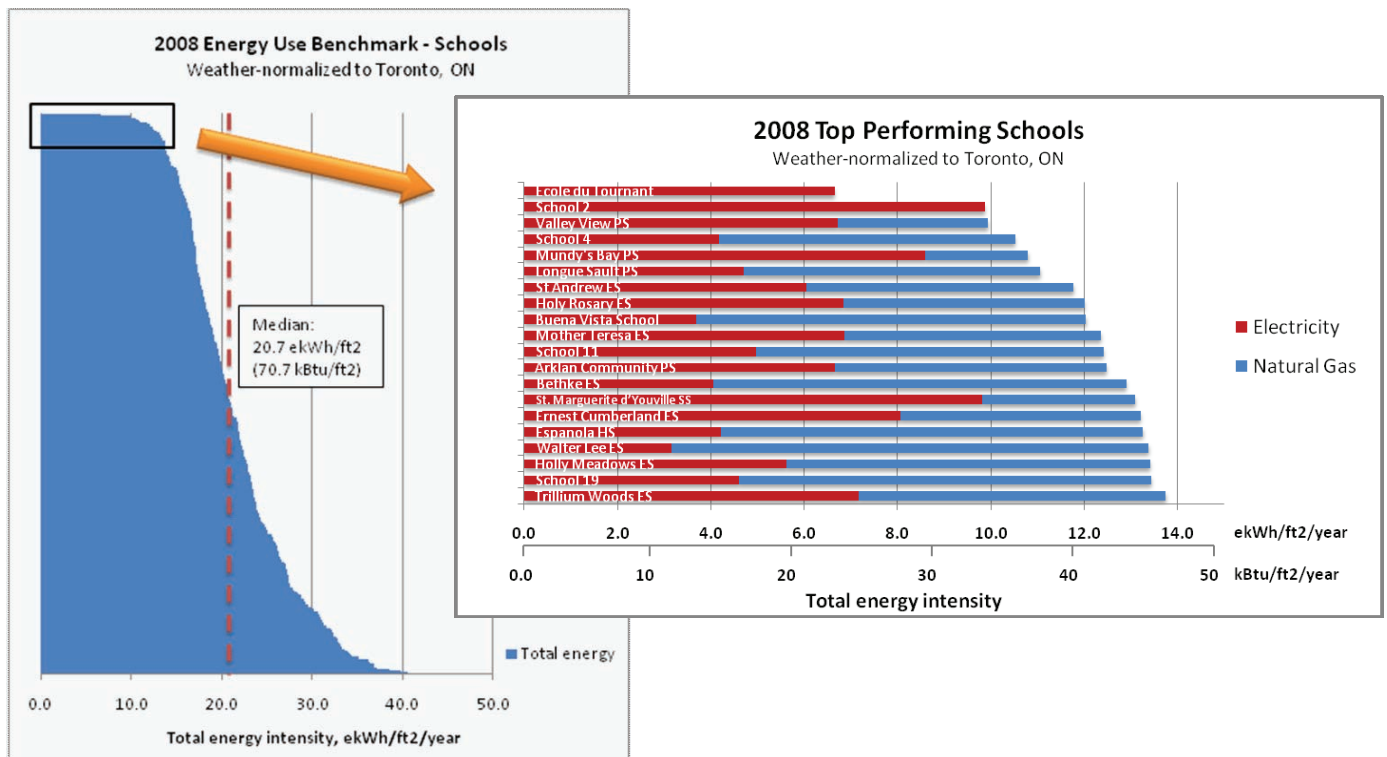
Assistant Plant Manager-Special Projects. Valley View Public School also features a bio-filter water reuse system, occupancy sensors, and displacement ventilation. Effective use of glazing, orientation and shading devices maximizes daylight, and ensures beneficial solar heat gain in winter while avoiding solar loads in summer, according to Ackroyd.



Valley View Public School, Ontario

Buena Vista and Valley View represent two of the remarkable success stories from Enerlife's top energy performers list for 2008. On average, the top 20 use 11.9 ekWh/ft<sup>2</sup> (40.3 kBtu/ft<sup>2</sup>) of total energy (electricity and gas or oil converted to common energy units), which is 40% less than the 20.7 ekWh/ft<sup>2</sup> (70.7 kBtu/ft<sup>2</sup>) median of the schools in the company's web-based performance management system. 40 school boards and more than 400 schools are included in the 2008 dataset.

At the other end of the top-performer vintages comes Valley View, the new (2007) elementary school of the Rainbow District School Board in Val Caron, Ontario, which scored #3 on the 2008 list. "Our board believes in buildings as teachers, and measuring and monitoring performance for reporting to occupants were seen as most important," says Sandi Ackroyd, the board's



School	Board (Province)	Year built	Building area, ft <sup>2</sup>	2008 ft <sup>2</sup> / student	Type (Elem/ Sec)	Heat type	Air Conditioning	Energy Star* / LEED
École du Tournant	Conseil Scolaire des Grands Seigneuries (QC)	2002	28869	157.8	Other	GSHP	Full A/C	N/A
School 2	(ON)	1967	17922	128.9	E	GSHP, electric back-up	<50% A/C	72
Valley View PS	Rainbow DSB (ON)	2007	61397	112.7	E	GSHP	No A/C	N/A
School 4	(ON)	1998	68276	170.7	E	gas boilers	No A/C	92
Mundy's Bay PS	Simcoe County DSB (ON)	2008	56834	137.6	E	GSHP, gas back-up	Full A/C	LEED Gold
Longue Sault PS	Upper Canada DSB (ON)	1958	23131	121.7	E	gas boilers	No A/C	97
St Andrew ES	Halton Catholic DSB (ON)	1999	60278	90.4	E	gas boilers	Full A/C	98
Holy Rosary ES	Halton Catholic DSB (ON)	1999	45520	94.2	E	WSHP, gas back-up	Full A/C	87
Buena Vista School	Saskatoon Public Schools (SK)	1913	56531	213.3	E	gas boilers	Full A/C	92
Mother Teresa ES	Halton Catholic DSB (ON)	1999	60278	83.5	E	gas boilers	Full A/C	86
School 11	Anonymous (ON)	2006	52474	141.4	E	gas boilers	No A/C	88
Arklan Community PS	Upper Canada DSB (ON)	1996	51925	183.5	E	gas boilers	Full A/C	75
Bethke ES	Poudre School District (CO, USA)	2008	62689	119.4	E	gas boilers	90% A/C	99 / LEED Gold
St. Marguerite d'Youville SS	Dufferin-Peel CDSB (ON)	2002	196862	94.8	S	WSHP, gas back-up	Full A/C	N/A
Ernest Cumberland ES	Simcoe County DSB (ON)	1993	52076	88.1	E	GSHP, gas back-up	Full A/C	N/A
Espanola HS	Rainbow DSB (ON)	1951	173203	266.5	S	gas boilers	<25% a/c	N/A
Walter Lee ES	Richmond SD38 (BC)	1968	42130	132.1	E	gas boilers	No A/C	95
Holly Meadows ES	Simcoe County DSB (ON)	2000	65843	86.3	E	gas boilers	>50% electric A/C	N/A
School 19	Anonymous (ON)	1984	60956	134.0	E	gas boilers	No A/C	70
Trillium Woods ES	Simcoe County DSB (ON)	2006	54110	102.1	E	gas boilers	Full A/C	81

\*Estimated rating

GSHP – Ground source heat pump  
WSHP – Water source heat pump

Six of the top-performers were built since 2000 while six more are pre-1990. Seventeen are elementary schools, but the three high schools which made the 2008 list indicate how energy efficient secondary schools can be. Six of the schools report relatively low occupancy (more than 140 ft<sup>2</sup> per student), but five others have high occupant densities at less than 100 ft<sup>2</sup> per student. Four of the top five feature ground-source heat pump systems, while all of the top 20 use 50% less gas than the median of the database as a whole.

“It’s not what you think,” according to Ian Jarvis, President of Enerlife Consulting. “Technology and system design make up just one-third of the energy performance equation.” “The common factor among the top twenty is their attention to the other two-thirds – operational excellence, and active engagement of staff and students,” says Jarvis.

While a number of school boards have demonstrated high energy efficiency in individual schools,

Simcoe County District School Board in Ontario went one better, with four of their schools included in the top twenty. Achieving high performance across all schools requires well-integrated policies and standards together with strong organizational alignment. “For more than a decade we have been building more and more efficient new schools and renovations,” says Brad Parkes, Assistant Manager of Design and Construction. “But more recently, engagement of our school principals and caretakers with board staff and our architects, engineers and other service providers is transforming the way our board develops and manages facilities, and how the school buildings interface with the people who use them.” New schools can provide significant savings, but new management practices are taking energy and environmental performance to the next level across Simcoe County’s 104 school portfolio. “Millions of dollars in utility cost savings are just the beginning of the benefits we see,” notes Parkes.

Enerlife is a management consulting firm based in Toronto, Ontario, enabling building owners and managers to achieve and sustain high standards of energy and environmental performance across building portfolios. The company’s online Green Building Performance System is used by owners and managers from all building sectors.



**The key to achieving and sustaining high energy performance is to bring together operators, occupants and designers into integrated building performance teams.**

For additional information visit [www.enerlife.com](http://www.enerlife.com) or call Emily Jarvis-Pollock at (416)915-1530 ext 202