

JULY 2024

CITY OF KITCHENER

ENERGY CONSERVATION AND DEMAND MANAGEMENT PLAN

2024-2028



KITCHENER CITY HALL

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Executive summary

Ontario Regulation 25/23: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans requires Broader Public Sector (BPS) organizations to develop, and update every five years, an Energy Conservation and Demand Management (ECDM) plan intended to reduce energy consumption and greenhouse gas emissions. This plan was developed in compliance with the regulation and covers the period from 2024 to 2028. This is an update to the plan developed under the Ontario Regulations 508/18 for the period 2019 to 2023.

Over the 2019-2023 period, energy management initiatives achieved the following results:

- 1,569,646 kWh reduction in electricity use
- 80,910 m³ reduction in natural gas use
- 209 tonnes reduction in CO₂e emissions.

The City of Kitchener is committed to energy management and environmental stewardship and has developed policies, plans and initiatives to support this focus.

In April 2024, City of Kitchener Council endorsed an updated Corporate Climate Action Plan 2.0 Pivot: NetZero (CorCAP), which includes both adaptation and mitigation strategies to reduce greenhouse gas emissions and the risks associated with climate change. Actions identified in the Energy Conservation Demand Management plan (ECDM) are intended to reduce energy consumption and are consistent with the strategies of the CorCAP.

An absolute reduction target of 8% by 2026 from 2016 levels has been set for all corporate operations and remains in effect. Between 2016 and 2023, GHG emissions were reduced from 11,515 tCO₂e to 10,947 tCO₂e. On April 29, 2024, Council approved a target of net-zero GHG emissions by 2050.

The ECDM plan identifies projects related to facilities, including pumping stations, and outdoor lighting. Corporate-wide processes and programs relevant to these operational areas are also outlined in this plan.

Context

Ontario Regulation 25/23: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans requires Broader Public Sector (BPS) organizations to develop an Energy Conservation and Demand Management (ECDM) plan and update it every five years. This City of Kitchener updated ECDM plan was developed in compliance with the regulation and covers the period from 2024 to 2028. The plan was approved by the Corporate Leadership Team on June 18, 2024.

This plan builds on the municipality's previous energy conservation and demand management efforts as outlined in past plans. To achieve sustained emissions and energy use reductions, integrating energy management and GHG emissions analysis into our capital planning, programing and operational decision-making is necessary. The City of Kitchener is committed to managing energy-related and climate

change costs and risks to provide organizational and community benefits and support other key strategic plans.

Hard copies of this ECDM plan are available upon request at the Kitchener City Hall located at 200 King Street W.

Energy Conservation Goals

The goal of this plan is to position the City of Kitchener with an energy management strategy that aligns with our municipal commitment to reduce levels of GHG emissions 8% from 2016 baseline levels by 2026 and moving toward our target of net-zero GHG emissions by 2050.

Our organization will strive to reduce energy consumption and manage demand to reduce energy costs and contribute to an efficient transition of the energy system. We are committed to creating new partnerships and working with other organizations to better manage energy use across our community and region.

Our organizational energy goals include:

1. **Energy conservation/efficiency** – use less energy/demand less energy and use energy more efficiently.
2. **Fuel switch** - shift to lower carbon energy sources, transition off fossil fuels.
3. **Generate renewable energy** – generate energy from renewable sources.

Our energy conservation and demand management objectives include:

- Effectively monitor and report on corporate energy use and GHG emissions.
- Enhance staff understanding of energy use and GHG emissions.
- Develop GHG reduction pathway studies on priority facilities.
- Implement building upgrades and energy efficiency retrofits to reduce facility energy usage and costs.
- Continue to align energy conservation work with our Corporate Climate Action Plan (CorCAP) 2.0 Pivot: Net-Zero to achieve greater outcomes.

Our targets towards achieving our goals and objectives include:

- Develop and implement a corporate green building standard for new construction and renovations of City facilities.
- Fuel switch HVAC equipment from fossil fuels to electricity as equipment is replaced.
- Integrate energy and GHG performance into project decision making process with energy modeling support.
- Develop a solar strategy for the generation of renewable energy.
- Develop and implement strategies for facilities (arenas, pools, acquisition, disposal.)
- Identify GHG reduction pathway for high priority facilities.
- Reduce corporate facility emissions by 8% from 2016 levels by 2026.
- Further emissions reductions to progress toward the corporate target of net-zero GHG emissions by 2050.

Energy Consumption and Greenhouse Gas Emissions

The City of Kitchener's most recent energy consumption submission for the 86 facilities and pumping stations is the 2023 calendar year.

In total, 29,835,664 kilowatt-hours (kWh) of electricity, 2,722,681 cubic metres (m³) of natural gas and 22.7 cubic metres (m³) of propane were consumed in 2023. This resulted in the production of 6,191 tonnes CO₂e of GHG emissions.

The previous ECDM plan reported data for the calendar year of 2017. The table below compares the energy and emissions changes from 2017 to 2023.

In 2017, the ECDM tracked consumption at 65 facilities. The criteria for facility inclusion was updated during this past plan period; the 2023 portfolio tracks energy consumption of 86 facilities. For comparison purposes, the 2017 data was adjusted; adding data from the closest available year for all facilities both operational in 2017 and included in the 2023 facilities portfolio.

Facility Energy Use and GHG Emissions Change 2017-2023		
	Change in Emissions (%)	Change in Consumption (%)
Facilities - Electricity	43%	-5%
Facilities - Natural Gas	-10%	-11%
Total	-5%	-8%

Table 1 – Change in Facility Energy Use and GHG Emissions 2017 – 2023

Across the portfolio, emissions decreased by 5% from 2017 to 2023. Electrical emissions show an increase despite decreased consumption as the Ontario Grid emissions factor is particularly low for 2017. Since 2017, over the period of the previous ECDM plan, the City of Kitchener reduced overall energy consumption across all reporting organizational buildings by 8%.

This City of Kitchener uses 2016 as a baseline year for GHG emissions targets. Figure 1 below presents our corporate GHG emissions for 2021, 2022 and 2023 in comparison to our baseline year of 2016. The red dotted line indicates the target for 2026 – which is an 8% reduction from 2016. Comparing 2016 to 2023, we have seen an overall 5% reduction in GHG emissions. While this is a promising trend, it is unknown whether this will be sustained in the coming years, or if this is a result of both internal and external influences on energy consumption and therefore GHG emissions.

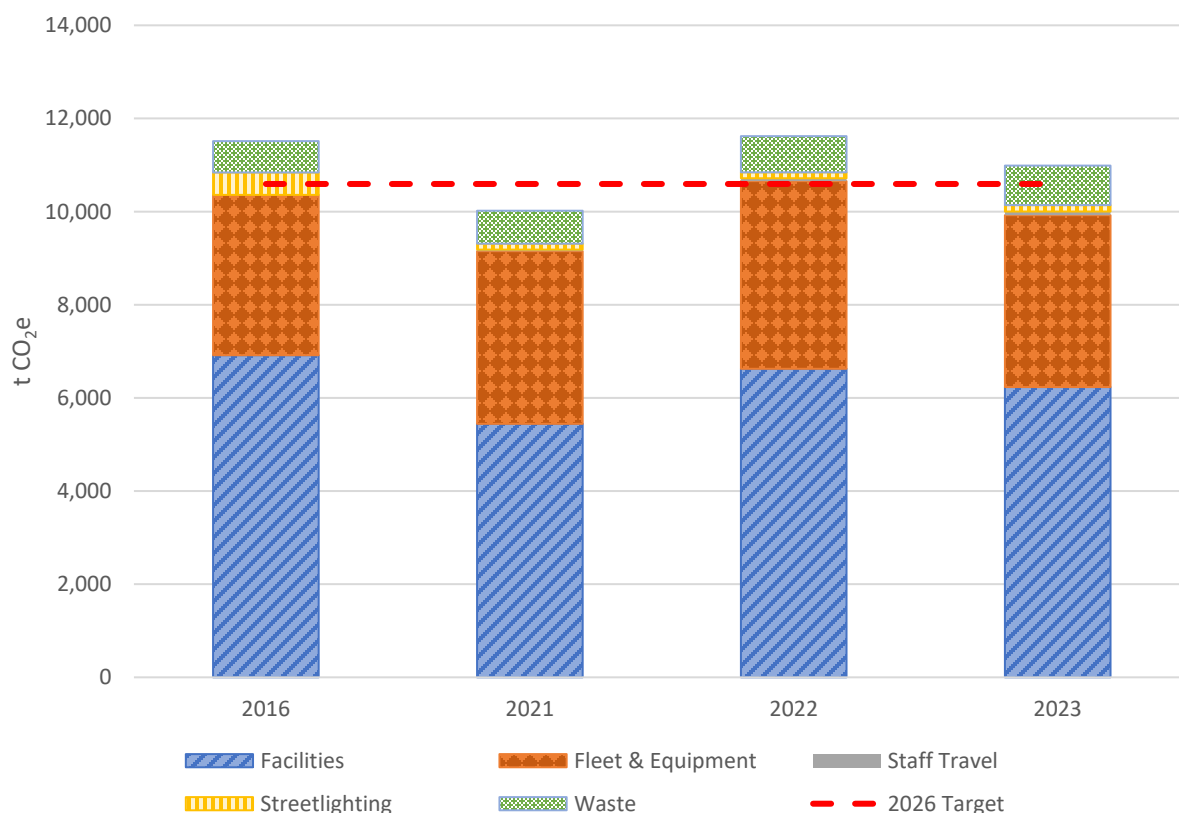


Figure 1 - Corporate GHG Emissions 2016 – 2023

Corporate GHG Emissions 2016 – 2023					
	2016 (tCO ₂ e)	2021 (tCO ₂ e)	2022 (tCO ₂ e)	2023 (tCO ₂ e)	2026 Target (tCO ₂ e)
Facilities	6916	5444	6627	6191	-
Fleet & Equipment	3442	3707	4027	3692	-
Staff Travel	-	33	62	76	-
Streetlighting	482	126	128	138	-
Waste	674	710	777	851	-
Total	11515	10021	11621	10947	10594

Table 2 - Corporate GHG Emissions 2016 – 2023

Annual energy reporting is required under the regulation and allows our municipality to understand how energy is used in our buildings, identify potential energy conservation opportunities, and track progress on energy conservation efforts. Appendix A includes the annual energy and emissions reporting for 2018 to 2023. This data is used to report on the achievements from the previous period and to inform the development of new actions identified.

Renewable energy

Solar Electricity Production

The Kitchener Operations Facility includes a 500-kilowatt photovoltaic solar system was installed on the roof. At the time of construction, this was the largest rooftop photovoltaic solar system in Canada, with 2,660 panels. The system came online in March 2011 and produced 497,397 kWh in 2011. The annual production for the last 5 years is shown in Table 3 below:

Solar Production 2019 – 2023	
Year	Production (kWh)
2019	627,903
2020	649,502
2021	632,306
2022	612,098
2023	615,126
Total System Life (2011-2023)	8,053,011

Table 3 – Solar Production 2019 – 2023

Kitchener Indoor Recreation Complex (KIRC)

The Kitchener Indoor Recreation Complex (KIRC), planned to begin construction in 2024 at RBJ Schlegel Park, will bring a new indoor pool and indoor turf facility, as well as other amenities, to our community.

The plans for KIRC include a geothermal heating and cooling system, as well as the City's largest array of solar panels. The solar array will reduce 22 tonnes of carbon annually and save close to \$100,000 in utility costs every year.

Solar Thermal

A solar wall was implemented at Forest Heights Pool and Library in 2022 providing solar pre-heating of ventilation air. This system reduces the use of natural gas for space heating and is expected to result a reduction of 13,390 m³ natural gas annually and 25.9 reduction in annual tonnes CO₂e .

Energy Conservation & Demand Management: Implemented and Planned Projects

City facilities contribute the largest portion of Corporate GHG emissions while providing vital programming space and services to the community. The portfolio includes arenas, pools, community centers, libraries, performance spaces, fire stations, office space, and maintenance facilities. Most of these facilities are over thirty years old (average age around 42 years) and entered service when GHG emissions were not a priority. Facilities, almost exclusively, use natural gas for space heating, domestic hot water needs, arena refrigeration, and pool heating. These have been the default design choice in our area as this has been the most economical choice. The consideration of GHG emissions during facility construction/refurbishment is a newer practice for both the City and the construction industry. The challenge is to bring the portfolio of facilities in line with the emissions reduction goals of the City of Kitchener.

This section provides reporting on implemented energy projects of City's portfolio of facilities during the 2019-2023 period and the planned actions for 2024-2028.

Implemented Energy Projects 2019-2023

Over the past five years, 41 projects, representing a capital investment of \$3.7 million, and approximately \$350,000 in savings have been completed in city facilities. Examples of projects include lighting upgrades to LED, improvement and automation of building controls, building envelope improvements, and HVAC upgrades including electrification. These projects achieved reductions of 80,910 m³ of natural gas, 1,569,646 kWh of electricity and 209 tonnes of CO₂e.

A complete list of facility energy projects can be found in Appendix B: Energy Management Projects 2019-2023

The greatest reductions were:

- 7% reduction (estimated) in natural gas consumption at the Forest Heights Pool and Library following the installation of a solar wall for ventilation air pre-heating.
- 64% reduction in energy use and a 57% reduction in GHG emissions at 91 Moore Ave following envelope upgrades and HVAC replacements.

Planned Actions Energy Conservation & Demand Management: 2024-2028.

The table below details energy conservation and demand management projects planned over the next five years. These projects have been identified as part of the city's updated corporate climate action plan. This second-generation corporate climate action plan sets out to achieve the same 8% target previously endorsed, along with making a much deeper commitment to being net-zero by 2050. The magnitude in shift from an 8% reduction target to net-zero target is significant. Realizing sustained GHG reductions and indeed a net-zero future does not rest solely on a suite of individual, one-off projects. Kitchener will need to make significant capital investments, strategic, systemic, and deeply integrated changes to corporate processes, business planning and policies in conjunction with the willingness to adopt and integrate promising new solutions as they become available. These planned actions seek to position the organization to make progress on this net-zero goal.

Table 3 – Planned Energy Conservation & Demand Management Projects: 2024-2028

Planned Energy Conservation & Demand Management Projects: 2024-2028			
No	Planned Action	Description	Target Completion Date
1	Design and Implement a Corporate Energy Management Program	Improved energy management and energy performance in facilities will be monitored and communicated to enable data informed decision making across the organization.	2027

2	Build out the corporate energy management system of practices and team	Successful energy management requires vertical and horizontal involvement and commitment across an organization. Every level of the organization is responsible and can be accountable for ensuring continuous improvement and ongoing effectiveness of the energy management program. Staff are exploring ways to formalize and standardize our energy management practices.	2027
3	Assess NRCAN 50001 Ready Navigator	Natural Resources Canada's 50001 Ready Navigator Canada is a free, on-line program provides step-by-step guidance on implementing an energy management system and building a culture of structured energy improvement. Staff are exploring this program which is anticipated to lead to deeper and sustained savings without requiring external audits or certifications.	2024
4	Develop Energy Management Policy	To support the integration of best energy management practice and integrating data into decision making an energy management policy is proposed. This policy is intended to formally define the energy data collected, targets and objectives for energy use, and provide direction on data driven energy decision making.	2027
5	Establish an Energy Management Monitoring System	Improve collection and storage of facilities utility data. In this way all energy consumption across the organization can be brought together, monitored, and analyzed to support more integrated and informed decision making across the organization	2024
6	Establish a Facilities Energy Management Technical Advisory Committee	The committee seeks to provide a forum for feedback between facilities design and operations/maintenance groups, provide input and idea on projects and operations The goal is to reduce the GHG emissions of City facilities with cost effective, effective, safe, practical, and maintainable technologies.	2024
7	Develop a Corporate Green Building Standard	Set specific targets for energy efficiency and sustainability goals to ensure new projects and renovations are contributing to corporate GHG emissions reduction goals.	2025
8	Facilities GHG reduction pathway for a suite of high priority facilities	A suite of City of Kitchener's highest GHG emitting facilities (across the portfolio of Kitchener Arenas, Administrative Buildings and Pools) will be grouped together to identify a strategic sequence of GHG reduction measures called "the GHG reduction pathway". The goal is the development of a long-	2025

		range capital asset management plan for each facility to achieve GHG reductions. It is anticipated that the recommended measures will be replicable to other City facilities within the same facility type across the facilities' portfolio.	
9	Develop an Arenas Strategy	This strategy development is intended to inform and guide integrated and informed strategic action in Kitchener's existing arenas. Energy, asset management, community service delivery needs, and programming will be integrated into this strategy.	2025
10	Develop a Pools Strategy	This strategy development is intended to inform and guide integrated and informed strategic action in Kitchener's existing pools. Energy, asset management, community service delivery needs, and programming will be integrated into this strategy.	2026
11	Develop a Facilities Acquisition Strategy	An important consideration in the development of facilities GHG reductions asset management planning, existing buildings can prove extremely challenging/costly to retrofit. This can also be the case when adjusting to meet better understood community needs, accessibility requirements, and new legislation for example. As part of a more strategic, integrated, and coordinated assessment of our facilities, the development of a Facility Acquisition Policy, and a Facility Disposal and Decommissioning Policy is recommended. This will enable the prioritization of investment in the facilities which best meet City priorities and programming needs.	2027
12	Develop a Facilities Disposal & Decommissioning Strategy		2027
13	Develop a Corporate Solar Strategy	The solar strategy will include a high-level scan of City facilities to identify and rank the best Kitchener facilities and locations (e.g. roof mount, ground mount, over-parking canopy) to deploy solar panels. The highest ranked locations would then receive further design and investigative work. The end product will identify the best projects for the City to pursue, well defined, costed and ready for implementation. Locations at other facilities would be ranked to provide a roadmap for future implementation.	2025
14	Monitor and assess expanding Ice Resurfacing Pilot	A pilot program is currently underway exploring the use of mechanical de-aeration for ice resurfacing water. This has the potential to significantly reduce the GHG emissions of arenas as the use of cooler	2025

		water for resurfacings saves energy by reducing the amount of water heating needed and a reduced load on the refrigeration plant. Currently, this is being trialed at one location. If the pilot is successful, this will be implemented at other arenas.	
15	Continue to monitor and assess expanding HVAC Fuel Switching	Several facilities throughout the City are undergoing a conversion of their Heating, Ventilation and Air Conditioning (HVAC) systems from natural gas to heat pump systems. These replacements are made when equipment is scheduled to be replaced. Fire Headquarters and Forest Height Community Centre are locations where conversions are underway. These facilities will serve as pilot projects to explore the installation costs, maintenance requirements and any challenges to conversion.	2024 and on-going

Conclusion

These planned actions position the City of Kitchener to conserve energy and reduce GHG emissions at City facilities. These actions are part of an organizational pivot in the direction of net-zero GHG emissions. Reporting on these actions will be included in the next Energy Conservation and Demand Management plan published July 1, 2029. Annual Energy Consumption and Greenhouse Gas Emissions reporting is available on the City of Kitchener website (kitchener.ca) in the Energy Management section.

Across the entire organization, we will strategically advance actions that enable the City of Kitchener to be more energy efficient, fuel switch and generate renewable energy while working towards a net-zero future for our organization.

Appendix A: Annual Energy and GHG Emissions Reporting Tables

Table – Energy and GHG Emissions Report 2023

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
2 KING ST W	2 KING ST W	994	7067	151446	41.7	42
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	13281	311279	79.2	22
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1427	17523	8.1	28.5
91 MOORE AVE	91 MOORE AVE	1297	2444	95189	15.6	12.1
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	36717	2624777	268.3	26.1
BREITHAUP CENTRE POOL	350 MARGARET	4060	53648	506643	298.8	73.6
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2168	50257	12.9	24.3
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	66905	1.9	3.4
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	12052	191778	69.3	30.2
CAMERON HEIGHTS POOL	301 CHARLES ST E	10454	10650	163326	61.1	203.5
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	56954	1701812	349.8	26.4
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	3425	74351	20.2	27.1
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	3318	78495	19.8	22.3
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	0	303896	8.5	8.2

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	0	198187	5.5	0.4
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	7291	150698	42.9	19.2
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	7059	81628	39.7	27.6
DON MCLAREN ARENA	61 GREEN	2592	9398	414818	61.5	23.7
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	5104	118865	30.4	14.9
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	7555	226917	46.4	42.8
DOWNTOWN COMMUNITY CENTRE	35 WEBER ST W	3389	9523	248713	57.5	17
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	18366	3004	322128	25.0	43.7
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	14162	200835	80.7	41.1
FIRE STATION 1	270 STRASBURG	3084	26230	459909	152.0	49.3
FIRE STATION 2	187 LANCASTER W	648	6749	83579	38.1	58.9
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	5874	89099	33.7	45.1
FIRE STATION 4	25 FAIRWAY N	648	4363	69059	25.1	38.7
FIRE STATION 6	149 PIONEER	646	5008	54692	28.1	43.5
FIRE STATION 7	1440 HURON	648	6151	79772	34.9	53.8
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2685	68245	596810	378.7	141
GRAND RIVER ARENA	555 HERITAGE	2688	10763	559288	72.8	27.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	40372	567955	230.1	101.3
GYMNASTICS/JUDO CENTRE	805 VICTORIA ST S	2455	10559	105275	59.0	24
HARRY CLASS POOL	45 WOODSIDE AVE	388	381	65642	3.9	9.9
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	15920	53074	85.9	375.3
HOMER WATSON HOUSE AND GALLERY	1754 OLD MILL RD	681	3243	31804	18.1	26.6
HURON NATURAL AREA COMFORT STATION	801 TRILLIUM DR	150	0	19931	0.6	3.7
IDLEWOOD POOL	5 THALER AVE	219	3520	14858	19.1	87.2
KINGSDALE COMMUNITY CENTRE	72 WILSON	1886	5682	148330	34.3	18.2
KITCHENER CITY HALL	200 KING W	20130	98520	3497792	620.5	30.8
KITCHENER MARKET	300 KING E	7123	42217	943379	250.4	35.1
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	16489	1341293	125.0	12.2
KIWANIS PARK POOL PUMP HOUSE & CHANGE ROOMS	1000 KIWANIS PARK DR	353	0	139555	3.9	11.1
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	113976	2590588	677.1	23.5
LIONS ARENA	20 RITTENHOUSE	2954	13126	501428	83.7	28.3
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	884	4753	110836	28.3	32
PUMPING STATION 02 NATHALIE	20 NATHALIE ST	119	0	72702	2.0	17.1
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	37319	1.0	20.1
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	2829	0.1	79

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	8594	0.2	239.8
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	34357	1.0	30.1
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	73	65609	2.2	20.6
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	226597	6.3	26.8
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	82848	2.3	154.6
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	80658	2.3	33.2
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	129840	3.6	36.7
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	109417	3.1	42.6
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	16850	0.5	9.4
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	45303	1.3	32.5
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	267850	7.5	25.3
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	23927	0.7	11.8
PUMPING STATION 18 KING	3563 KING ST E	760	0	305361	8.6	11.3
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	22200	0.6	6.2
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	42972	1.2	16.9
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	22898	0.6	12.6

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 21 OLD MILL 2	1801 OLD MILL RD	100	0	65335	1.8	18.3
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	137316	3.8	41.3
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	20163	0.6	22.6
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	106770	3.0	22.3
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	9840	235567	58.8	22.9
ROCKWAY CENTRE	1405 KING E	1537	4317	129230	26.5	17.3
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	8970	160337	52.1	37.1
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	52042	1475236	317.4	42.8
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	5618	151267	34.0	19.1
THE AUD	400 EAST	28588	118518	4282957	748.6	26.2
THE BOATHOUSE	57 JUBILEE DR	287	1077	17893	6.2	21.6
THE REGISTRY THEATRE	122 FREDERICK	823	3543	38432	19.9	24.1
THEMUSEUM	10 KING ST W	5340	3428	565241	34.0	6.4
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	7296	161192	43.2	28.4
VICTORIA PARK COMFORT STATION JUBILEE	40 JUBILEE DR	98	441	25555	3.1	31.2
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	681	16163	4.1	11.5
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	3464	66104	20.2	16.8

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2023

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tonnes CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
WILLIAMSBURG CEMETERY: OFFICE & MAINT. AND DEDICATION CENTRE & CREMATORIUM	1187 FISCHER HALLMAN RD	601	0	60229	36.8	61.2
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	396	33157	3.0	11
WILSON POOL	78 WILSON AVE	189	2525	24645	14.1	74.5
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1126	40331	7.1	78

Table – Energy and GHG Emissions Report 2022

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
2 KING ST W	2 KING ST W	994	4524	120275	27.4	27.5
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	15618	311837	91.6	25.4
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1741	15544	9.7	34.2
91 MOORE AVE	91 MOORE AVE	1297	2828	103806	17.9	13.8
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	44891	2272188	301.8	29.3
BREITHAUP CENTRE POOL	350 MARGARET	4060	55283	450941	305.9	75.3
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2340	54239	13.9	26.2
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	65602	1.8	3.4
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	14179	182570	80.3	35.0
CAMERON HEIGHTS POOL	301 CHARLES ST E	1291	14301	74686	78.0	60.4
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	61165	1550888	367.9	27.8
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	3623	67756	21.1	28.3
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	3538	78283	21.0	23.6
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	0	392390	11.0	10.5
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	0	186312	5.2	5.0
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	7661	151879	44.9	20.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	8104	76190	45.1	31.4
DON MCLAREN ARENA	61 GREEN	2592	11070	358277	68.8	26.5
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	6148	109433	35.7	17.5
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	8935	241124	54.2	49.9
DOWNTOWN COMMUNITY CENTRE	35 WEBER ST W	3484	11139	251906	66.1	19.0
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	1020	3021	338823	25.5	25.0
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	14748	197915	83.8	42.6
FIRE STATION 1	270 STRASBURG	3084	26917	490405	156.5	50.8
FIRE STATION 2	187 LANCASTER W	648	7564	79439	42.3	65.4
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	7556	90830	42.6	57.1
FIRE STATION 4	25 FAIRWAY N	648	4922	69143	28.0	43.3
FIRE STATION 6	149 PIONEER	646	5544	55513	31.0	47.9
FIRE STATION 7	1440 HURON	648	6573	80652	37.1	57.3
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2686	76259	568935	420.5	156.5
GRAND RIVER ARENA	555 HERITAGE	2688	10852	475751	70.9	26.4
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	44406	545711	250.9	110.5
GYMNASTICS/JUDO CENTRE	805 VICTORIA ST S	2594	11361	124617	63.8	24.6

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
HARRY CLASS POOL	45 WOODSIDE AVE	388	362	72423	4.0	10.2
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	12909	53229	70.0	305.6
HOMER WATSON HOUSE AND GALLERY	1754 OLD MILL RD	661	4162	44235	23.3	35.3
HURON NATURAL AREA COMFORT STATION	801 TRILLIUM DR	150	0	18632	0.5	3.5
IDLEWOOD POOL	5 THALER AVE	219	3646	15900	19.8	90.4
KINGSDALE COMMUNITY CENTRE	72 WILSON	1536	6288	140959	37.3	24.3
KITCHENER CITY HALL	200 KING W	20130	105822	3440543	657.7	32.7
KITCHENER MARKET	300 KING E	7123	42631	958985	253.0	35.5
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	19693	1370536	142.8	13.9
KIWANIS PARK POOL PUMP HOUSE & CHANGE ROOMS	1000 KIWANIS PARK DR	351	0	107976	3.0	8.6
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	155597	2647234	899.6	31.2
LIONS ARENA	20 RITTENHOUSE	2954	11292	468026	73.0	24.7
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	929	5120	106012	30.1	32.4
PUMPING STATION 01 BLEAMS	1525 BLEAMS RD	54	0	826	0.0	0.4
PUMPING STATION 02 NATHALIE	20 NATHALIE ST	140	0	48891	1.4	9.8
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	35856	1.0	19.3
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	3065	0.1	85.8
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	8205	0.2	229.7

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	41040	1.1	35.9
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	255	61235	3.1	28.4
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	232206	6.5	27.4
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	32777	0.9	61.2
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	83044	2.3	34.2
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	121422	3.4	34.3
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	100449	2.8	39.1
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	17903	0.5	10.0
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	56598	1.6	40.6
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	259350	7.3	24.5
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	26397	0.7	13.0
PUMPING STATION 18 KING	3563 KING ST E	760	0	306522	8.6	11.3
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	26856	0.8	7.5
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	42277	1.2	16.7
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	32766	0.9	18.0
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	129485	3.6	39.0

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	17178	0.5	19.2
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	110089	3.1	23.0
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	7966	182457	47.4	18.4
ROCKWAY CENTRE	1405 KING E	1537	4184	102067	25.1	16.3
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	9302	168763	54.1	38.5
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	55415	1621192	339.4	45.8
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	5361	138234	32.3	18.1
THE AUD	400 EAST	28588	116988	3939755	730.9	25.6
THE BOATHOUSE	57 JUBILEE DR	287	1129	8853	6.2	21.7
THE REGISTRY THEATRE	122 FREDERICK	823	4907	30144	26.9	32.7
THEMUSEUM	10 KING ST W	5340	2473	610627	30.2	5.7
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	8002	163613	47.0	30.9
VICTORIA PARK COMFORT STATION JUBILEE	40 JUBILEE DR	98	560	26499	3.7	37.9
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	719	19065	4.3	12.4
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	3553	75135	21.0	17.4
WILLIAMSBURG CEMETERY: OFFICE & MAINT. AND DEDICATION CENTRE & CREMATORIUM	1187 FISCHER HALLMAN RD	603	0	54157	40.5	67.1
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	561	30942	3.8	14.0

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2022

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
WILSON POOL	78 WILSON AVE	189	3317	23604	18.3	96.6
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1214	43379	7.7	84.1

Table – Energy and GHG Emissions Report 2021

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2021

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	15444	294417	90.2	25.0
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1573	11220	8.7	30.6
91 MOORE AVE	91 MOORE AVE	1297	4630	96823	27.3	21.0
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	44160	2235275	296.9	28.9
BREITHAUP CENTRE POOL	350 MARGARET	4060	51384	340817	282.1	69.5
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2286	52741	13.6	25.6
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	56150	1.6	2.9
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	12283	152468	69.4	30.3
CAMERON HEIGHTS POOL	301 CHARLES ST E	1291	Not Available	Not Available	Not Available	Not Available
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	Not Available	1226725	34.3	Not Available
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	3321	53451	19.1	25.6
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	3548	68189	20.7	23.4
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	None	345017	9.7	9.3
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	None	192663	5.4	5.1
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	7166	104114	40.9	18.4
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	6172	55150	34.3	23.9

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2021

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
DON MCLAREN ARENA	61 GREEN	2592	5155	245282	34.2	13.2
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	5498	106783	32.2	15.8
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	6403	186080	39.2	36.1
DOWNTOWN COMMUNITY CENTRE	35 WEBER ST W	3484	Not Available	Not Available	Not Available	Not Available
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	1020	2857	333468	24.5	24.0
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	13340	169025	75.5	38.4
FIRE STATION 1	270 STRASBURG	3084	23100	510180	136.8	44.4
FIRE STATION 2	187 LANCASTER W	648	6011	73190	33.9	52.4
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	8065	95634	45.5	60.9
FIRE STATION 4	25 FAIRWAY N	648	4429	68698	25.4	39.2
FIRE STATION 6	149 PIONEER	646	4984	63639	28.2	43.7
FIRE STATION 7	1440 HURON	648	7183	83026	40.4	62.4
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2686	56460	517566	314.0	116.9
GRAND RIVER ARENA	555 HERITAGE	2688	9644	322369	60.2	22.4
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	44513	494752	250.0	110.1
GYMNASTICS/JUDO CENTRE	805 VICTORIA ST S	2594	Not Available	Not Available	Not Available	Not Available
HARRY CLASS POOL	45 WOODSIDE AVE	388	53	51523	1.7	4.4

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2021

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	15095	0	80.1	349.7
IDLEWOOD POOL	5 THALER AVE	219	3637	16670	19.8	90.2
KINGSDALE COMMUNITY CENTRE	72 WILSON	1536	5074	121399	30.3	19.7
KITCHENER CITY HALL	200 KING W	20130	101794	3481335	637.5	31.7
KITCHENER MARKET	300 KING E	7123	32303	907761	196.8	27.6
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	15922	1338896	122.0	11.9
KIWANIS PARK POOL PUMP HOUSE & CHANGE ROOMS	1000 KIWANIS PARK DR	351	None	169522	4.7	13.5
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	102560	3121710	631.5	21.9
LIONS ARENA	20 RITTENHOUSE	2954	5864	338780	40.6	13.7
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	929	4808	94829	28.2	30.3
PUMPING STATION 01 BLEAMS	1525 BLEAMS RD	54	0	19702	0.6	10.2
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	35268	1.0	19.0
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	2900	0.1	81.2
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	8520	0.2	238.6
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	26258	0.7	23.0
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	43	61569	2.0	18.1
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	218288	6.1	25.8

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2021

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	32798	0.9	61.2
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	66006	1.8	27.2
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	119057	3.3	33.7
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	100431	2.8	39.1
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	17866	0.5	10.0
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	53417	1.5	38.4
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	267277	7.5	25.2
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	27393	0.8	13.5
PUMPING STATION 18 KING	3563 KING ST E	760	0	319986	9.0	11.8
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	25684	0.7	7.2
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	42555	1.2	16.8
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	29378	0.8	16.1
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	126380	3.5	38.0
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	15423	0.4	17.3
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	129015	3.6	27.0
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	6199	114431	36.1	14.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2021

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
ROCKWAY CENTRE	1405 KING E	1537	3650	71784	21.4	13.9
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	7992	136883	46.2	32.9
SDG IDEA FACTORY	2 KING ST W	994	83	94953	3.1	3.1
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	44481	1231168	270.4	36.5
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	4410	95306	26.1	14.6
THE AUD	400 EAST	28588	98139	3233159	611.2	21.4
THE BOATHOUSE	57 JUBILEE DR	287	997	12520	5.6	19.7
THE REGISTRY THEATRE	122 FREDERICK	823	4622	17086	25.0	30.4
THEMUSEUM	10 KING ST W	4546	3514	Not Available	18.6	Not Available
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	7881	141378	45.8	30.1
VICTORIA PARK COMFORT STATION JUBILEE	40 JUBILEE DR	98	535	24060	3.5	35.8
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	3013	13373	16.4	46.5
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	669	62698	5.3	4.4
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	637	26094	4.1	15.0
WILSON POOL	78 WILSON AVE	189	3059	21906	16.8	89.1
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1154	38740	7.2	79.2

Table – Energy and GHG Emissions Report 2020

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Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	18031	278606	103.5	28.7
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1454	11110	8.0	28.4
91 MOORE AVE	91 MOORE AVE	1297	5528	114354	32.5	25.1
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	33824	1865549	231.7	22.5
BREITHAUPF CENTRE POOL	350 MARGARET	4060	47431	388262	262.5	64.7
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2187	44658	12.9	24.2
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	49626	1.4	2.5
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	11674	138893	65.8	28.7
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	Not Available	Not Available	Not Available	Not Available
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	2734	57295	16.1	21.6
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	4108	68353	23.7	26.7
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	0	319852	9.0	8.6
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	0	353310	9.9	9.4
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	8324	Not Available	Not Available	Not Available
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	6434	48944	35.5	24.7
DON MCLAREN ARENA	61 GREEN	2592	6783	185796	41.2	15.9

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2020

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	5848	134532	34.8	17.1
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	6503	215610	40.5	37.4
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	1020	2754	350373	24.4	23.9
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	12139	169997	69.2	35.2
FIRE STATION 1	270 STRASBURG	3084	24621	521798	145.2	47.1
FIRE STATION 2	187 LANCASTER W	648	7264	72933	40.6	62.6
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	9829	101251	55.0	73.7
FIRE STATION 4	25 FAIRWAY N	648	4296	67840	24.7	38.1
FIRE STATION 6	149 PIONEER	646	5523	70238	31.3	48.4
FIRE STATION 7	1440 HURON	648	8600	87443	48.1	74.2
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2686	49822	514876	278.7	103.8
GRAND RIVER ARENA	555 HERITAGE	2688	10151	349169	63.6	23.7
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	43745	465652	245.1	107.9
HARRY CLASS POOL	45 WOODSIDE AVE	388	41	64144	2.0	5.2
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	8965	0	47.6	207.7
IDLEWOOD POOL	5 THALER AVE	219	2254	13958	12.3	56.4
KINGSDALE COMMUNITY CENTRE	72 WILSON	1536	5982	97969	34.5	22.4

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2020

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
KITCHENER CITY HALL	200 KING W	20130	93841	3681407	600.9	29.9
KITCHENER MARKET	300 KING E	7123	31200	889993	190.4	26.7
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	Not Available	Not Available	Not Available	Not Available
KIWANIS PARK POOL PUMP HOUSE & CHANGE ROOMS	1000 KIWANIS PARK DR	351	Not Available	10763	Not Available	Not Available
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	127353	2862873	755.8	26.2
LIONS ARENA	20 RITTENHOUSE	2954	7152	300658	46.4	15.7
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	929	4982	95283	29.1	31.3
PUMPING STATION 01 BLEAMS	1525 BLEAMS RD	54	0	21611	0.6	11.2
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	37208	1.0	20.0
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	2819	0.1	78.9
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	10441	0.3	292.3
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	26385	0.7	23.1
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	0	68851	1.9	17.9
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	200630	5.6	23.7
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	36486	1.0	68.1
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	76002	2.1	31.3
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	120501	3.4	34.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2020

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	106300	3.0	41.3
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	19792	0.6	11.1
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	48022	1.3	34.5
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	280324	7.8	26.4
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	29142	0.8	14.3
PUMPING STATION 18 KING	3563 KING ST E	760	0	382755	10.7	14.1
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	26779	0.7	7.5
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	42848	1.2	16.9
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	30967	0.9	17.0
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	121768	3.4	36.7
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	15954	0.4	17.9
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	116015	3.2	24.2
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	9969	133741	56.6	22.1
ROCKWAY CENTRE	1405 KING E	1537	3618	103083	22.1	14.4
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	9631	166569	55.8	39.7
SDG IDEA FACTORY	2 KING ST W	994	Not Available	Not Available	Not Available	Not Available
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	Not Available	1241780	Not Available	Not Available

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2020

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	4703	87466	27.4	15.3
THE AUD	400 EAST	28588	91677	3032609	571.3	20.0
THE BOATHOUSE	57 JUBILEE DR	287	755	17703	4.5	15.7
THE REGISTRY THEATRE	122 FREDERICK	823	3693	16684	20.1	24.4
THEMUSEUM	10 KING ST W	4546	Not Available	Not Available	Not Available	Not Available
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	7675	115959	44.0	28.9
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	2986	16176	16.3	46.3
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	760	70284	6.0	5.0
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	608	25900	4.0	14.4
WILSON POOL	78 WILSON AVE	189	778	10872	4.4	23.4
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1142	42605	7.2	79.7

Table – Energy and GHG Emissions Report 2019

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2019

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	21161	365815	122.9	34.1
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1580	14963	8.8	31.2
91 MOORE AVE	91 MOORE AVE	1297	4964	130427	30.1	23.2
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	51251	2403833	341.6	33.2
BREITHAUPF CENTRE POOL	350 MARGARET	4060	58887	564748	328.8	81.0
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2503	52205	14.8	27.8
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	67790	2.0	3.6
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	13925	180927	79.1	34.5
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	Not Available	Not Available	Not Available	Not Available
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	3862	71244	22.6	30.2
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	4490	81709	26.2	29.5
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	0	394666	11.4	11.0
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	0	370758	10.8	10.2
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	Not Available	Not Available	Not Available	Not Available
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	8139	90803	45.8	31.9
DON MCLAREN ARENA	61 GREEN	2592	12486	452750	79.4	30.6

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2019

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	5528	92848	32.0	15.7
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	7956	249335	49.4	45.6
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	1020	3222	367280	27.7	27.2
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	13813	212520	79.4	40.4
FIRE STATION 1	270 STRASBURG	3084	34062	542770	196.4	63.7
FIRE STATION 2	187 LANCASTER W	648	7061	76840	39.7	61.2
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	10264	95988	57.2	76.7
FIRE STATION 4	25 FAIRWAY N	648	5065	69617	28.9	44.6
FIRE STATION 6	149 PIONEER	646	6503	77032	36.7	56.9
FIRE STATION 7	1440 HURON	648	6908	90712	39.3	60.6
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2686	60989	561472	339.8	126.5
GRAND RIVER ARENA	555 HERITAGE	2688	15131	490127	94.5	35.2
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	51450	685253	292.8	128.9
HARRY CLASS POOL	45 WOODSIDE AVE	388	226	80255	3.5	9.1
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	12098	0	64.2	280.3
IDLEWOOD POOL	5 THALER AVE	219	Not Available	17013	Not Available	Not Available
KINGSDALE COMMUNITY CENTRE	72 WILSON	1536	7658	141670	44.7	29.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2019

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
KITCHENER CITY HALL	200 KING W	20130	108132	4113514	692.9	34.4
KITCHENER MARKET	300 KING E	7123	42060	1159914	256.8	36.0
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	108132	Not Available	Not Available	Not Available
KIWANIS PARK POOL PUMP HOUSE & CHANGE ROOMS	1000 KIWANIS PARK DR	351	0	130857	3.8	10.8
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	123572	2805073	736.9	25.5
LIONS ARENA	20 RITTENHOUSE	2954	14021	557788	90.6	30.7
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	929	5893	119972	34.7	37.4
PUMPING STATION 01 BLEAMS	1525 BLEAMS RD	54	0	22492	0.7	12.1
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	38424	1.1	21.4
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	2992	0.1	86.8
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	15049	0.4	436.4
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	30438	0.9	27.6
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	1	64518	1.9	17.4
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	193193	5.6	23.6
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	39242	1.1	75.9
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	76332	2.2	32.6
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	126731	3.7	37.1

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2019

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	111885	3.2	45.1
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	22316	0.6	12.9
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	51133	1.5	38.0
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	290614	8.4	28.4
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	31719	0.9	16.1
PUMPING STATION 18 KING	3563 KING ST E	760	0	394797	11.4	15.1
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	30512	0.9	8.8
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	44862	1.3	18.3
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	41320	1.2	23.5
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	116441	3.4	36.3
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	17334	0.5	20.1
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	116463	3.4	25.2
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	9256	216878	55.4	21.6
ROCKWAY CENTRE	1405 KING E	1537	4945	164539	31.0	20.2
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	12303	221105	71.7	51.0
SDG IDEA FACTORY	2 KING ST W	994	Not Available	Not Available	Not Available	Not Available
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	Not Available	1934484	Not Available	Not Available

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2019

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	5526	136169	33.3	18.6
THE AUD	400 EAST	28588	134284	4511238	843.2	29.5
THE BOATHOUSE	57 JUBILEE DR	287	Not Available	19030	Not Available	Not Available
THE REGISTRY THEATRE	122 FREDERICK	823	5096	32473	28.0	34.0
THEMUSEUM	10 KING ST W	4546	Not Available	Not Available	Not Available	Not Available
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	9728	165456	56.4	37.1
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	3950	17097	21.4	60.9
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	930	94990	7.7	6.4
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	509	32308	3.6	13.3
WILSON POOL	78 WILSON AVE	189	2383	21307	13.3	70.2
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1265	47155	8.1	88.7

Table – Energy and GHG Emissions Report 2018

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2018

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
44-50 GAUKEL STREET COMMERCIAL	44 GAUKEL	3603	23941	400218	139.0	38.6
79 JOSEPH STREET COMMERCIAL	79 JOSEPH ST	283	1660	14708	9.2	32.7
91 MOORE AVE	91 MOORE AVE	1297	Not Available	Not Available	Not Available	Not Available
ACTIVA SPORTSPLEX	135 LENNOX LEWIS	10283	55478	2555899	371.0	36.1
BREITHAUPF CENTRE POOL	350 MARGARET	4060	58399	564019	326.7	80.5
BRIDGEPORT CHILD CARE CENTRE	8 BRIDGE E	532	2603	44022	15.1	28.4
BRIDGEPORT COMMUNITY CENTRE	20 TYSON	545	0	75547	2.3	4.2
BUDD PARK SPORTS FACILITY	1111 HOMER WATSON	2295	12067	205633	70.2	30.6
CENTRE IN THE SQUARE	101 QUEEN ST N	13239	Not Available	Not Available	Not Available	Not Available
CENTREVILLE CHICOPEE COMMUNITY CENTRE	141 MORGAN	747	3969	64731	23.0	30.8
CHANDLER MOWAT COMMUNITY CENTRE	222 CHANDLER	887	4913	81314	28.5	32.1
CHARLES AND BENTON PARKING GARAGE	4 CHARLES E	1043	0	474707	14.2	13.7
CIVIC DISTRICT PARKING GARAGE	83 QUEEN ST N	1052	0	408311	12.2	11.6
CONRAD CENTRE FOR THE PERFORMING ARTS	36 KING ST W	2230	Not Available	Not Available	Not Available	Not Available
COUNTRY HILLS COMMUNITY CENTRE	100 RITTENHOUSE	1437	8087	88269	45.5	31.7
DON MCLAREN ARENA	61 GREEN	2592	12588	444921	80.1	30.9

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2018

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
DOON PIONEER PARK COMMUNITY CENTRE AND LIBRARY	150 PIONEER	2039	5165	98067	30.3	14.9
DOON VALLEY GOLF CLUB HOUSE	500 DOON VALLEY DR	1085	7718	265504	48.9	45.1
DUKE AND ONTARIO STREET PARKING GARAGE	33 ONTARIO N	18366	2985	357365	26.6	46.5
FIRE STATION #5 & FOREST HEIGHTS COMMUNITY CENTRE	1700 QUEENS	1965	14186	227127	82.1	41.8
FIRE STATION 1	270 STRASBURG	3084	22580	497387	134.7	43.7
FIRE STATION 2	187 LANCASTER W	648	6986	76695	39.4	60.7
FIRE STATION 3 AND AMBULANCE STATION	1035 OTTAWA N	746	9723	89656	54.3	72.7
FIRE STATION 4	25 FAIRWAY N	648	5521	72600	31.5	48.6
FIRE STATION 6	149 PIONEER	646	6586	77308	37.3	57.7
FIRE STATION 7	1440 HURON	648	6823	81296	38.6	59.6
FOREST HEIGHTS POOL AND LIBRARY	253 FISCHER HALLMAN RD	2685	64067	576569	357.1	133
GRAND RIVER ARENA	555 HERITAGE	2688	15159	498037	95.3	35.5
GRAND RIVER RECREATION COMPLEX	600 HERITAGE	2271	48301	682617	276.7	121.8
HARRY CLASS POOL	45 WOODSIDE AVE	388	193	91671	3.8	9.7
HARRY CLASS POOL PUMPHOUSE	20 HIGHLAND RD E	229	Not Available	Not Available	Not Available	Not Available
IDLEWOOD POOL	5 THALER AVE	219	Not Available	14592	Not Available	Not Available
KINGSDALE COMMUNITY CENTRE	72 WILSON	1886	6055	144765	36.5	19.3

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2018

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
KITCHENER CITY HALL	200 KING W	20130	106858	4276278	695.1	34.5
KITCHENER MARKET	300 KING E	7123	1175	1079234	38.6	5.4
KITCHENER PUBLIC LIBRARY	85 QUEEN ST N	10277	Not Available	408311	Not Available	Not Available
KIWANIS PARK PUMP HOUSE	1000 KIWANIS PARK DR	84	0	146303	4.4	12.4
KOF - KITCHENER OPERATIONS FACILITY	131 GOODRICH DRIVE	28874	161420	3064648	948.2	32.8
LIONS ARENA	20 RITTENHOUSE	2954	13145	542224	86.0	29.1
MILL COURTLAND COMMUNITY CENTRE	216 MILL ST	884	5818	122448	34.5	39.1
PUMPING STATION 01 BLEAMS	1525 BLEAMS RD	54	0	22475	0.7	12.5
PUMPING STATION 03 STOKE	166 STOKE DR	52	0	38635	1.2	22.3
PUMPING STATION 04 PATRICIA	164 PATRICIA AVE	1	0	2917	0.1	87.2
PUMPING STATION 05 MOORE	195 MOORE AVE	1	0	12826	0.4	383.5
PUMPING STATION 06 OXFORD	219 OXFORD ST	32	0	28137	0.8	26.4
PUMPING STATION 08 FALCONRIDGE	97 FALCONRIDGE DR	108	340	59878	3.6	33.3
PUMPING STATION 09 VICTORIA NORTH	2500 SHIRLEY DR	237	0	190635	5.7	24.1
PUMPING STATION 10 CARSON	230 CARSON DR	15	0	41919	1.3	83.8
PUMPING STATION 11 MANCHESTER	451 MANCHESTER RD	68	0	77741	2.3	34.3
PUMPING STATION 12 OTTERBEIN	500 OTTERBEIN RD	99	0	123755	3.7	37.5

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2018

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
PUMPING STATION 13 SPRINGMOUNT	227 SPRINGMOUNT PL	72	0	109083	3.3	45.5
PUMPING STATION 14 BANCROFT	30 BANCROFT ST	50	0	20409	0.6	12.2
PUMPING STATION 15 APPLE TREE	65 APPLE TREE DR	39	0	49172	1.5	37.8
PUMPING STATION 16 WOOLNER TRAIL	154 WOOLNER TRAIL	297	0	283155	8.5	28.6
PUMPING STATION 17 CHANDOS	155 CHANDOS DR	57	0	33012	1.0	17.4
PUMPING STATION 18 KING	3563 KING ST E	760	0	441004	13.2	17.4
PUMPING STATION 19 RIVER BIRCH	900 RIVER BIRCH CRT	100	0	25209	0.8	7.6
PUMPING STATION 20 PIONEER TOWER	625 PIONEER TOWER RD	71	0	45619	1.4	19.3
PUMPING STATION 21 OLD MILL	1810 OLD MILL RD	51	0	40623	1.2	23.9
PUMPING STATION 22 HOMER WATSON	2200 HOMER WATSON BLVD	93	0	109850	3.3	35.4
PUMPING STATION 23 CONESTOGA COLLEGE	43 CONESTOGA COLLEGE BLVD	25	0	17895	0.5	21.5
PUMPING STATION 24 NEW DUNDEE	640 NEW DUNDEE RD	134	0	105978	3.2	23.7
QUEENSMOUNT SPORTS BUILDING	1260 QUEENS BLVD	2568	13277	211107	76.8	29.9
ROCKWAY CENTRE	1405 KING E	1537	5593	167935	34.7	22.6
ROCKWAY GOLF CLUB HOUSE	625 ROCKWAY DR	1405	13656	233968	79.5	56.6
SDG IDEA FACTORY	2 KING ST W	994	Not Available	Not Available	Not Available	Not Available
SPORTSWORLD ARENA	35 SPORTSWORLD CROSSING RD	7417	Not Available	Not Available	Not Available	Not Available

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSION DATA - 2018

Property Name	Address	Gross Floor Area (m ²)	Natural Gas Use (therms)	Electricity Use - Grid Purchase (kWh)	Total (Location-Based) GHG Emissions (Metric Tons CO ₂ e)	Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/m ²)
STANLEY PARK COMMUNITY CENTRE	505 FRANKLIN ST N	1785	5196	132085	31.5	17.7
THE AUD	400 EAST	28588	150260	4855141	942.7	33
THE BOATHOUSE	57 JUBILEE DR	287	Not Available	19484	0.6	2
THE REGISTRY THEATRE	122 FREDERICK	823	4621	35829	25.6	31.1
THEMUSEUM	10 KING ST W	4546	Not Available	Not Available	Not Available	Not Available
VICTORIA HILLS COMMUNITY CENTRE	10 CHOPIN DR	1521	8305	160005	48.9	32.1
VICTORIA PARK MACHINE SHOP	35 DILL ST	352	916	18087	5.4	15.3
VICTORIA PARK PAVILION	80 SCHNEIDER AVE	1202	4119	100044	24.9	20.7
WILLIAMSBURG COMMUNITY CENTRE	1187 FISCHER HALLMAN RD	274	444	33130	3.3	12.2
WILSON POOL	78 WILSON AVE	189	2021	24643	11.5	60.6
WOODLAND CEMETERY OFFICE	119 ARLINGTON BLVD	91	1440	45940	9.0	99.1

Appendix B: Energy Management Projects 2019-2023

Energy Consumption & GHG Emissions Estimated Annual Impact							
Year	Project Description	Cost Savings (\$)	Natural Gas Reduction		Electricity Reduction		GHG Emissions Reduction
			(m3)	(Kg) CO2e	(kWh)	(Kg) CO2e	(Tonnes CO2e)
2019	Sportsworld Arena entire building LED Lighting	\$ 28,517	0	0	190,117	5,513	5.5
2019	Activa Sportsplex Parking Lot LED Lighting	\$ 3,502	0	0	9,465	274	0.3
2019	Fire Station 3 Parking Lot LED Lighting	\$ 635	0	0	4,231	123	0.1
2019	Grand River Recreation Complex Natatorium LED Lighting	\$ 11,399	0	0	75,994	2,204	2.2
2019	Breithaupt Centre Pool Gymnasium LED Lighting	\$ 1,325	0	0	8,835	256	0.3
2019	Fire Station 7 Parking lot and wall pack LED Lighting	\$ 1,144	0	0	7,625	221	0.2
2019	Charles and Benton Garage LED Lighting	\$ 15,366	0	0	102,438	2,971	3.0
2019	The AUD Parking Lot LED Lighting	\$ 29,719	0	0	198,125	5,746	5.7
2019	The AUD offices/boardrooms LED Lighting	\$ 55,443	0	0	369,619	10,719	10.7
2019	Queensmount Arena LED Lighting	\$ 4,924	0	0	32,826	952	1.0
2019	Kitchener Operations Facility Watering Mats for greenhouse	\$ -	0	0	0	0	8.0
2019	City Hall Pump VFDs installation	\$ -	0	0	0	0	0.0
2019	Kitchener Market LED retrofit	\$ 21,742	0	0	144,946	4,203	4.2
2020	Breithaupt Centre Pool common areas/wall packs and parking lot lights LED	\$ 15,526	0	0	103,510	2,898	2.9
2020	Centreville Chicopee Community Centre Interior and exterior LED lighting	\$ 1,357	0	0	9,048	253	0.3
2020	Grand River Arena LED interior exterior LED lighting	\$ 1,925	0	0	12,832	359	0.4
2020	Grand River Recreation Complex Parking lot (motion detection) LED lighting	\$ 1,408	0	0	9,389	263	0.3
2020	Forest Heights Community Centre Gymnasium	\$ 2,734	0	0	18,224	510	0.5
2020	Victoria Park LED lighting	\$ 6,290	0	0	41,933	1,174	1.2
2020	Civic District Parking Garage LED lighting	\$ 34,526	0	0	102,080	2,858	2.9
2021	Kitchener Operations Facility Shops and Stores LED Lighting	\$ 34,526	0	0	230,174	6,445	6.4

2021	The AUD VFD installs on AHU's 1 & 2	\$ 27,145	0	0	0	0	0.0
2021	Lions Arena, Don McLaren Arena, Doon Pioneer Community Centre HVAC controls	\$ 1,932	0	0	0	0	0.0
2021	Budd Park Soccer Parking lot (motion detected)	\$ 3,058	0	0	60,278	1,688	1.7
2021	Fire Station 6 LED retrofit (interior and exterior)	\$ 5,671	0	0	37,808	1,059	1.1
2021	Parking lots 14, 19A, 19B	\$ 3,130	0	0	7	0	0.0
2021	McLennan Park Roadway LED retrofit	\$ 2,838	0	0	0	0	0.0
2021	Doon Pioneer Community Centre Parking lot LED Lighting	\$ 2,634	0	0	0	0	0.0
2021	Morrison Park Trail LED retrofit	\$ 1,675	0	0	0	0	0.0
2021	Highland Courts Pathway LED retrofit	\$ 1,116	0	0	0	0	0.0
2021	91 Moore Ave Envelope improvements	\$ 3,836	6,227	12,032	32,137	900	12.9
2022	Forest Heights Pool Solar Wall	\$ 5,039	13,390	25,874	0	0	25.9
2022	Fire Station 1 LED conversion (Interior/exterior)	\$ 13,438	0	0	90,990	2,548	2.5
2022	Kitchener Operations Facility Salt Dome LED Lighting	\$ 10,494	0	0	69,960	1,959	2.0
2022	Huron Natural Area Parking lot LED	\$ 1,533	0	0	10,217	286	0.3
2022	Doon Valley Golf Club House Parking lot (motion detection added)	\$ 3,069	0	0	20,455	573	0.6
2022	City Hall Booster Pump	\$ 10,862	0	0	63,891	1,789	1.8
2023	Gymnastics/Judo Centre Exterior LED Lighting	\$ 1,788	0	0	11,917	358	0.4
2023	Stanley Park Community Centre LED Lighting	\$ 32	0	0	212	9	0.0
2023	Fire Station 1 HVAC Equipment Electrification	\$ (18,421)*	50,407*	97,404*	-241,150*	-10,369*	87.0*
2023	Forest Heights Community Centre HVAC Equipment Electrification	\$ (3,978)*	10,886*	21,036*	-52,080*	-2,239*	18.8*
Total	Total 2019-2023	\$348,898	80,910	156,346	1,598,969	38,541	210.8

*Preliminary estimate – project is not yet completed.