

ELECTRICITY ACT, 1998

ONTARIO REGULATION 507/18: BROADER PUBLIC SECTOR: ENERGY REPORTING AND CONSERVATION AND DEMAND MANAGEMENT PLANS

ENERGY CONSUMPTION AND GREENHOUSE GAS EMISSIONS REPORT

CITY OF THUNDER BAY

June 24, 2021

In 2018 the Ministry of Energy, Northern Development and Mines enacted, under the *Electricity Act, 1998*, Ontario Regulation 507/18: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans to help public agencies including municipalities, hospitals, and schools manage and reduce their energy consumption. Under this Regulation, public agencies are required to report on their annual energy consumption and greenhouse gas emissions for prescribed facilities. The regulation also requires the development and implementation of conservation and demand management (CDM) plans every five years starting in 2014.

The data reported in 2021 is for the 2019 calendar year (January 1, 2019 to December 31, 2019).

O. Reg 507/18 outlines the operations for which the municipality is required to report on its energy use and greenhouse gas emissions and prepare CDM plans. The list of prescribed operations for which the municipality must report are:

- Administrative offices and related facilities including municipal council chambers
- Public libraries
- Cultural facilities, indoor recreational facilities and community centres, including art galleries, performing arts facilities, auditoriums, indoor sports arenas, indoor ice rinks, indoor swimming pools, gyms and indoor courts for playing tennis, basketballs or other sports
- Ambulance stations and associated offices and facilities
- Fire stations and associated offices and facilities
- Police stations and associated offices and facilities
- Storage facilities where equipment or vehicles are maintained, repaired or stored
- Buildings/facilities or facilities related to the treatment or pumping of water or sewage
- Parking garages

The prescribed operations must also be conducted in a building/facility that the municipality owns or leases, and the municipality must be issued and be responsible for paying the utility invoice.

The City of Thunder Bay facilities and energy consumption portfolio also includes other operations that were not included in the prescribed list of required reporting. Facilities and operations that were not included are:

- Outdoor pools and operations
- Homes for the Aged

- Tourism facilities and signage
- Animal Services facilities
- Commercial facilities
- Seasonal parks
- Waterfront facilities
- Conservatory
- Cemeteries
- Golf facilities and operations
- Daycares
- Stadiums
- Parking lot lighting
- Streetlighting
- Flashing lights and traffic control lighting
- Other outdoor lighting

As a result, the energy consumption and greenhouse gas emissions reported through O. Reg 507/18 is not inclusive of all the operations and facilities within the City of Thunder Bay's energy consumption portfolio.

For more information on the City of Thunder Bay's energy consumption, the Energy Consumption and Greenhouse Gas Emissions report and energy management initiatives within City operations, please contact Vanessa DeGiacomo-Zwaresh at 807-684-2510 or email at vanessa.degiacomozwaresh@thunderbay.ca.

Energy Consumption and Greenhouse Gas Emissions Reporting - for 2019

January 2019 to December 2019 Municipality Municipal City of Thunder Bay Confirm consecutive 12-mth period (mth-yr to mth-yr) Sector Agency Sub-sector Organization Name

Operation Name	Operation Type	Address	City	Postal Code	Total Floor Area	Unit	Average hrs/wk	Annual Flow (ML)		lectricity Unit	Natural Gas (Natural Gas Unit	GHG Emissions (Kg)	Energy Intensity (ekWh/sqft)	Energy Intensity (ekWh/Mega Litre) Comments
Stephenson Building	Administrative offices and related facilities, including municipal council chambers	2160 Yonge Street	Toronto	M7A 2G5	135,034.0	O Square fee	nt 70	23516.00224	2,181,065.00000 kWh		125,300.00000 Cu	bic meter			max. 255 characters
Volunteer Pool and Community Centre	Indoor swimming pools	180 Martha St	Thunder Bay	P7A 8C1		0 Square fee		0.00000	435,430.00000 kWh		79,561.00000 Cu	ibic Meter	163,689.03314	58.92845	0.00000 Based on hours of operations
125 S Syndicate Ave (CIT) 55+ Centre	Administrative offices and related facilities, including municipal council chambers Indoor recreational facilities	125 Syndicate Ave S 700 River St	Thunder Bay Thunder Bay	P7E 6H8 P7A 3S6		0 Square fee 0 Square fee	et 60	0.00000	124,124.00000 kWh 341,197.00000 kWh		31,204.00000 Cu	his Makes	3,782.43065 69,392.42109	12.78443 29.90338	0.0000
Archives	Administrative offices and related facilities, including municipal council chambers	235 Vickers St N	Thunder Bay	P7C 6A4	22,500.0	O Square fee	et 76	0.00000	168.639.00000 kWh		35,449.00000 Cu		72.159.77277	24.79014	0.00000 based on hours of operations
Armstrong EMS 43	Ambulance stations and associated offices and facilities	6 Northern Dr	Armstrong	POT 1A0		O Square fee		0.00000	23,743.00000 kWh		30,1100000		723.52044	14.83938	0.00000
Armstrong EMS 46	Ambulance stations and associated offices and facilities	4 Northern Dr	Armstrong	POT 1A0	1,600.0	0 Square fee	et 168	0.00000	28,722.00000 kWh				875.24551	17.95125	0.00000
Armstrong EMS	Ambulance stations and associated offices and facilities	65 Queen Street, PO Box 6	Armstrong	P0T 1A0	2,218.0	0 Square fee	et 168	0.00000	26,226.00000 kWh				799.18490	11.82417	0.00000
Balmoral Police Station	Police stations and associated offices and facilities	1200 Balmoral St	Thunder Bay	P7B 5Z5		O Square fee		0.00000	1,414,797.00000 kWh		120,734.00000 Cu	ibic Meter	271,376.06920	41.18979	0.0000
Beardmore EMS Beck St EMS	Ambulance stations and associated offices and facilities Ambulance stations and associated offices and facilities	133 Main St 181 Beck St	Beardmore Thunder Bay	P0T 1G0	2,325.0	0 Square fee 0 Square fee	et 84	0.00000	35,481.00000 kWh 14,975.00000 kWh		4,773.00000 Cu	hic Meter	1,081.21251 9,480.29585	15.26065 22.74979	0.00000
Brodie St Library	Public libraries	216 Brodie St S	Thunder Bay	P7E 1C2	24 200 0	O Square fee	et 65	0.00000	289.033.00000 kWh		44,799,00000 Cu		93.505.90158	31.61764	0.00000 based on hours of operations
Brown Street EMS	Ambulance stations and associated offices and facilities	1321 Brown St	Thunder Bay	P7E 2M4	3,972.0	O Square fee	et 168	0.00000	25,152.00000 kWh		7,584.00000 Cu	ibic Meter	15,104.97206	26.62464	0.00000
Canada Games Complex	Indoor swimming pools	420 Winnipeg Ave	Thunder Bay	P7B 6B7	113,022.0	0 Square fee	et 112	0.00000	2,003,970.00000 kWh		507,305.00000 Cu		1,020,191.50805	65.43411	0.00000 based on hours of operations
Churchill Pool	Indoor swimming pools	130 Churchill Dr W	Thunder Bay	P7C 1V5		0 Square fee		0.00000	307,971.00000 kWh		54,747.00000 Cu		112,890.95665	80.78165	0.00000 based on hours of operations
City Hall Community Services Administration Building	Administrative offices and related facilities, including municipal council chambers Administrative offices and related facilities, including municipal council chambers	500 Donald St E 53 Water Street S	Thunder Bay Thunder Bay	P7E 5V3		O Square fee O Square fee		0.00000	649,585.00000 kWh 119.972.00000 kWh		100,874.00000 Cu 38,942.00000 Cu		210,509.91170 77,280.70339	39.57819 62.07429	0.0000
Conmee EMS	Ambulance stations and associated offices and facilities	Fire #5750 Hwy 11/17	Conmee	POT 1W0		O Square fee		0.00000	9.820.00000 kWh		38,942.00000 CC	ibic ivieter	299.24486	3.27333	0.0000
County Park Library	Public libraries	1020 Dawson Rd	Thunder Bay	P7B 1K6		0 Square fee		0.00000	39,394.00000 kWh		3,213.00000 Cu	ibic Meter	7,275.03791	17.84111	0.00000 based on hours of operations - transfer of natural gas invoices to library in 2018
Current River Arena	Indoor ice rinks	425 Grenville Ave	Thunder Bay	P7A 2B9	26,310.0	O Square fee	et 126	0.00000	401,037.60000 kWh		54,886.00000 Cu	ibic Meter	115,989.77231	37.41367	0.00000 October to April ice plant runs continuously to maintain ice quality
Current River Community Centre	Community centres	450 Dewe Ave	Thunder Bay	P7A 2G7		0 Square fee		0.00000	100,259.40000 kWh		8,545.00000 Cu		19,210.61241	23.73587	0.00000 includes office hours and regular programming hours
Delaney Arena	Indoor ice rinks	300 Legion Track Dr/200 Hyde Park Ave	Thunder Bay	P7E 1Y2	35,100.0	O Square fee	et 126	0.00000	713,978.00000 kWh		96,715.00000 Cu	ibic Meter	204,609.04190	49.62517	0.00000 October to April ice plant runs continuously to maintain ice quality
Fort William Gardens	Indoor ice rinks	901 Miles St F	Thunder Bay	P7C 1 I9	74.000.0	0 Square fee	at 126	0.00000	1.315.063.00000 kWh		217.948.00000 Cu	hic Meter	452,132.28820	49 07251	October to April ice plant runs continuously to maintain ice quality. Also houses offices for Arena 0.00000 administration Jan- Dec. Meter also feeds Curling club.
Frederica Fire Station	Fire stations and associated offices and facilities	1710 Frederica St W	Thunder Bay	P7E 0A8		O Square fee		0.00000	85.712.00000 kWh		12.896.00000 Cu		26.993.42757	43.25589	0.00000 administration sair Sec. weter also reeds curing club.
Front and Egan Administration Building and Garage	Storage facilities where equipment or vehicles are maintained, repaired or stored	155 Front St	Thunder Bay	P7A 2P3	39,010.0	O Square fee	et 60	0.00000	281,407.00000 kWh		135,355.00000 Cu	bic Meter	264,481.13310	44.08946	0.00000
Front and Egan AfterHours& Stores & Washbay	Storage facilities where equipment or vehicles are maintained, repaired or stored	155 Front St	Thunder Bay	P7A 2P3	4,000.0	O Square fee	et 168	0.00000	41,530.00000 kWh		11,395.00000 Cu		22,809.23836	40.65838	0.00000
Geraldton EMS	Ambulance stations and associated offices and facilities	815 Main St, Box 1350	Geraldton	POT 1M0	3,961.0	0 Square fee	et 140	0.00000	31,330.00000 kWh		7,706.00000 Cu	ibic Meter	15,523.89075	28.58562	0.00000
Grandview Arena	Indoor ice rinks	300 Madeline St	Thunder Bay	P7A 5Y9		O Square fee		0.00000	270,247.00000 kWh		49,820.00000 Cu		102,426.27397	34.30814	0.00000 October to April ice plant runs continously to maintain ice quality
Greenstone EMS (Longlac) Hodder Avenue Fire Station	Ambulance stations and associated offices and facilities Fire stations and associated offices and facilities	105 Skinner Ave, PO Box 640 300 Hodder Ave	Longlac Thunder Bay	P0T 2A0 P7A 1T3		O Square fee O Square fee		0.00000	25,059.00000 kWh 53,723,00000 kWh		8,636.00000 Cu 8,275.00000 Cu		17,091.07768 17.282.03940	35.62210 47.22262	0.00000 0.00000 new equipment installed
Human Resources	Administrative offices and related facilities, including municipal council chambers	141 May St S	Thunder Bay	P7E 1A9		O Square fee		0.00000	451,316.00000 kWh		0,275.00000 CC	Dic Wicter	13,752.95247	48.01234	0.00000
James Street Fire Station	Fire stations and associated offices and facilities	501 Churchill Dr W	Thunder Bay	P7C 1W2		O Square fee		0.00000	61,053.00000 kWh		12,914.00000 Cu	bic Meter	26,276.02515	35.41073	0.0000
John Jumbo Community Centre	Community centres	330 Tolvo St	Thunder Bay	P7B 6K8		0 Square fee		0.00000	6,243.00000 kWh		2,893.00000 Cu	bic Meter	5,659.82685	12.85238	0.00000 Includes office hours and regular programming hours
Junot Ave EMS	Ambulance stations and associated offices and facilities	105 Junot St S	Thunder Bay	P7B 4X6	38,000.0	0 Square fee	et 168	0.00000	462,574.00000 kWh		53,121.00000 Cu	ibic Meter	114,528.01437	27.02979	0.00000
Junot Avenue Fire Station	Fire stations and associated offices and facilities	20 Junot Ave N	Thunder Bay Thunder Bay	P7A 7L1		O Square fee		0.00000	64,922.00000 kWh		12,369.00000 Cu 8.823.00000 Cu		25,363.53347 17,570.08227	54.54916 18.26276	0.0000
Kinsmen Youth Centre Manitouwadge EMS	Community centres Ambulance stations and associated offices and facilities	609 James St South 1 Paramedic Lane, PO Box 548	Manitouwadge	POT 2C0		0 Square fee 0 Square fee		0.00000	88,610.00000 kWh		8,823.00000 CC	ibic Meter	2,700.21253	18.262/6	0.00000 Based on hours of operations
Mapleward Fire Station	Fire stations and associated offices and facilities	3000 Government Rd	Thunder Bay	P7G 1V5		O Square fee		0.00000	51,231.00000 kWh		4,760.00000 Cu	bic Meter	10,560.54678	24.65356	0.0000
Mapleward Solid Waste and Recycling Bomag Building	Storage facilities where equipment or vehicles are maintained, repaired or stored	5405 Mapleward Rd	Thunder Bay	P7G 1R8	1,750.0	0 Square fee	et 61	0.00000	13,767.00000 kWh				419.52179	7.86686	0.00000
Mapleward Solid Waste and Recycling Garage	Storage facilities where equipment or vehicles are maintained, repaired or stored	5405 Mapleward Rd	Thunder Bay	P7G 1R8		0 Square fee		0.00000	307,735.89000 kWh		60,908.54000 Cu		124,532.96603	54.54359	0.00000 main also feeds out to power 3 transtor units
Mapleward Solid Waste& Recycling Admin Building/Kiosk	Administrative offices and related facilities, including municipal council chambers	5405 Mapleward Rd	Thunder Bay	P7G 1R8		0 Square fee		0.00000	91,921.11000 kWh		18,193.46000 Cu	ibic Meter	37,198.15868	55.50139	0.00000 main also feeds out to power 3 transtor units
Marathon EMS	Ambulance stations and associated offices and facilities	26 Peninsula Rd, PO Box 459 901 Edward St S	Marathon Thunder Bay	P0T 2E0 P7E 6R2		O Square fee		0.00000	19,945.00000 kWh		15 070 00000 0	his Makes	607.78399 33,982.41743	5.46438 31.15133	0.0000
Mary J L Black Library Mountdale - InOps	Public libraries Storage facilities where equipment or vehicles are maintained, repaired or stored	410 Mountdale Ave	Thunder Bay	P7E 6G8		O Square fee		0.00000	124,343.00000 kWh		15,970.00000 Ct		196 374 29372	46 10960	0.00000 based on hours of operation
Mountdale - Parks/Mechanics	Storage facilities where equipment or vehicles are maintained, repaired or stored	410 Mountdale Ave	Thunder Bay	P7E 6G8		O Square fee		0.00000	160,767.00000 kWh		44,174.00000 Cu		88,415.60989	43.76656	0.00000
Mountdale Administration Building	Administrative offices and related facilities, including municipal council chambers	410 Mountdale Ave	Thunder Bay	P7E 6G8	10,760.0	O Square fee	et 60	0.00000	85,083.00000 kWh		13,531.00000 Cu		28,174.80820	21.27207	0.00000
Nakina EMS	Ambulance stations and associated offices and facilities	204-B Thornton St, Box 429	Nakina	POT 2HO	2,100.0	0 Square fee	et 84	0.00000	23,793.00000 kWh				725.04409	11.33000	0.00000
Neebing Arena	Indoor ice rinks	1715 Bowlker Rd	Thunder Bay	P7K 1L4		0 Square fee		0.00000	274,785.00000 kWh		51,963.00000 Cu		106,616.17411	33.08145	0.00000 October to April ice plant runs continuously to maintain ice quality
Neebing Fire Station	Fire stations and associated offices and facilities Ambulance stations and associated offices and facilities	2065 - 20th Side Rd 125 HOGAN RD, UNIT R	Thunder Bay	P7K 1H6 P0T 2J0		O Square fee		0.00000	78,503.00000 kWh		13,617.00000 Cu 5,185.00000 Cu		28,136.88978 9,802.90100	43.34397 26.88050	0.00000
Nipigon EMS North Central Fire Station	Fire stations and associated offices and facilities	60 Water St S	Nipigon Thunder Bay	P7B 6E8	24.711.0	O Square fee O Square fee	et 168	0.00000	256.416.00000 kWh		21,868.00000 Cu		49.157.99600	19.78164	0.0000
North End Community Centre	Community centres	954 Huron Ave	Thunder Bay	P7A 6L4		0 Square fee		0.00000	62,142.00000 kWh		18,702.00000 Cu		37,252.15932	48.31531	0.00000 Includes office hours and regular programming hours
North McIntyre Community Centre	Community centres	2051 Government Rd	Thunder Bay	P7G 2E9		0 Square fee		0.00000	60,960.00000 kWh		13,644.00000 Cu	ibic Meter	27,653.34887	20.19269	0.00000 Includes office hours and regular programming hours
Oliver Road Community Centre	Community centres	563 Oliver Rd	Thunder Bay	P7B 2H2		0 Square fee		0.00000	64,080.00000 kWh		9,785.00000 Cu		20,452.49504	16.76537	0.00000 Includes office hours and regular programming hours
Parks North Admin/Garage	Storage facilities where equipment or vehicles are maintained, repaired or stored	645 Cumberland St N	Thunder Bay	P7A 4S2		0 Square fee		0.00000	68,859.00000 kWh		29,434.00000 Cu		57,747.05543	19.80371	0.00000
Port Arthur Arena Red Rock EMS - Frost St	Indoor ice rinks Ambulance stations and associated offices and facilities	420 Lisgar St 30 Frost St	Thunder Bay Red Rock	P7B 6T4 P0T 2P0		O Square fee O Square fee		0.00000	686,747.00000 kWh 10.053.00000 kWh		105,142.00000 Cu	ibic Meter	219,711.54537 306.34507	59.96519 14.36143	0.00000 Full year ice including summer ice - plant runs continuously to maintain ice quality 0.00000
Red Rock EMS	Ambulance stations and associated offices and facilities Ambulance stations and associated offices and facilities	4 Taylor St, Box 217	Red Rock	POT 2PO		O Square fee		0.00000	13,148.00000 kWh		2,911.00000 Cu	bic Meter	5,904.27420	26.91420	0.0000
Shuniah EMS	Ambulance stations and associated offices and facilities	1700A Lakeshore Dr	Shuniah	P7A 0T1		O Square fee		0.00000	29,500.00000 kWh		2,311.00000 CC	Dic Wicter	898.95350	6.21053	0.00000
South Neebing Community Centre	Community centres	1841 Mountain Rd	Thunder Bay	P7J 1A8	6,960.0	O Square fee	et 45	0.00000	24,226.00000 kWh		6,948.00000 Cu	ibic Meter	13,874.31529	14.09020	0.00000 Includes office hours and regular programming hours
Terrace Bay EMS	Ambulance stations and associated offices and facilities	20 Cartier Dr, Box 400	Terrace Bay	POT 2W0	2,675.0	0 Square fee	et 84	0.00000	44,535.00000 kWh				1,357.11506	16.64860	0.00000 Hours of operation vary depending on number of events held per year. Approx 140 events per year -
Thunder Bay Community Auditorium	Auditoriums	1 Paul Shaffer Dr	Thunder Bay	P7B 6C7	60,000 0	0 Square fee	et 90	0.00000	650.980.00000 kWh		62.748.00000 Cu	ibic Meter	138,470.37654	21.96420	hours depend on types of event ranging from 9:30am to 1:00am or 24 hours a day. Box office is 0.00000 opened 9:30 to 5:30 Tues to Sat
Thunder Bay Training Centre	Fire stations and associated offices and facilities	750 Hammond Ave	Thunder Bay	P7B 6T5		O Square fee		0.00000	71,352.00000 kWh		12,397.00000 Cu		25,612.41242	14.80678	0.00000 Based on hours of operations
Traffic Control & Streetlighting Admin/Garage	Storage facilities where equipment or vehicles are maintained, repaired or stored	625 Cumberland St N	Thunder Bay	P7A 4S2	10,750.0	0 Square fee	et 60	0.00000	46,076.00000 kWh		16,659.00000 Cu		32,900.02914	20.75573	0.00000
Transit Adminstration/Garage	Administrative offices and related facilities, including municipal council chambers	570 Fort William Rd	Thunder Bay	P7B 2Z8		0 Square fee		0.00000	808,778.00000 kWh		246,444.00000 Cu	ibic Meter	490,579.57238	33.28087	0.00000
Upsala EMS	Ambulance stations and associated offices and facilities	20 North Rd	Upsala	POT 2YO		O Square fee		0.00000	50,204.00000 kWh		10 000 00000 0	bis Massa	1,529.86649	25.32997	0.00000
Vale Community Centre Vickers Heights Community Centre	Community centres Community centres	420 Vale Ave 1695 Broadway Ave	Thunder Bay Thunder Bay	P7C 5E7	4 195 0	0 Square fee 0 Square fee	et 45	0.00000	27,861.00000 kWh 24,943.00000 kWh		10,906.00000 Cu 6,971.00000 Cu		21,468.18632 13,939.64886	22.02321 23.60649	0.00000
Vickers Street Fire Station	Fire stations and associated offices and facilities	330 Vickers St N	Thunder Bay	P7C 4B2	13.000.0	O Square fee	et 168	0.00000	167,798.00000 kWh		55,055.00000 Cu		109,201.77794	57.91617	0.00000
Victoriaville Civic Centre	Administrative offices and related facilities, including municipal council chambers	111 Syndicate Ave S	Thunder Bay	P7E 6S4	51,360.0	O Square fee	et 60	0.00000	604,123.00000 kWh		11,822.00000 Cu	ibic Meter	40,760.43257	14.20881	0.00000
Waverley Resource Library	Public libraries	285 Red River Rd	Thunder Bay	P7B 1A9	23,300.0	0 Square fee	et 58	0.00000	326,605.00000 kWh		36,530.00000 Cu	bic Meter	79,017.23848	30.67973	0.00000 Based on hours of operations
						.1.									Facility operates as South side 55+ centre with increased daily programming. Includes office hours and
West Arthur Community Centre	Community centres	1914 Arthur St W	Thunder Bay	P7K 1C7		O Square fee		0.00000	77,855.00000 kWh		5,462.00000 Cu		12,699.08009	16.72664 30.60360	0.00000 regular programming.
West Thunder Community Centre Whalen Building	Community centres Administrative offices and related facilities, including municipal council chambers	915 Edward St S 34 N. Cumberland	Thunder Bay Thunder Bay	P7E 6R2		O Square fee O Square fee		0.00000	158,017.00000 kWh 1,036,650.00000 kWh	+	26,759.00000 Cu 57,554.00000 Cu		55,406.53993 140,402.98181	30.60360 20.60401	0.00000 Includes office hours and regular programming hours 0.00000
Whalen Building WPCP - Atlantic Ave	Administrative offices and related facilities, including municipal council chambers Facilities related to the treatment of sewage	901 Atlantic Ave	Thunder Bay	P7A 4L3		O Square fee		26317.00000	1,036,650.00000 kWh	-	1.278.235.00000 Cu		2.778.136.96928	216.32748	966,93459
WTP - Bare Point	Facilities related to the treatment of vater	RR#13 Bare Point Rd	Thunder Bay		67,339.0	O Square fee	et 168	14011.00000	6,475,151.00000 kWh		572,196.00000 Cu		1,279,126.48332	186.46434	896.17604
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