



Grand Erie District School Board

TO: JoAnna Roberto, Ph. D., Director of Education & Secretary of the Board
FROM: Rafal Wyszynski, Superintendent of Business & Treasurer
RE: **Energy Consumption and Greenhouse Gas Emissions Report 2022-23**
DATE: June 10, 2024

Energy Consumption and Greenhouse Gas Emissions Report 2022-23

Important Notice: Natural gas consumption data is expected to be under reported in the annual report for this year due to issues with meter read data provided by Grand Erie District School Board's (Grand Erie) natural gas supplier. This is likely a factor in the reduction in GHG emission between FY2022 and FY2023.

Background

Ontario Regulation 25/23 (Formerly O. Reg 507/18), under the Electricity Act, requires school boards, among other public agencies, to report annually on their energy consumption and greenhouse gas (GHG) emissions. The report is due July 1st and must provide information on the total consumption of energy and associated GHG emissions for the previous fiscal year. This year's report covers September 1, 2022 to August 31, 2023, also referred to as "FY2023" (fiscal year 2023).

All data must be uploaded to the Ministry of Energy's reporting system. Through this process, a report is generated which summarizes energy consumption and GHG emissions over the previous fiscal year for Ministry and public review. Please refer to Appendix A: Energy Consumption and Greenhouse Gas Emissions Report 2022-23 for this report. Grand Erie's 2022-23 Energy Consumption and Greenhouse Gas Emissions Report was completed and submitted to the Ministry on May 24th, 2024

For this reporting process, Grand Erie reports on Branlyn Community School and Notre Dame Catholic Elementary School, while the Brant Haldimand Norfolk Catholic District School Board reports on Saint Basil Catholic Elementary School and Walter Gretzky Elementary School. As per O. Reg 25/23, boards are required to submit their completed consumption report annually to the Ministry of Energy, post the report on both the internet and intranet sites, and have a copy available at their office to any interested member of the public.

Summary

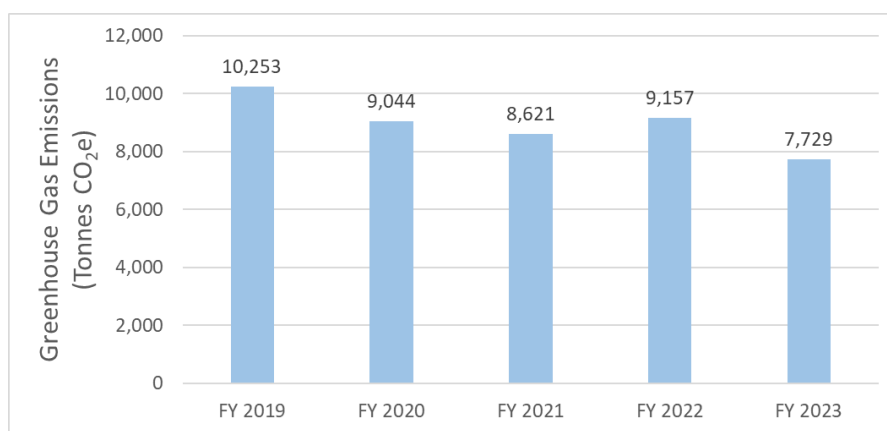
Total Annual Greenhouse Gas Emissions:

Measuring the GHG emissions associated with energy consumption provides a comparable and consistent metric for environmental performance. Overall, GHG emissions at Grand Erie decreased between FY 2022 and FY 2023 by approximately 18%, or ~1,428 tonnes CO₂e (carbon dioxide equivalent).

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GHG Emission Highlights:

- 5-year average: 8,961 tonnes CO₂e
- Highest annual emissions: FY2019 – 10,253 tonnes CO₂e
- Lowest annual emissions: FY2023 – 7,729 tonnes CO₂e

There are three types of energies tracked as part of this reporting process, natural gas, electricity, and propane. On average, natural gas has made up the largest share of Grand Erie’s energy profile, followed by electricity, and lastly propane. For the period of this report, natural gas represented 66.9% of the energy profile, electricity made up 32.8%, and propane (Glen Morris Central Public School only) accounted for 0.3%:

Energy Consumption	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Electricity (kWh)	20,438,218	17,407,992	17,112,276	19,115,457	19,354,602
Natural Gas (m ³)	5,403,588	4,595,335	4,312,922	4,410,608	3,701,462
Propane (L)	34,891	31,588	18,535	10,786	22,517

Energy Consumption (GJ)*	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Electricity	72,311	61,353	60,252	68,334	69,673
Natural Gas	191,270	169,375	161,809	171,219	142,248
Propane	883	822	279	273	570
Total	264,464	231,550	222,340	239,826	212,491

*Energy consumption converted to gigajoules (GJ) to allow for relative comparison

Factors influencing FY 2023 energy consumption and GHG emissions

There are several factors which have affected energy consumption and GHG emission trends over the period of this report:

- Natural gas meter read estimates
 - Many Enbridge customers, including school boards, are frequently receiving estimated meter reads for natural gas services. This reporting year seems to have been particularly impacted as several schools had months without actual meter reads or encountered estimates that did not match typical seasonal trends.
- Seasonal temperatures
 - Variations in seasonal temperatures can sway the energy demand of board facilities, either requiring more or less energy based on the need for heating or cooling. Heating Degree Days (HDD) is a measure of the demand for heating in cooler weather, while Cooling Degree Days (CDD) is a measure of the demand for cooling in warmer weather. Data from the Hamilton Airport Weather Station indicates that FY2023 had lower values for HDD, and CDD, then FY2022. This suggests that the decrease in energy consumption in FY2023 could be related to a reduced demand for heating and cooling.
- Energy Conservation Projects
 - Boiler replacement projects took place at Walpole North Elementary School, Langton Public School, McKinnon Park Secondary School, Princess Elizabeth Public School and Seneca Central Public School in FY2022 which resulted in reduced natural gas usage in FY2023. Bellview Public School also had a boiler upgrade project completed, however natural gas usage did not decrease between FY2022 and FY2023.

Next Steps

This report was completed to meet the requirements of O. Reg 25/23 Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans. Efforts to reduce the environmental impact of Grand Erie's operations will continue to be explored, with an update on our Energy Conservation and Demand Management Plan also being submitted in 2024.

Grand Erie Multi-Year Plan

This report supports the Belonging indicator of Learn Lead Inspire and the following statement: We build a culture of belonging to support an equitable, inclusive and responsive environment for each learner.

Respectfully submitted,

Rafal Wyszynski
Superintendent of Business & Treasurer

Appendix A

Energy Consumption and Greenhouse Gas Emissions Report 2022-23

Confirm consecutive 12-month period (month-year to month-year)	September 2022 – August 2023
Sector	School Board
Agency Sub-sector	School Board
Organization Name	Grand Erie District School Board

Property Name	Operation Type	Address	City	Postal Code	Gross Floor Area (ft²)	Weekly Operating Hours	Number of Portables	Electricity (kWh)	Natural Gas (ekWh)	Propane (ekWh)	Site Energy Use (kWh)	Site Energy Use Intensity (kWh/ft²)	Site GHG Emissions (Metric Tons CO2e)	Site GHG Emissions Intensity (kgCO2e/ft²)
Agnes G Hodge PS	School	52 Clench Avenue	Brantford	N3T 1B6	43,870	80	6	272,796.90	392,611.11		665,416.67	15.17	78.7	1.79
Banbury Heights PS	School	141 Banbury Rd	Brantford	N3P 1E3	47,142	80	0	412,622.90	294,777.78		707,388.89	15.01	64.9	1.38
Bellview PS	School	97 Tenth Avenue	Brantford	N3S 1G5	36,883	80	0	184,248.90	402,638.89		586,888.89	15.91	78	2.11
Bloomsburg PS	School	25 Concession 12, R.R. #3	Waterford	NOE 1Y0	25,553	80	0	100,985.80	291,111.11		392,083.33	15.34	55.5	2.17
Board Office	Office	349 Erie Avenue	Brantford	N3S 2H7	28,458	80	2	320,917.40	301,194.44		622,083.33	21.86	63.5	2.23
Boston PS	School	2993 Cockshutt Rd., R.R. #1	Waterford	NOE 1Y0	21,841	80	0	87,282.30	343,277.78		430,555.56	19.71	64.6	2.96
Branlyn Community School	School	238 Brantwood Park Rd	Brantford	N3P 1N9	86,329	100	0	583,752.90	500,250.00		1,083,972.22	12.56	106.9	1.24
Brantford CI & VS	School	120 Brant Ave	Brantford	N3T 3H3	210,340	80	0	1,551,912.00	536,138.89		2,088,000.00	9.93	140.5	0.67
Brier Park PS	School	10 Blackfriar Lane	Brantford	N3R 6C5	34,258	80	1	235,201.30	341,055.56		576,250.00	16.82	68.3	1.99
Burford District ES	School	35 Alexander St	Burford	NOE 1A0	51,264	80	0	188,761.60	285,194.44		473,944.44	9.24	56.9	1.11
Caledonia Centennial PS	School	110 Shetland St	Caledonia	N3W 2H1	36,935	80	8	172,208.90	254,583.33		426,777.78	11.55	50.9	1.38
Cayuga SS	School	70 Highway #54	Cayuga	NOA 1E0	134,130	80	0	532,764.00	1,571,527.78		2,104,277.78	15.69	299.4	2.23
Cedarland PS	School	60 Ashgrove Ave	Brantford	N3R 6E5	33,917	80	0	162,527.40	298,722.22		461,250.00	13.60	58.6	1.73
Centennial-Grand Woodlands S	School	41 Ellenson Dr	Brantford	N3R 3E7	29,511	80	0	145,135.90	405,611.11		550,750.00	18.66	77.5	2.63
Central PS	School	135 George St	Brantford	N3T 6B4	29,378	80	3	175,430.00	152,111.11		327,527.78	11.15	32.4	1.10
Cobblestone ES	School	179 Grandville Circle	Paris	N3L 0A9	51,260	80	4	343,578.10	352,222.22		695,777.78	13.57	73.4	1.43
Courtland PS	School	1012 Queen Street, Box 245	Courtland	NOJ 1E0	25,681	80	0	90,174.40	318,000.00		408,166.67	15.89	60.1	2.34
Delhi DSS	School	393 James St	Delhi	N4B 2B6	89,309	80	0	370,218.70	895,694.44		1,265,888.89	14.17	172.5	1.93
Delhi PS	School	227 Queen St	Delhi	N4B 2K6	35,683	80	0	172,524.60	450,138.89		622,638.89	17.45	86.3	2.42
Dunnville SS	School	110 Helena St	Dunnville	N1A 2S5	151,688	80	0	495,800.70	1,670,305.56		2,166,083.33	14.28	316.2	2.08
Echo Place PS	School	723 Colborne St	Brantford	N3S 3R5	18,689	80	0	78,775.80	157,472.22		236,250.00	12.64	30.7	1.64
Ecole Confederation	School	54 Ewing D Dr	Brantford	N3R 5H8	40,756	80	0	227,887.80	483,111.11		710,972.22	17.44	93.8	2.30
Ecole Dufferin	School	106 Chestnut Ave	Brantford	N3T 4C6	45,239	80	0	104,759.50	392,277.78		497,027.78	10.99	73.9	1.63
Edith Monture PS	School	33 Dowden Ave	Brantford	N3T 0A3	66,728	80	9	419,500.10	419,722.22		839,194.44	12.58	87.7	1.31
Elgin Avenue PS	School	80 Elgin Ave	Simcoe	N3Y 4A8	41,353	80	0	123,011.70	382,555.56		505,583.33	12.23	72.7	1.76
Glen Morris Central PS	School	522 Glen Morris Rd E	Glen Morris	NOB 1W0	16,847	80	0	95,314.90		158,305.56	253,611.11	15.05	37.5	2.23
Graham Bell-Victoria PS	School	56 Grand St	Brantford	N3R 4B2	33,984	80	0	97,760.10	299,027.78		396,805.56	11.68	56.9	1.67
Grand Erie Learning Alternatives	School	365 Rawdon St	Brantford	N3S 6J3	20,444	80	0	66,373.40	328,805.56		395,194.44	19.33	61.4	3.00
Grandview Central PS	Office	11 Thrush St	Dunnville	N1A 1X7	19,419	80	0	23,190.50	220,166.67		243,361.11	12.53	40.5	2.09
Grandview PS	School	68 North Park St	Brantford	N3R 4J9	33,951	80	0	112,051.50	54,583.33		166,638.89	4.91	4.1	0.38
Greenbrier PS	School	33 White Oaks Ave	Brantford	N3R 5N8	23,928	80	0	99,186.40	265,333.33		364,500.00	15.23	50.8	2.12
Hagersville ES	School	40 Parkview Road	Hagersville	NOA 1H0	29,999	80	1	103,784.30	377,861.11		481,638.89	16.06	71.3	2.38
Hagersville SS	School	70 Parkview Rd	Hagersville	NOA 1H0	133,389	80	1	766,004.90	2,294,444.44		3,060,416.67	22.94	436.7	3.27
Houghton Annex	School	505 Fairground SR, R.R. #5	Langton	NOE 1G0	4,955	40	0	1,491.00	19,694.44		21,166.67	4.27	3.6	0.73
Houghton PS	School	505 Fairground Sideroad	Langton	NOE 1G0	33,739	80	6	195,264.40	295,500.00		490,750.00	14.55	59	1.75
J L Mitchener PS	School	Box 99 60 Munsee St South	Cayuga	NOA 1E0	36,542	80	0	121,285.70	346,472.22		467,750.00	12.80	66.1	1.81
James Hillier PS	School	62 Queensway Dr	Brantford	N3R 4W8	30,979	80	2	89,072.50	316,500.00		405,555.56	13.09	59.8	1.93
Jarvis PS	School	14 Monson St	Jarvis	NOA 1J0	31,949	80	0	145,519.70	278,555.56		424,055.56	13.27	54.5	1.71
Joseph Brant Learning Centre	School	347 Erie Ave	Brantford	N3S 2H7	19,639	80	3	122,221.40	202,111.11		324,305.56	16.51	40	2.04
King George School	School	265 Rawdon St	Brantford	N3S 6G7	39,244	80	0	175,380.00	422,777.78		598,138.89	15.24	81.4	2.07
Lakewood ES	School	713 St. George St	Port Dover	NOA 1N0	90,337	80	0	335,647.90	1,011,444.44		1,347,083.33	14.91	192.5	2.13
Langton PS	School	23 Albert Street	Langton	NOE 1G0	21,034	80	0	106,930.20	296,194.44		403,111.11	19.16	56.6	2.69
Lansdowne-Costain PS	School	21 Preston Blvd	Brantford	N3T 5B1	29,557	80	1	135,741.90	257,944.44		393,694.44	13.32	50.5	1.71
Lynndale Heights PS	School	55 Donly Drive South	Simcoe	N3Y 5C7	39,173	80	1	217,793.30	338,888.89		556,694.44	14.21	67.4	1.72
Major Ballachey PS	School	105 Rawdon St	Brantford	N3S 6C7	48,259	80	0	157,679.00	375,027.78		532,694.44	11.04	72.3	1.50
Mapleview ES	School	223 Fairview Ave W	Dunnville	N1A 1M4	46,094	80	1	251,815.00	281,916.67		533,722.22	11.58	58.1	1.26
McKinnon Park SS	School	91 Haddington St	Caledonia	N3W 2H2	121,932	80	10	1,010,753.90	1,286,666.67		2,297,388.89	18.84	261.2	2.14
Mount Pleasant School	School	667 Mt. Pleasant Road	Mt. Pleasant	NOE 1K0	24,136	80	1	101,838.00	238,861.11		340,694.44	14.12	46.1	1.91
North Park C & VS	School	280 North Park St	Brantford	N3R 4L1	172,157	80	2	658,239.40	1,868,361.11		2,526,583.33	14.68	356.6	2.07
North Ward School	School	107 Silver St	Paris	N3L 1V2	43,854	80	0	138,519.00	371,888.89		455,888.89	10.40	61.3	1.40
Oakland-Scotland PS	School	15 Church Street West	Scotland	NOE 1R0	24,005	80	0	118,547.50	231,583.33		350,138.89	14.59	45.2	1.88
Oneida Central PS	School	661 4th Line	Caledonia	N3W 2B2	21,840	80	2	124,773.10	259,611.11		384,388.89	17.60	50.5	2.31
Onondaga-Brant PS	School	21 Brant School Rd., R.R. #1	Brantford	N3T 5L4	20,456	80	2	101,152.80	250,250.00		351,388.89	17.18	48.1	2.35
Paris Central PS	School	7 Broadway St E	Paris	N3L 2R2	26,077	80	0	211,714.20	193,166.67		404,888.89	15.53	40.9	1.57
Paris DHS	School	231 Grand River St N	Paris	N3L 2N6	147,702	80	4	601,787.70	1,490,333.33		2,092,111.11	14.16	286.6	1.94
Pauline Johnson C & VS	School	627 Colborne St	Brantford	N3S 3M8	184,625	80	0	584,931.00	1,956,583.33		2,541,500.00	13.77	370.5	2.01
Port Rowan PS	School	48 College Avenue	Port Rowan	NOE 1M0	22,998	80	0	79,723.30	287,555.56		367,277.78	15.97	54.3	2.36
Prince Charles PS	School	40 Morton Ave	Brantford	N3R 2N5	29,641	80	0	127,351.50	216,583.33		343,916.67	11.60	42.8	1.44
Princess Elizabeth PS	School	60 Tecumseh St	Brantford	N3S 2B5	26,696	80	0	94,676.40	376,000.00		470,666.67	17.63	70.7	2.65

Property Name	Operation Type	Address	City	Postal Code	Gross Floor Area (ft²)	Weekly Operating Hours	Number of Portables	Electricity (kWh)	Natural Gas (ekWh)	Propane (ekWh)	Site Energy Use (kWh)	Site Energy Use Intensity (kWh/ft²)	Site GHG Emissions (Metric Tons CO2e)	Site GHG Emissions Intensity (kgCO2e/ft²)
Rainham Central School	School	RR 1 572 Concession 5	Fisherville	N0A 1G0	24,859	80	2	115,391.10	241,111.11		356,500.00	14.34	46.9	1.89
River Heights School	School	37 Forfar St.	Caledonia	N3W 1L6	58,496	80	0	214,685.20	517,000.00		731,666.67	12.51	99.6	1.70
Russell Reid PS	School	43 Cambridge Dr.	Brantford	N3R 5E3	29,105	80	0	119,336.40	272,500.00		391,833.33	13.46	52.7	1.81
Seneca Central PS	School	2767 Reg Rd #9	York	N0A 1R0	17,605	80	1	77,289.90	189,972.22		267,250.00	15.18	36.5	2.07
Simcoe Comp Secondary	School	40 Wilson Ave	Simcoe	N3Y 2E5	160,657	80	0	676,354.00	1,774,583.33		2,450,888.89	15.26	340.1	2.12
St George-German PS	School	3 College Street	St. George	N0E 1N0	42,673	80	0	249,492.00	592,472.22		841,944.44	19.73	114.2	2.68
Teacher Resource Centre	Office	108 Tollgate Rd	Brantford	N3R 4Z6	19,623	80	0	299,602.90	119,500.00		419,083.33	21.36	30	1.53
Teeterville PS	School	229 Teeter St. PO Box 1	Teeterville	N0E 1S0	21,394	80	0	124,678.90	272,055.56		396,722.22	18.54	52.7	2.46
Thompson Creek ES	School	800 Cross St W	Dunnville	N1A 1N7	51,259	80	0	168,705.80	384,888.89		553,583.33	10.80	74.4	1.45
Tollgate Technological Skills Centre	School	112 Tollgate Rd	Brantford	N3R 4Z6	97,190	80	3	579,409.30	1,643,750.00		2,223,138.89	22.87	313.7	3.23
Valley Heights SS	School	2561 #59 Highway	Langton	N0E 1G0	110,656	80	0	561,971.70	1,705,583.33		2,267,527.78	20.49	324.4	2.93
Walpole North ES	School	1895 Regional Rd. #55, R.R. #5	Hagersville	N0A 1H0	20,655	80	1	87,468.80	234,472.22		321,944.44	15.59	44.9	2.17
Walsh PS	School	933 St. John's Road West, RR#2	Simcoe	N3Y 4K1	36,653	80	2	148,266.50	228,750.00		377,027.78	10.29	45.6	1.24
Waterford DHS	School	227 Main St., South	Waterford	N0E 1Y0	125,404	80	0	460,353.90	1,379,916.67		1,840,250.00	14.67	262.7	2.09
Waterford PS	School	100 East Church St	Waterford	N0E 1Y0	28,444	80	7	208,728.00	263,277.78		472,000.00	16.59	53.5	1.88
West Lynn PS	School	18 Parker Dr	Simcoe	N3Y 1A1	29,041	80	0	121,835.40	335,333.33		457,166.67	15.74	64.1	2.21
Woodman Cainsville School	School	51 Woodman Dr	Brantford	N3S 4K3	30,199	80	9	214,734.00	209,777.78		424,527.78	14.06	44	1.46

Disclaimer:

- The Ministry's new reporting template has transitioned from reporting data in kilowatt hours for electricity (kWh), cubic meters for natural gas (m³), and liters for Propane (L), to Gigajoules (GJ) for all energy types. Conversion from GJ for both Natural Gas and Propane were completed using the conversion factors included in Energy Star Portfolio Manager's "Thermal Energy Conversions – Technical Reference".
- While efforts were made to provide the most accurate data possible, due to the issues with meter reads from our primary natural gas service provider we cannot guarantee that the natural gas data for this period will remain unchanged in future reports