

Report to Committee of the Whole
May 30, 2016



**Waterloo Region
 District School Board**

Inspired Learners – Tomorrow's Leaders

SUBJECT: Energy Update

ORIGINATOR: This report was prepared by Matthew Gerard, Superintendent of Business Services and Treasurer, Ian Gaudet, Controller of Facility Services, Ron Dallan, Manager of Capital Projects, Lou Lima, Manager of Mechanical, Electrical and Environmental Services and Steve Feeney, Supervisor of Energy Conservation, in consultation with Executive Committee.

PURPOSE/STRATEGIC PLAN:

The purpose of this report is to update the Board with respect to energy conservation across the Waterloo Region District School Board (WRDSB) and highlight ongoing work in this area. The strategic plan relates to the following direction which includes engaging students, families, staff and communities; championing quality public education and promoting forward-thinking.

BACKGROUND:

The Green Energy Act (O.Reg. 397/11), came into effect in 2009 repealed the Energy Conservation Leadership Act and the Energy Efficiency Act. Under this Act the Ministry implemented the Utility Consumption Database (UCD). The UCD reports on annual utility consumption and greenhouse gas emissions for more than 5,000 schools and administrative buildings across 72 boards and requires the implementation of a 5 year conservation and demand management plan for each board.

UCD reports for 2011/12 through to 2012/14 for all Board facilities, as well as the Board's conservation and demand management plan completed in 2014, are available for public viewing at the WRDSB website. Annual reporting to the Ministry is expected to continue with future reports expanding to include data of water use and alternate utilities at WRDSB facilities.

In school calendar years 2009/10, 2010/11, and 2011/12, Business Services provided energy updates to the Board through the Energy Efficient School Funding (EESF) annual capital report. EESF funding was targeted for capital investment into schools that were below the average in terms of energy performance. The program for EESF was discontinued by the Ministry at the end of school year 2011/12. As such, no capital funding is being provided targeted solely at reducing energy consumption, although this is a founding principal for expenditures of capital from School Renewal (SR), School Condition Improvement (SCI) or new capital investment as Business Services continue to deliver capital projects across the region.

STATUS

Energy Use Intensity and Consumption

Energy Use Intensity (EUI) measured in equivalent kilowatt hours per square metre (ekWh/m²) is the base unit for comparison purposes.

This metric is developed by first using heating degree days to weather normalize the gas consumption, as its use is nearly exclusive for space heating. Cubic metres of gas or gigajoules, as reported by the utilities, is then converted to equivalent kilowatt hours (ekWh). Total energy consumption is calculated by adding ekWh of gas use to electrical consumption, already reported in kWh.

Determining intensity involves accounting for square footage of all facilities in our inventory including portables and port-a-packs as well as changes to school areas due to additions or school closures. This produces the EUI measured in ekWh/m².

Previous reports used a baseline of 2008 (January through December calendar year) as a benchmark. It is important to note that subsequent data is presented on a school calendar year basis.

EUI is presented in Figures 1a and 1b as follows;

Figure 1a – Energy Use Intensity by Panel (ekWh/m²) versus Year

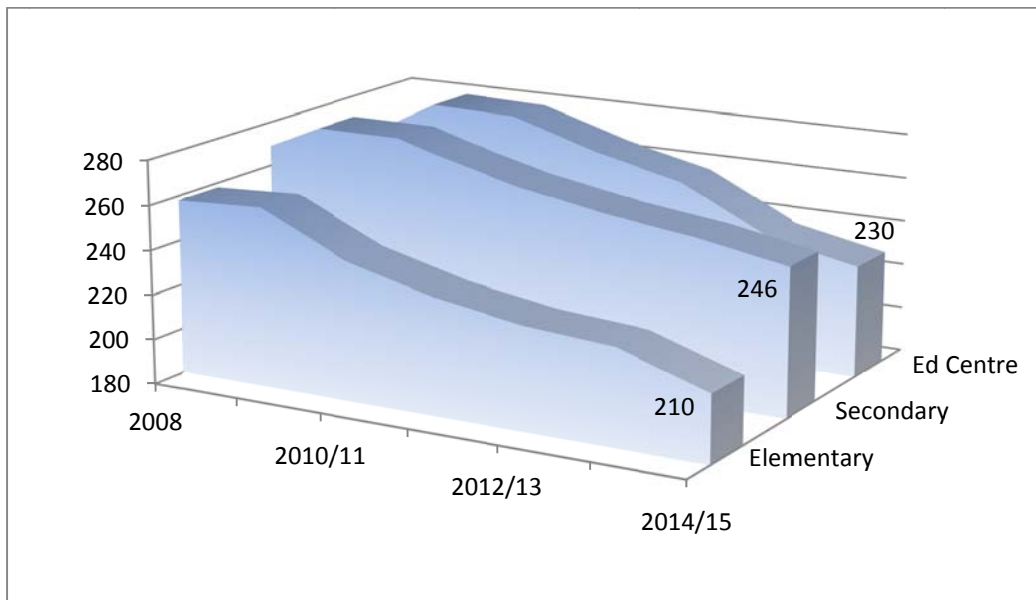
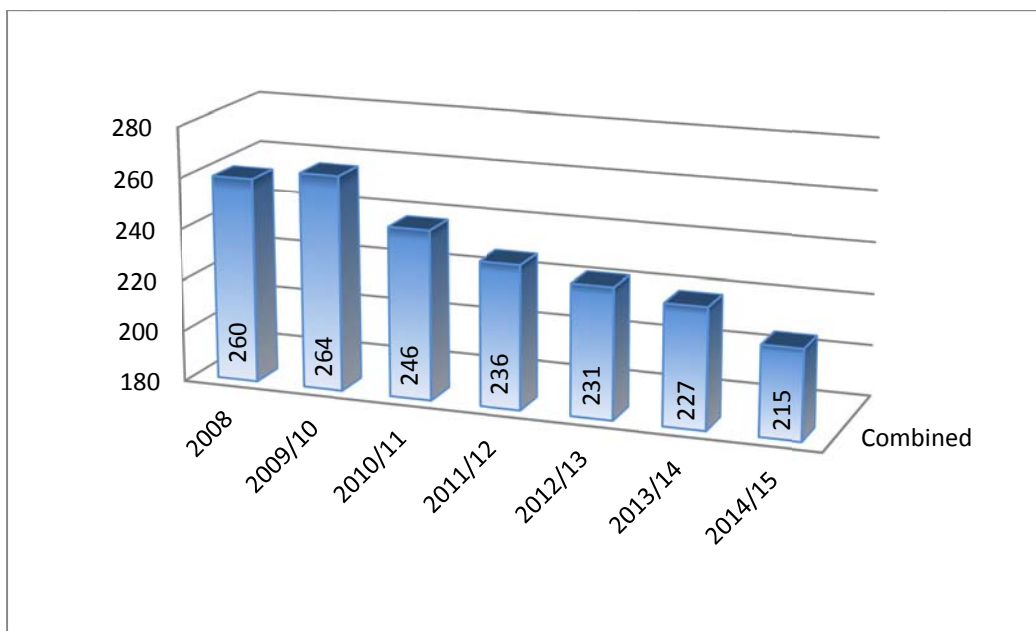


Figure 1b – Energy Use Intensity Combined (ekWh/m²) versus Year



The Board has experienced a 17.3% reduction in EUI when comparing 2014/15 to 2008 average energy intensity for both elementary and secondary schools as well as outdoor and education centers.

Detailed EUI for each school is presented in Appendix A for elementary and Appendix B for secondary schools and the Education Centre.

Consumption by commodity is an important factor that drives expenditures. Gas continues to be at a comparatively low cost to electricity. As such, a greater reliance on gas as a resource is currently beneficial for our operational budget.

Energy consumption and expenditures for 2014/15 are presented in Figures 2 and 3 respectively;

Figure 2 – Energy Consumption by Commodity

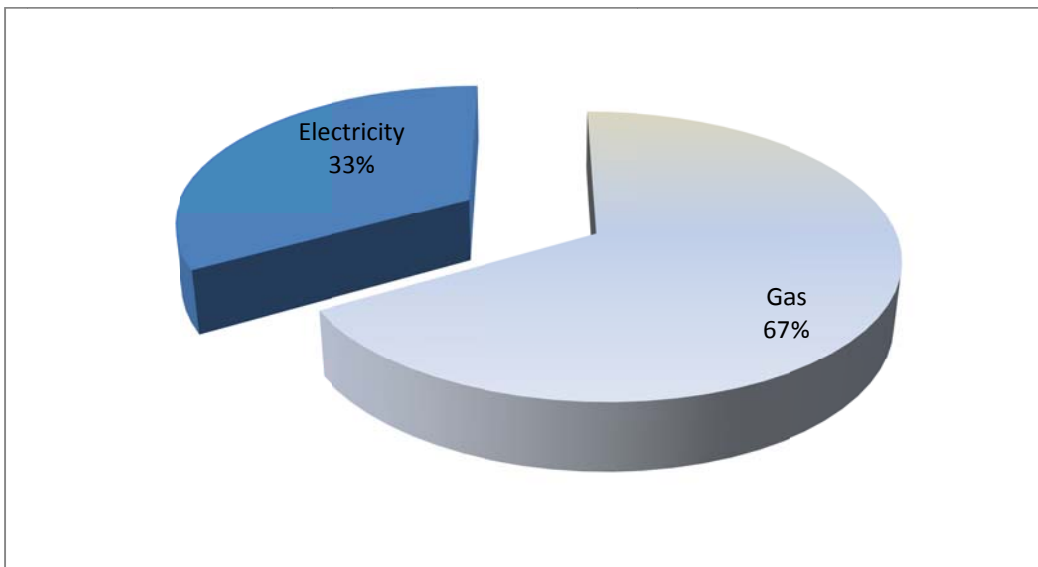
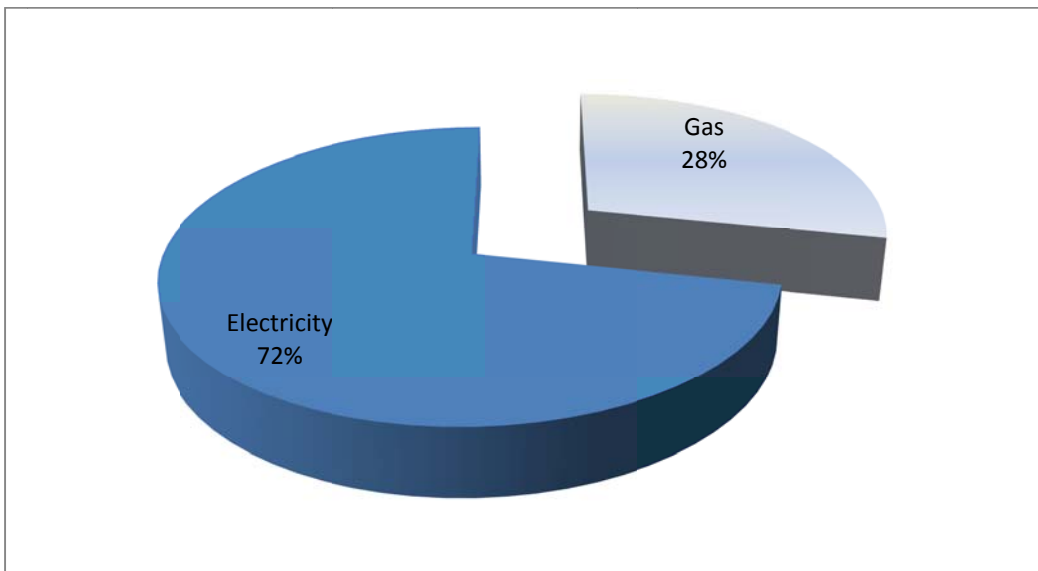


Figure 3 – Energy Expenditures by Commodity



On average for 2014/15, gas cost was approximately 2.5 cents per ekWh and electricity cost was approximately 15.7 cents per ekWh with a combined cost for both commodities at 6.9 cents. This represents a rise in the combined commodity cost from 2013/14 of just over 4.1%.

Energy intensity is driven by consumption. Consumption is an aspect over which the Board and its stakeholders have partial control. Factors that are controllable may include:

- Student and staff behaviour
- Waste minimization
- Use of efficient technologies
- Automation and control technologies (Building Automation Systems or BAS)
- Building envelope improvements
- Designated periods of set-back and/or shut down

Consumption is also driven by factors beyond stakeholder control and can include factors such as:

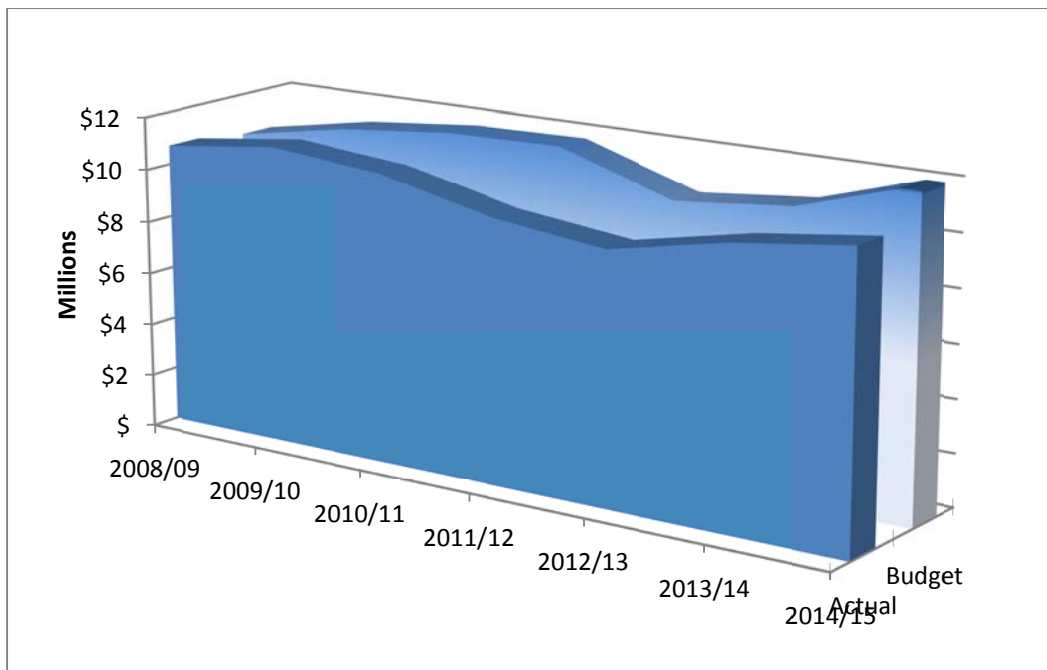
- Weather (warmer summer and shoulder season drives cooling demand)
- Hours of operation (extended use for Ministry initiatives such as Community Use)
- School closures (disposal of redundant school sites or port-a-packs)
- Expansion of facilities and square footage (New schools or school additions)

Energy Budget and Expenditure

A seven year history of board budgets and expenditures for electricity and gas are presented in Appendix C. The WRDSB gas and electricity budget for 2014/15 was \$12.2M and expenditures were \$11.0M

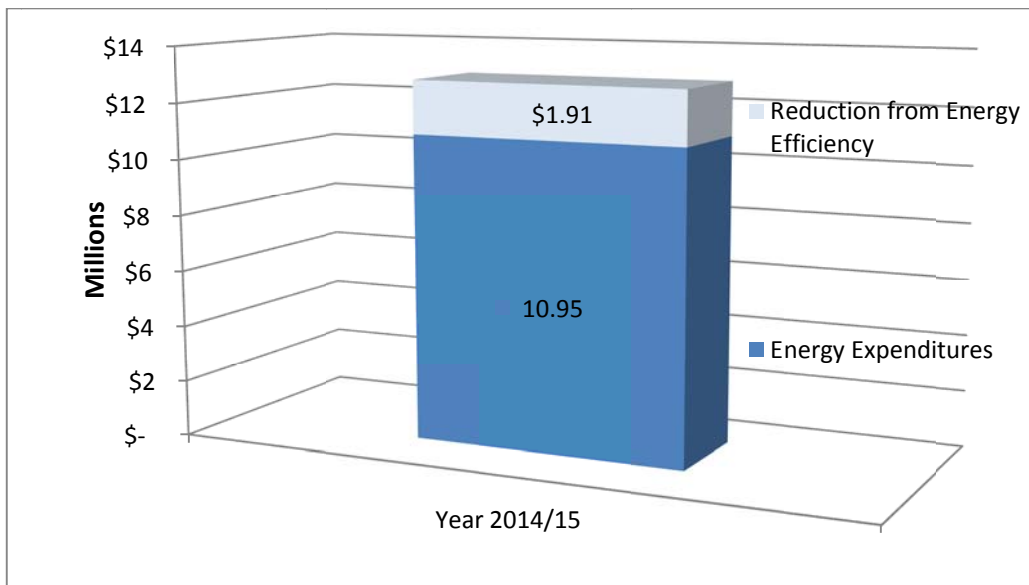
It is important to note when reviewing this information that budget and actual expenses cannot be compared directly year over year as a metric for operational efficiencies. Consumption is user and weather dependent. Costs are market dependent. Market pricing is something the Board has limited control over and market pricing can fluctuate greatly depending on demand and time of use. Business Services staff continues to employ a 5 year cost averaging approach purchasing strategy working through a consortium. This minimizes the Board's exposure to spot market pricing and contributed to the savings experienced in 2014/15. Figure 4 presents the board's budget versus expenditures since 2008.

Figure 4 – Budget and Expenditures (Dollars) versus Year



Offset costs from energy efficiency can be estimated when comparing the base line EUI for 2008 at 260 ekWh/m² vs the EUI for 2014/15 at 215 ekWh/m² with both at the current cost of 6.9 cents. Figure 5 represents more than \$1.9M in offset costs for 2014/15 due to EUI reductions.

Figure 5 – Reduction as compared to base line (Dollars) for 2014/15



Regardless of our best efforts to reduce consumption by driving down EUI, energy costs, in particular cost for electricity, are likely to continue to rise in the future. Offsetting these costs by reducing EUI is critical to minimizing the anticipated increases in future budgets and expenditures.

Operations

Changing human behavior continues to be our most promising as well as our most challenging area in resource conservation. Continuing work with Sustainable Waterloo Region, a local not-for-profit organization striving to reduce our carbon footprint at a regional level, as well as EcoSchools throughout the Board, provides a partnership in the promotion of sustainability at the school level and energy efficiency throughout the Board. In addition, presentations by Facility Services staff to schools as part of the grade 5 curriculum on energy efficiency and sustainability, provides a direct link with students and educators.

The continuation of the Summer Student Placement program assisting Facility Services with energy efficiency and resource conservation, although extremely successful last year in promoting energy reduction and tracking water use while providing valuable work experience to a young person, will not have funding available this year from the Ministry of Government and Consumer Services and alternative support is being sought from the Government of Canada thru the Canada Summer Jobs program.

Continuing work with the Building Envelope Working Group in 2015, brought together managers, coordinators, architects, roofing, windows and other experts to establish best practices and products for the Board. This was done in conjunction with energy modeling for a typical WRDSB elementary school to achieve specific energy efficiency targets for each building system while maintaining construction budgets, maintenance needs and long term use of the school. This resulted in the development of Board Standards for windows, roofs and vestibule/building entrances, now in use in the design of new schools and school renovations.

Technologies

As we construct new or renew older facilities, Facility Services continue to implement suitable energy efficiency technologies, including;

- Energy/heat recovery for building fresh air
- Variable speed drives for fans and pumps
- Occupancy sensors and daylight harvesting for lighting
- T-8 or High Intensity Discharge (HID) to Light Emitting Diode (LED) lighting retrofits
- CO2 demand control ventilation
- Astronomical timers for exterior lighting
- Direct Digital Control (DDC) building automation systems
- Condensing gas air handling units for gyms and similar spaces
- Condensing boilers and water heaters for new schools
- Elimination of electric heat for new schools
- Time-of-day control for electric heat at existing schools
- Occupancy control for electric heat and cool in portables
- Regression analysis for boiler plant retrofits

In addition a number of pilot programs were underway to further pursue energy and resource conservation, including;

- eTime Energy window treatment
- Cooling through gas fired heat pump systems
- Load shedding cooling controls for summer schools
- Eyedro point of use web-based power monitoring
- Humidity based free cooling
- Direct replacement LED lamps for non-renovated spaces

As implementations of these technologies help reduce consumption, Business Services staff intends to continue the expansion and use of such technologies where possible, while targeting a reasonable, 3 years to 7.5 years, return on investment (ROI) and available funding. It should be noted that while technology is a great resource to reduce consumption, our greatest opportunity to leverage reductions is to change behaviors and reduce waste.

Review of new technologies with other boards by evaluating new schools including the 95 ekWh/m² Hyde Park PS at the Simcoe County DSB, discussions at OMC Energy Sub-Committee and participation in ASHRAE or CSC sponsored seminars, and others, provides school specific solutions to help minimize energy consumption while continue to meet the long term building needs of students and staff.

Further to the use of technology, the continued implementation of Preventative Maintenance (PM) programs extends the working life of equipment and also helps to increase efficiencies and therefore use less energy. As such, the continued development of the Computerized Maintenance Management System (CMMS) and development of PM programs is key to reduced consumption within our schools.

Renewables

The WRDSB received approximately \$1M for five renewable energy projects from the Ministry in 2010/2011. These projects were completed in late 2011 and have generated more than \$201,000 in revenue over 53 months of operation. Appendix D presents a summary of photovoltaic production and revenues.

It is important to recognize that despite generating significant revenue, the payback on the \$1M capital investment under the MicroFIT program at 80 cents per kWh provides a 21.7 year payback. This time frame would be significantly longer if not subsidized at 80 cents per kWh rate.

Incentives and Reinvestment

In addition to the projects implemented and the saving generated through reduced consumption, the WRDSB has actively sought out incentives programs that generate savings that can be reinvested into schools and further help with resource conservation board wide.

Since 2009, the Board has received more than \$335,000 in incentives from partners that include:

- Union Gas
- Cambridge ND, Kitchener Wilmot and Waterloo North Hydro
- Reliance Commercial Solutions

These incentives continue to be reinvested each year to support capital upgrades directly related to energy conservation or to support schools for their use in promotion of their EcoSchool status. Appendix E presents the EcoSchools recognition awards and recent energy upgrades funded from these incentives.

COMMUNICATIONS:

The Green Energy Act requires this Energy Update be presented to Board and available publicly on an annual basis. In addition, the Energy Conservation and Demand Management Plan and Energy Consumption and Greenhouse Gas Emission annual reports, as available through the UCD, are posted by the WRDSB online with hard copies available at the Ed Centre for public access as required under the Green Energy Act.

It is intended that this report will be shared with the, Elementary Accommodation Committee (EAC), Secondary Accommodation Committee (SAC), and Accommodation Steering Committee (ASC) in an effort to enhance awareness and build a knowledge base and momentum for energy conservation in the schools.

FINANCIAL IMPLICATIONS:

While the utility budget may represent less than two percent of the overall Board budget, the active management of the utility portfolio is required to mitigate risk exposure as cost over runs or savings can have a significant impact on the operating budget.

The utility budget will continue to be monitored and developed on an annual basis within Business Services in consultation with external agencies as required (consortium, Ministry, OMC Energy Sub-Committee, School Energy Coalition), Executive Council, and brought forward through regular budget deliberations.

RECOMMENDATION:

No recommendation. For information only.

_____ Director of Education

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
ANNUAL ENERGY USE INTENSITY - ELEMENTARY SCHOOLS**

Fiscal Year (Sep to Aug) or Calendar Year (Jan to Dec) as available

School	2008	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>
A R Kaufman P.S.	212	267	244	234	239	234	214
Abraham Erb P.S.	189	166	173	167	171	166	161
Alpine P.S.	287	330	318	334	307	306	293
Avenue Road P.S.	242	400	331	197	170	177	177
Ayr P.S.	238	292	277	268	257	250	224
Baden P.S.	232	176	168	156	161	168	170
Blair O.E.C.	Unavailable	297	267	292	271	273	257
Blair Road P.S.	422	249	224	246	212	217	214
Breslau P.S.	336	393	268	267	248	338	241
Bridgeport P.S.	246	241	245	269	262	194	169
Brigadoon P.S.	199	296	213	181	185	193	167
Cedar Creek P.S.	211	206	182	174	175	188	172
Cedarbrae P.S.	289	245	308	264	255	250	256
Centennial (Camb) P.S.	269	286	254	363	266	248	229
Centennial (Wloo) P.S.	389	264	244	171	247	258	238
Central P.S.	269	294	268	284	277	280	256
Chalmers Street P.S.	265	274	288	316	267	257	237
Clemens Mill P.S.	223	219	206	209	213	226	226
Conestogo P.S.	261	271	252	273	244	239	228
Coronation P.S.	440	378	364	326	329	323	332
Country Hills P.S.	190	224	229	301	268	230	219
Courtland Senior P.S.	246	254	244	219	223	274	226
Crestview P.S.	242	322	299	279	246	300	319
Dickson P.S.	184	183	185	161	171	171	117
Doon P.S.	279	304	281	219	211	201	196
Driftwood Park P.S.	232	199	183	185	180	184	197
Edna Staebler P.S.	Not Open	171	159	150	159	159	159
Elgin Street P.S.	196	226	204	187	196	191	183
Elizabeth Ziegler P.S.	272	278	268	251	226	242	240
Empire P.S.	238	246	239	227	239	219	208
Floradale P.S.	209	191	214	236	232	208	181
Forest Glen P.S.	281	260	240	221	202	235	214
Forest Hill P.S.	316	269	246	248	208	203	198
Franklin P.S.	236	258	233	234	227	218	210
Glencairn P.S.	156	177	182	173	187	215	185
GrandView (Camb) P.S.	230	251	239	143	168	172	163
Grandview (NH) P.S.	197	326	228	233	217	213	189
Hespeler P.S.	206	205	184	166	168	180	177
Highland P.S.	326	281	275	204	189	205	206
Hillcrest P.S.	232	221	209	191	205	182	183
Howard Robertson P.S.	407	343	335	280	287	263	269
J F Carmichael P.S.	217	198	192	183	161	172	167
J.W. Gerth P.S.	Not Open	125	137	120	141	149	150
Jean Steckle PS	Not Open	Not Open	Not Open	Not Open	Not Open	146	137

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School	2008	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>
John Darling P.S.	179	215	170	171	177	184	196
John Mahood P.S.	323	258	228	221	213	198	185
Keatsway P.S.	250	197	172	154	132	153	148
King Edward P.S.	594	268	261	252	256	247	276
Lackner Woods P.S.	192	213	203	210	209	226	220
Laurelwood P.S.	223	235	216	220	205	209	205
Laurentian P.S.	293	321	303	264	258	310	363
Lester B. Pearson P.S.	217	173	171	173	175	166	168
Lexington P.S.	307	287	291	261	256	295	228
Lincoln Avenue P.S.	289	358	332	330	313	151	98
Lincoln Heights P.S.	298	258	232	233	234	213	203
Linwood P.S.	356	268	252	273	247	253	239
MacGregor Sr P.S.	201	212	204	201	202	201	193
MacKenzie King P.S.	294	319	299	313	281	301	217
Manchester P.S.	281	316	304	286	258	253	199
Margaret Avenue P.S.	229	285	198	236	237	236	248
Mary Johnston P.S.	174	176	176	175	165	184	170
McQuarrie Centre	539	531	561	411	522	421	299
Meadowlane P.S.	225	271	270	255	247	254	234
Millen Woods P.S.	Not Open	Not Open	196	153	162	168	153
Moffat Creek P.S.	Not Open	Not Open	Not Open	Not Open	138	135	117
N A MacEachern P.S.	326	338	317	250	256	255	283
New Dawn	412	424	403	430	368	268	209
New Dundee P.S.	188	215	205	209	208	192	196
Northlake Woods P.S.	311	234	241	234	217	199	193
Park Manor P.S.	341	313	284	272	276	279	278
Parkway P.S.	289	260	256	280	337	266	240
Pioneer Park P.S.	236	274	248	255	260	223	219
Preston P.S.	180	188	194	191	191	178	161
Prueter P.S.	169	286	277	219	259	241	206
Queen Elizabeth P.S.	220	252	251	277	268	251	237
Queensmount Sr P.S.	400	309	342	324	258	287	329
Riverside P.S.	171	217	175	175	186	208	179
Rockway P.S.	265	311	281	311	257	316	268
Rosemount P.S.	245	299	287	269	271	272	298
Ryerson P.S.	260	264	246	199	207	204	196
Saginaw P.S.	250	281	248	232	251	242	235
Sandhills P.S.	238	251	226	224	246	237	207
Sandowne P.S.	285	206	221	293	274	251	262
Sheppard P.S.	224	277	268	249	241	247	242
Silverheights P.S.	229	209	203	186	183	158	147
Sir Adam Beck P.S.	Not Open	Not Open	124	164	130	136	133
Smithson P.S.	216	259	249	255	250	224	239
Southridge P.S.	284	318	294	288	287	274	305

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
ANNUAL ENERGY USE INTENSITY - ELEMENTARY SCHOOLS**

Fiscal Year (Sep to Aug) or Calendar Year (Jan to Dec) as available

School	2008	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>
St Andrew's P.S.	247	191	196	173	174	174	174
St Jacobs P.S.	236	253	250	235	239	237	222
Stanley Park P.S.	299	331	314	299	280	314	262
Stewart Avenue P.S.	270	306	191	170	179	168	170
Suddaby P.S.	149	197	192	192	146	157	155
Sunnyside P.S.	226	243	218	198	205	208	208
Tait Street P.S.	227	243	241	229	230	251	176
Three Bridges P.S.	193	200	187	193	169	179	94
Trillium P.S.	262	342	255	251	253	250	235
W.T. Townshend P.S.	158	161	156	139	147	173	145
Wellesley P.S.	243	261	252	242	243	242	224
Westheights P.S.	309	339	255	232	235	233	238
Westmount P.S.	244	256	248	223	241	241	235
Westvale P.S.	151	145	141	128	140	136	135
William G. Davis P.S.	308	410	331	328	303	292	275
Williamsburg P.S.	159	149	145	149	150	158	157
Wilson Avenue P.S.	225	185	234	223	226	231	219
Winston Churchill P.S.	217	234	216	163	179	183	199
Woodland Park P.S.	177	191	179	167	162	155	156
Wrigley's Corners O.E.C.	Unavailable	251	225	282	236	232	246
Energy Intensity Average (EkWh/m2)	258	260	242	232	226	223	210

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
ANNUAL ENERGY USE INTENSITY - SECONDARY SCHOOLS**

Fiscal Year (Sep to Aug) or Calendar Year (Jan to Dec) as available

School	2008	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>
Bluevale C.I.	274	291	237	249	255	245	244
Cameron Heights C.I.	385	379	368	357	337	328	375
Eastwood C.I.	211	237	221	213	224	250	233
Elmira District S.S.	278	303	277	258	238	231	243
Forest Heights C.I.	325	328	321	341	287	279	269
Galt C.I.	254	248	258	296	287	278	267
Glenview Park S.S.	275	298	313	284	275	250	232
Grand River C.I.	244	283	264	246	260	254	257
Huron Heights S.S.	252	280	282	264	272	244	234
Jacob Hespeler S.S.	219	281	290	250	265	254	215
Kitchener-Waterloo C. & V.S.	291	269	266	251	253	272	238
Preston H.S.	260	306	267	259	257	260	249
Sir John A. Macdonald S.S.	246	257	242	240	218	210	205
Southwood S.S.	275	225	193	177	164	165	160
Waterloo C.I.	265	278	272	249	256	251	238
Waterloo-Oxford District S.S.	243	322	321	307	281	279	279
Energy Intensity Average (EkWh/m2)	269	287	275	265	258	253	246
Education Centre (EkWh/m2)	258	280	279	267	258	238	230

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
ENERGY BUDGET AND EXPENDITURES**

Commodity	2008/09	
	Budget	Actual
Electricity	\$ 4,616,900	\$ 5,755,988
Gas	\$ 5,832,400	\$ 4,966,345
Total	\$ 10,449,300	\$ 10,722,333

Commodity	2009/10	
	Budget	Actual
Electricity	\$ 5,733,000	\$ 6,797,223
Gas	\$ 5,505,900	\$ 4,480,301
Total	\$ 11,238,900	\$ 11,277,524

Commodity	2010/11	
	Budget	Actual
Electricity	\$ 6,759,525	\$ 6,549,661
Gas	\$ 4,915,515	\$ 4,352,896
Total	\$ 11,675,040	\$ 10,902,557

Commodity	2011/12	
	Budget	Actual
Electricity	\$ 6,809,909	\$ 6,572,072
Gas	\$ 4,958,342	\$ 3,357,832
Total	\$ 11,768,251	\$ 9,929,904

Commodity	2012/13	
	Budget	Actual
Electricity	\$ 7,204,740	\$ 7,062,058
Gas	\$ 3,163,721	\$ 2,377,512
Total	\$ 10,368,461	\$ 9,439,570

Commodity	2013/14	
	Budget	Actual
Electricity	\$ 7,315,200	\$ 7,432,158
Gas	\$ 3,512,270	\$ 2,934,994
Total	\$ 10,827,470	\$ 10,367,152

Commodity	2014/15	
	Budget	Actual
Electricity	\$ 9,213,000	\$ 8,018,535
Gas	\$ 3,007,590	\$ 2,934,994
Total	\$ 12,220,590	\$ 10,953,529

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
PHOTOVOLTAIC GENERATION AND REVENUES (LIFETIME)***

	kWh Production	Revenue
Blair Road P.S.	45,661	\$ 36,620
Forest Glen P.S	51,003	\$ 40,904
Forest Heights C.I.	44,595	\$ 35,765
Lincoln Heights P.S.	54,636	\$ 43,818
Waterloo C.I.	<u>55,526</u>	<u>\$ 44,532</u>
Total	251,421	\$ 201,639

Notes:

* Based on energy produced between November and December 2011 through April 2016.

Links to websites are as follows:

Blair Road P.S. <http://www.cachelan.com/green/solarVuLive.php?ac=blairrdps&dr=dakon>
 Forest Glen P.S. <http://www.cachelan.com/green/solarVu.php?ac=forestglenps>
 Forest Heights C.I. <http://www.foresthtsc.solarvu.net/green/solarVu.php?ac=foresthtsc>
 Lincoln Heights P.S. <http://lincolnhgtsp.solarvu.net/green/solarVuLive.php?ac=lincolnhgtsp&dr=dakon>
 Waterloo C.I. <http://www.waterlooci.solarvu.net/green/solarVu.php?ac=waterlooci>

**WATERLOO REGION DISTRICT SCHOOL BOARD
BUSINESS SERVICES DIVISION
FACILITY SERVICES DEPARTMENT**

**ENERGY UPDATE
ENERGY REBATES REINVESTMENTS**

ECO Schools Recognition Awards

2014/15 Top 5 ECO Schools

Forest Glen P.S.
Sunnyside P.S.
Elgin Street P.S.
J.W. Gerth P.S.
Brigadoon P.S.

Selected Recognition Award

Water Hydration Station
Water Hydration Station
Water Hydration Station
Energy Efficient Hand Dryers
Energy Efficient Hand Dryers

2013/14 Top 5 ECO Schools

Franklin P.S.
Glenview Park S.S.
John Darling P.S.
Millen Woods P.S.
Williamsburg P.S.

Selected Recognition Award

Bottle Water Hydration Station
Bottle Water Hydration Station
Energy Efficient Hand Dryers
School Grounds Greening (Trees and Plantings)
Bottle Water Hydration Station

2012/13 Top 5 ECO Schools

Bluevale C.I.
Eastwood C.I.
Jacob Hespeler S.S.
MacGregor P.S.
Suddaby P.S.

Selected Recognition Award

Schools Grounds Greening (Trees and Plantings)
Bottle Water Hydration Station
Bottle Water Hydration Station
Energy Star LCD Monitor
Energy Efficient Hand Dryers

2011/12 Top 5 ECO Schools

Highland P.S.
New Dundee P.S.
Forest Hill P.S.
Waterloo C.I.
Centennial P.S. (C)

Energy Star LCD Monitor
School Grounds Greening (Trees and Plantings)
Bottle Water Hydration Station
Bottle Water Hydration Station
Lighting Occupancy Sensors

2014/15 Capital Projects Reinvestments

School

Sir John A MacDonald S.S. and 5 others
Howard Robertson P.S.
A.R. Kaufman P.S. and 10 others
Jacob Hespeler S.S. and 20 others
Forest Glen PS and 5 others
Waterloo Oxford D.S.S. and 8 others

Project

Upgrade Bldg Controls for Humidity Reset During Free Cooling
Building Controls Upgrade w/ Emerg Vent, Temp Alarms & OA Schedule Enable / Disable Remote Control Overrides for Multizone Heating / Cooling Un
Field Irrigation Controls to Minimize Water Use
Electric Heat Control Upgrades for Vestibules, Entrance and Corridors
Astronomical Clock for Exterior Lights