

**Report to Committee of the Whole  
May 11, 2015**



**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 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The Green Energy Act (Act), came into effect in 2009 repealed the Energy Conservation Leadership Act and the Energy Efficiency Act.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 utility consumption and greenhouse gas emissions for more than 5,000 schools and administrative buildings across 72 boards.

Phase One of the UCD required boards to report on natural gas/hydro consumption and greenhouse gas emissions. WRDSB submitted its report to the Ministry of Energy in 2013 as required under the Act, with the Board making this information available publicly. Phase Two of the UCD, included the annual report on natural gas/hydro consumption and greenhouse gas emissions, as well as a conservation and demand management plan. This report was completed in 2014 and made available to the Ministry of Energy and to the public. Annual reporting to the Ministry of Energy is expected to continue with future reports expanding to include data on the use of water and alternate utilities at Board facilities.

In the school 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 principle for expenditures of capital from School Renewal (SR), School Condition Improvement (SCI), and 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/m<sup>2</sup>) 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/m<sup>2</sup>.

Previous reports used a 2008 calendar year 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/m<sup>2</sup>) versus Year

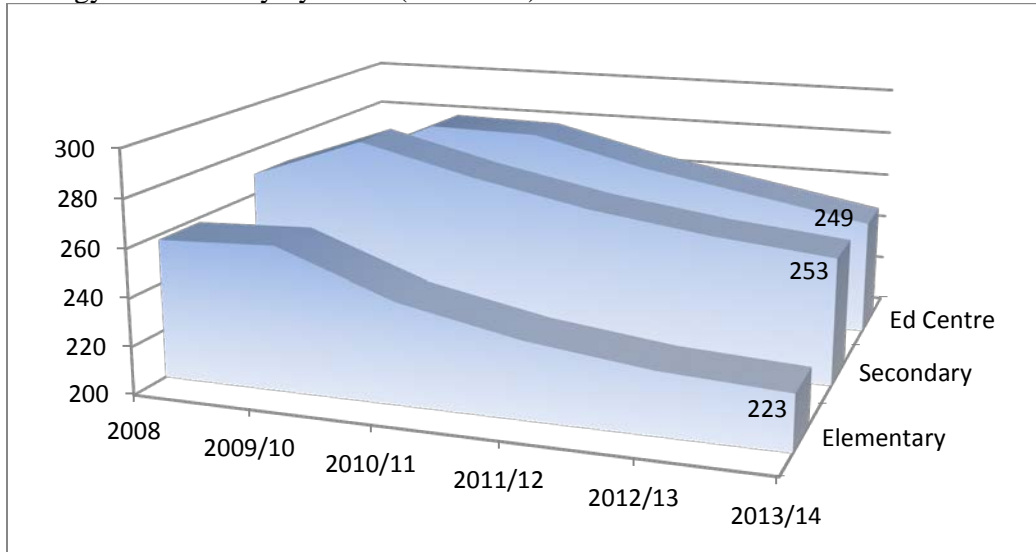
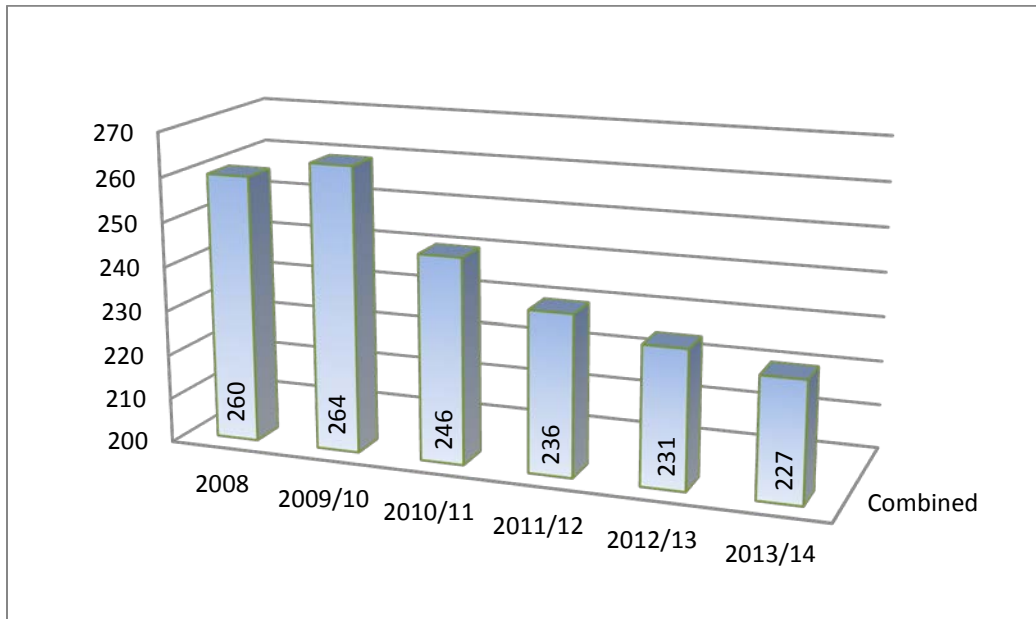


Figure 1b – Energy Use Intensity Combined (ekWh/m<sup>2</sup>) versus Year



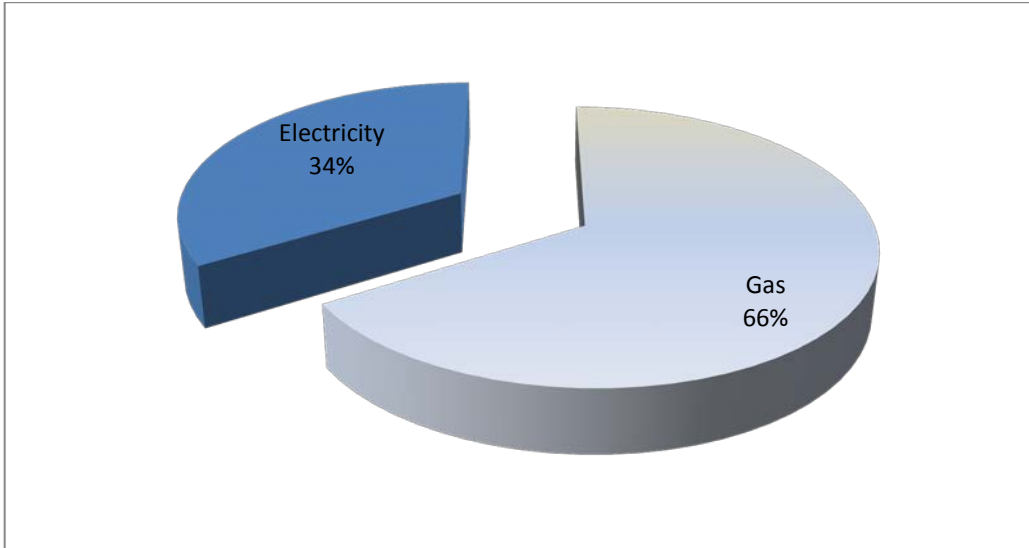
The Board has experienced a 12.7% reduction in EUI when comparing 2013/14 to 2008 average energy intensity for both elementary and secondary schools combined.

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 is at a comparatively low cost to electricity. As such, a greater reliance on gas as a resource is currently beneficial for our operational budget.

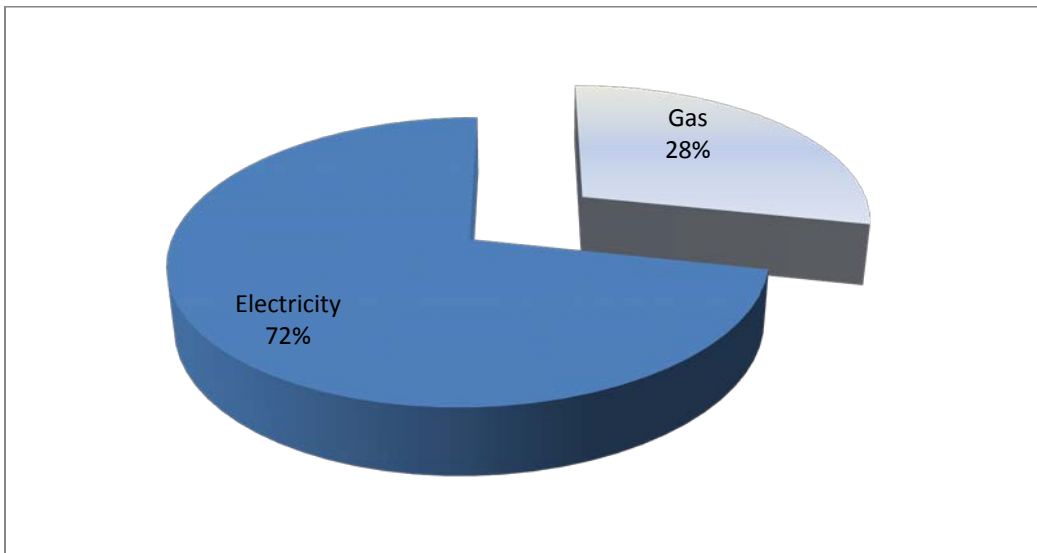
Energy consumption by commodity is presented in Figure 2 for 2013/14.

Figure 2 – Energy Consumption by Commodity (2013/14)



Energy expenditures by commodity are presented in Figure 3 for 2013/14.

Figure 3 – Expenditures by Commodity (2013/14)



On average for 2013/14, gas cost approximately 2.5 cents per ekWh and electricity cost approximately 14.5 cents per ekWh with an average for both estimated at 6.58 cents.

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:

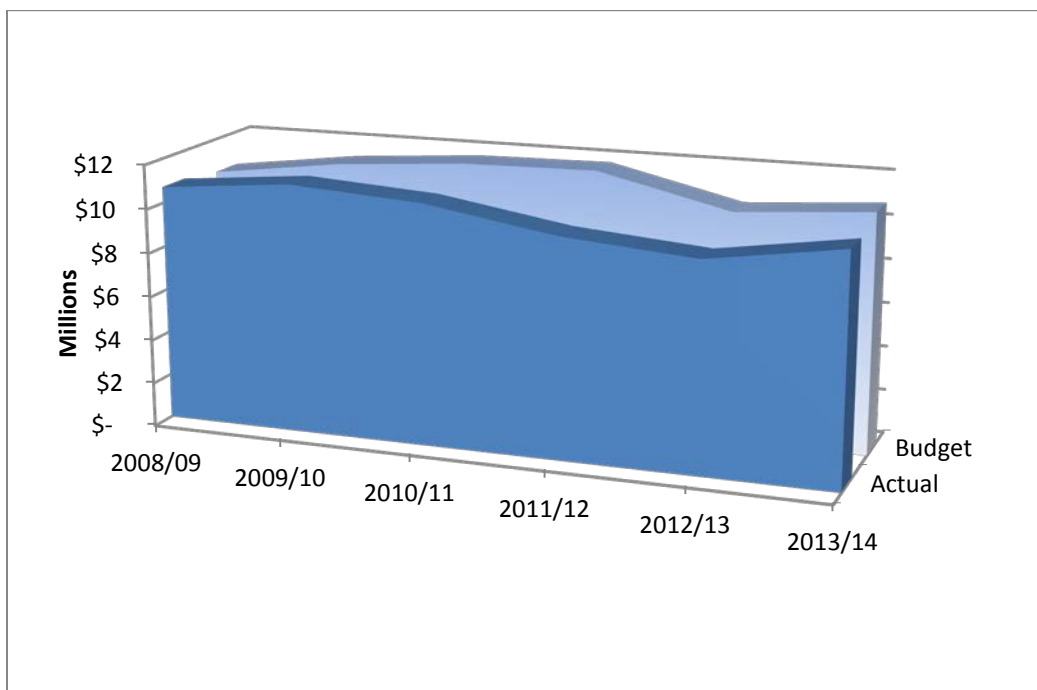
- Weather (colder winter drives heating demand)
- Hours of operation (extended use for Ministry initiatives such as Community Use)
- Growth of region (new schools and additional portables)
- Expansion of facilities and square footage (FDK additions)

### Energy Budget and Expenditure

A six year history of board budgets and expenditures for electricity and gas are presented in Appendix C. The WRDSB utility budget for 2013/14 was \$10.8M and expenditures were \$10.4M

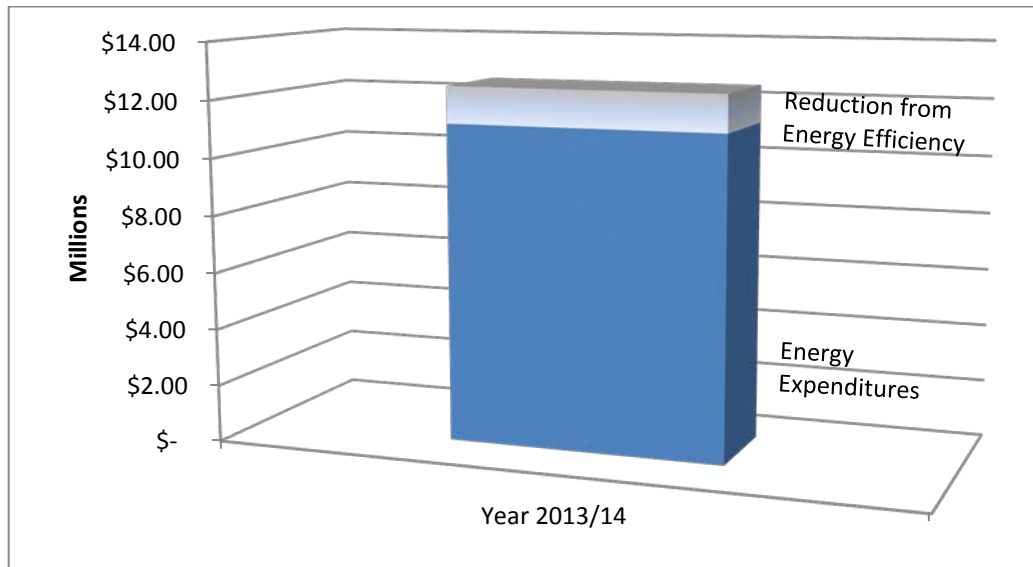
It is important to note when reviewing this information that budget and actual expenses cannot be compared directly year over year as a metric for operational efficiencies. Consumption is weather dependent. Costs are market dependent. Market pricing is something the Board has very limited control over and market pricing can fluctuate greatly depending on demand and time of use. Business Services staff employs a purchasing strategy working through a consortium. This minimizes the Board’s exposure to spot market pricing and was instrumental in generating the savings experienced in 2013/14. Figure 4 presents the board’s budget versus expenditures since 2008.

Figure 4 – Budget and Expenditures (Dollars) versus Year



One can estimate reduction from energy efficiency as compared to base line by comparing the EUI factors for 2008 vs 2013/14 at current average cost of 6.58 cents per ekWh/m2. Figure 5 represents more than \$1.2M in cost savings due to EUI reductions in 2013/14.

Figure 5 – Reduction as compared to base line (Dollars) for 2013/14



Regardless of our best efforts to reduce consumption by driving down EUI, energy costs are likely to continue to rise in the future.

### **Operations**

Changing human behavior continues to be our most promising as well as our most challenging area in resource conservation. Recently, the WRDSB became a member of Sustainable Waterloo Region which is a local not-for-profit organization striving to reduce our carbon footprint at a regional level. This collaboration will provide the Board with additional resources for minimizing greenhouse gasses and promoting energy efficiency, from this local leader in sustainability through partnerships and learning opportunities.

The Board was also successful in obtaining funding for an energy conservation summer student placement. This is one of 65 positions offered by the Ministry of Government Services (Summer Experience Program) to support youth work opportunities in school boards and this placement will assist in the energy conservation program at WRDSB as well as provide support to other Facility Services areas.

The creation of a Building Envelope Working Group in 2014, bringing together managers, coordinators, architects, roofing experts, windows experts 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 has resulted in developing specific Board Standards for windows, roofs and vestibule/building entrances, suitable for new projects and future renovations.

### **Technologies**

As we construct new facilities 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;

- Window treatment eTime Energy pilot
- Gas fired heat pump pilot
- Load shedding summer school pilot
- Eyedro point of use web-based power monitoring
- Humidity based free cooling pilot

As implementations of these technologies help reduce consumption, Business Services intend to continue the expansion and use of such technologies where possible, while targeting a reasonable (e.g. 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.

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 PM programs are crucial to reducing 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 \$151,000 in revenue over 41 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 an estimated 18 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 \$275,000 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 EcoSchool 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 the Business Services Department 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*

<b>School</b>	<b>2008 EkWh/m2</b>	<b>2009/10 EkWh/m2</b>	<b>2010/11 EkWh/m2</b>	<b>2011/12 EkWh/m2</b>	<b>2012/13 EkWh/m2</b>	<b>2013/14 EkWh/m2</b>
A R Kaufman P.S.	212	267	244	234	239	234
Abraham Erb P.S.	189	166	173	167	171	166
Alpine P.S.	287	330	318	334	307	306
Avenue Road P.S.	242	400	331	197	170	177
Ayr P.S.	238	292	277	268	257	250
Baden P.S.	232	176	168	156	161	168
Blair O.E.C.	Unavailable	297	267	292	271	273
Blair Road P.S.	422	249	224	246	212	217
Breslau P.S.	336	393	268	267	248	338
Bridgeport P.S.	246	241	245	269	262	194
Brigadoon P.S.	199	296	213	181	185	193
Cedar Creek P.S.	211	206	182	174	175	188
Cedarbrae P.S.	289	245	308	264	255	250
Centennial (Camb) P.S.	269	286	254	363	266	248
Centennial (Wloo) P.S.	389	264	244	171	247	258
Central P.S.	269	294	268	284	277	280
Chalmers Street P.S.	265	274	288	316	267	257
Clemens Mill P.S.	223	219	206	209	213	226
Conestogo P.S.	261	271	252	273	244	239
Coronation P.S.	440	378	364	326	329	323
Country Hills P.S.	190	224	229	301	268	230
Courtland Senior P.S.	246	254	244	219	223	274
Crestview P.S.	242	322	299	279	246	300
Dickson P.S.	184	183	185	161	171	171
Doon P.S.	279	304	281	219	211	201
Driftwood Park P.S.	232	199	183	185	180	184
Edna Staebler P.S.	Not Open	171	159	150	159	159
Elgin Street P.S.	196	226	204	187	196	191
Elizabeth Ziegler P.S.	272	278	268	251	226	242
Empire P.S.	238	246	239	227	239	219
Floradale P.S.	209	191	214	236	232	208
Forest Glen P.S.	281	260	240	221	202	235
Forest Hill P.S.	316	269	246	248	208	203
Franklin P.S.	236	258	233	234	227	218
Glencairn P.S.	156	177	182	173	187	215
GrandView (Camb) P.S.	230	251	239	143	168	172
Grandview (NH) P.S.	197	326	228	233	217	213
Hespeler P.S.	206	205	184	166	168	180
Highland P.S.	326	281	275	204	189	205
Hillcrest P.S.	232	221	209	191	205	182
Howard Robertson P.S.	407	343	335	280	287	263
J F Carmichael P.S.	217	198	192	183	161	172
J.W. Gerth P.S.	Not Open	125	137	120	141	149
Jean Steckle PS	Not Open	Not Open	Not Open	Not Open	Not Open	146
John Darling P.S.	179	215	170	171	177	184
John Mahood P.S.	323	258	228	221	213	198



**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*

<b>School</b>	<b>2008</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>
	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>	<i>EkWh/m2</i>
Keatsway P.S.	250	197	172	154	132	153
King Edward P.S.	594	268	261	252	256	247
Lackner Woods P.S.	192	213	203	210	209	226
Laurelwood P.S.	223	235	216	220	205	209
Laurentian P.S.	293	321	303	264	258	310
Lester B. Pearson P.S.	217	173	171	173	175	166
Lexington P.S.	307	287	291	261	256	295
Lincoln Avenue P.S.	289	358	332	330	313	151
Lincoln Heights P.S.	298	258	232	233	234	213
Linwood P.S.	356	268	252	273	247	253
MacGregor Sr P.S.	201	212	204	201	202	201
MacKenzie King P.S.	294	319	299	313	281	301
Manchester P.S.	281	316	304	286	258	253
Margaret Avenue P.S.	229	285	198	236	237	236
Mary Johnston P.S.	174	176	176	175	165	184
McQuarrie Centre	539	531	561	411	522	421
Meadowlane P.S.	225	271	270	255	247	254
Millen Woods P.S.	Not Open	Not Open	196	153	162	168
Moffat Creek P.S.	Not Open	Not Open	Not Open	Not Open	138	135
N A MacEachern P.S.	326	338	317	250	256	255
New Dawn	412	424	403	430	368	268
New Dundee P.S.	188	215	205	209	208	192
Northlake Woods P.S.	311	234	241	234	217	199
Park Manor P.S.	341	313	284	272	276	279
Parkway P.S.	289	260	256	280	337	266
Pioneer Park P.S.	236	274	248	255	260	223
Preston P.S.	180	188	194	191	191	178
Prueter P.S.	169	286	277	219	259	241
Queen Elizabeth P.S.	220	252	251	277	268	251
Queensmount Sr P.S.	400	309	342	324	258	287
Riverside P.S.	171	217	175	175	186	208
Rockway P.S.	265	311	281	311	257	316
Rosemount P.S.	245	299	287	269	271	272
Ryerson P.S.	260	264	246	199	207	204
Saginaw P.S.	250	281	248	232	251	242
Sandhills P.S.	238	251	226	224	246	237
Sandowne P.S.	285	206	221	293	274	251
Sheppard P.S.	224	277	268	249	241	247
Silverheights P.S.	229	209	203	186	183	158
Sir Adam Beck P.S.	Not Open	Not Open	124	164	130	136
Smithson P.S.	216	259	249	255	250	224
Southridge P.S.	284	318	294	288	287	274
St Andrew's P.S.	247	191	196	173	174	174
St Jacobs P.S.	236	253	250	235	239	237
Stanley Park P.S.	299	331	314	299	280	314
Stewart Avenue P.S.	270	306	191	170	179	168
Suddaby P.S.	149	197	192	192	146	157

**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*

<b>School</b>	<b>2008 EkWh/m2</b>	<b>2009/10 EkWh/m2</b>	<b>2010/11 EkWh/m2</b>	<b>2011/12 EkWh/m2</b>	<b>2012/13 EkWh/m2</b>	<b>2013/14 EkWh/m2</b>
Sunnyside P.S.	226	243	218	198	205	208
Tait Street P.S.	227	243	241	229	230	251
Three Bridges P.S.	193	200	187	193	169	179
Trillium P.S.	262	342	255	251	253	250
W.T. Townshend P.S.	158	161	156	139	147	173
Wellesley P.S.	243	261	252	242	243	242
Westheights P.S.	309	339	255	232	235	233
Westmount P.S.	244	256	248	223	241	241
Westvale P.S.	151	145	141	128	140	136
William G. Davis P.S.	308	410	331	328	303	292
Williamsburg P.S.	159	149	145	149	150	158
Wilson Avenue P.S.	225	185	234	223	226	231
Winston Churchill P.S.	217	234	216	163	179	183
Woodland Park P.S.	177	191	179	167	162	155
Wrigley's Corners O.E.C.	Unavailable	251	225	282	236	232
<b>Energy Intensity Average (EkWh/m2)</b>	<b>258</b>	<b>260</b>	<b>242</b>	<b>232</b>	<b>226</b>	<b>223</b>

**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

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

**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
<b>Total</b>	<b>\$ 10,449,300</b>	<b>\$ 10,722,333</b>

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

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

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

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

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

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

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

	<b>kWh Production</b>	<b>Revenue</b>
Blair Road P.S.	35,608	\$ 28,557
Forest Glen P.S	38,959	\$ 31,245
Forest Heights C.I.	34,274	\$ 27,487
Lincoln Heights P.S.	41,758	\$ 33,490
Waterloo C.I.	<u>42,305</u>	<u>\$ 33,929</u>
<b>Total</b>	<b>192,904</b>	<b>\$ 154,708</b>

Notes:

\* Based on energy produced between November and December 2011 through April 2015.

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://lincolnhgtsps.solarvu.net/green/solarVuLive.php?ac=lincolnhgtsps&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**

**ECOSchools Recognition Awards**

**2013/14 Top 5 ECOSchools**

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 ECOSchools**

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 ECOSchools**

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

**2010/11 Top 5 ECOSchools**

Glencairn P.S.  
Keatsway P.S.  
Lester B. Pearson P.S.  
Southwood S.S.  
Westvale P.S.

**Selected Recognition Award**

Schools Grounds Greening (Trees and Plantings)  
Bottle Water Hydration Station  
Schools Grounds Greening (Trees and Plantings)  
Bicycle Stand  
Energy Star LCD Monitor

**2013/14 Capital Projects Reinvestments**

**School**

Lexington P.S.  
Winston Churchill P.S. and 3 others  
Abraham Erb P.S. and 8 others  
Trillium P.S. and 17 others

**Project**

Replace Programable Controllers, Program & Extend Graphics  
Upgrade to Web Access for Allow Remote Monitoring of Controls  
Control Upgrade of Electric Heaters at Entrances  
Astronomical Clock for Exterior Lights