

GREEN ENERGY ACT, 2009

ENERGY CONSUMPTION AND

GREENHOUSE GAS EMISSIONS TEMPLATE

CITY OF THUNDER BAY

June 29, 2015

In 2009 the Ministry of Energy and Infrastructure enacted the *Green Energy Act* to help public agencies including municipalities, hospitals, and schools manage and reduce their energy consumption. As part of this Act, Regulation 397/11 requires certain public agencies – municipalities, municipal service boards, school boards, universities, colleges and hospitals – to report on their annual energy consumption and greenhouse gas emissions beginning in 2013. The regulation also requires the development and implementation of conservation and demand management (CDM) plans starting in 2014.

Conservation and the wise use of energy is a key component of the *Green Energy Act*, 2009 and this regulation will help Ontario achieve its Greenhouse Gas emissions reduction targets:

Six per cent below 1990 levels by 2014

15 per cent by 2020 and

80 per cent by 2050.

These targets were set out in Go Green: Ontario's Action Plan, which was issued in 2007 and can be found at http://www.ene.gov.on.ca.

O. Reg 397/11 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

Starting in 2015 (2013 data), municipalities were not required to report the energy use and flow rates for facilities and pumps related to the pumping of water and sewage.

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 greenhouse gas emission reported through O. Reg 397/11 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 Green Energy Act reporting template and energy management initiatives within City operations, please contact Vanessa DeGiacomo-Zwaresh at 684-2510 or email at vdegiacomozwaresh@thunderbay.ca.

Energy Consumption and Greenhouse Gas Emissions Reporting - for 2013

consecutive 12mth period (mth-yr to mth-

Jan/2013 - Dec/2013

yr) Jan/2013 - [
Sector Municipalit
Agency Sub-sec Municipal Municipality

<b>Organization N</b>	City of Thunder Bay	Please fill in th	ne mandatory f	ields indica	ited in red, in a	ddition to	subn	nitting data on y	our energy usage.							
							Avg		gy Type and Amount P	urchase	d and Consumed in	Natural (	Total (calcu	lated in webfo	orm)	
Operation				Postal	Total Floor		hrs/	Annual Flow	Electricity		Natural Gas	5	GHG Emissions	Energy	Energy	Comments
Name	Operation Type	Address	City	Code	Area	Unit	wk	(Mega Litres)	Quantity	Unit	Quantity	Unit	(Kg)	Intensity	Intensity	
Stephenson Bui	facilities, including municipal council	2160 Yonge Street	Toronto	M7A 2G5	135.034.00	Square meters	70	23516.00224	2,181,065.00000	kWh	125,300.00000	Cubic meter				max. 255 characters
101 S	Administrative	101 S	Thunder Bay	P7E 1C5	4,200.00	Square	60		78,681.29000	kWh			5,980.72222	18.73364		
Syndicate (POA)	offices and related facilities, including municipal council	Syndicate Ave				feet										
125 S	Administrative	125 Syndicate	Thunder Bay	P7E 6H8	9,709.00	Square	60		117,245.31000	kWh			8,912.05050	12.07594		
Syndicate Ave (CIT)	offices and related facilities, including municipal council	Ave S				feet										
55+ Centre	Indoor recreational	700 River St	Thunder Bay	P7A 3S6	22,500.00	Square	76		321,758.71000	kWh	27,328.76000	Cubic	76,126.01460	27.20901		Based on hours of
	facilities		_			feet						Meter				operations
Archives	Administrative offices and related facilities, including municipal council	235 Vickers St N	Thunder Bay	P7C 6A4	22,000.00	Square feet	60		129,732.98000	kWh	33,831.73000	Cubic Meter	73,824.44547	22.24041		
Armstrong EMS 43	Ambulance stations and associated offices and facilities	6 Northern Dr	Armstrong	P0T 1A0	1,600.00	Square feet	168		6,547.82000	kWh			497.71289	4.09239		
Armstrong EMS 46	Ambulance stations and associated offices and facilities	4 Northern Dr	Armstrong	POT 1A0	1,600.00	Square feet	168		6,630.00000	kWh			503.95956	4.14375		
Armstrong EMS	Ambulance stations and associated offices and facilities	65 Queen Street, PO Box 6	Armstrong	P0T 1A0	2,995.00	Square feet	168		22,451.69000	kWh			1,706.59786	7.49639		

Arthur St EMS	Ambulance stations and associated offices and facilities	1543 Arthur St	Thunder Bay	P7E 5N5	2,500.00	Square feet	168	23,598.55000	kWh	14,781.16000	Cubic Meter	29,739.43317	72.27577		
Balmoral Police Station	Police stations and associated offices and facilities	1200 Balmoral St	Thunder Bay	P7B 5Z5	65,500.00	Square feet	168	1,558,471.88000	kWh	130,644.06000	Cubic Meter	365,461.75177	44.99126		
Beardmore EMS	Ambulance stations and associated offices and facilities	133 Main St	Beardmore	P0T 1G0	2,423.00	Square feet	84	19,074.22000	kWh			1,449.86961	7.87215		
Beck St EMS	Ambulance stations and associated offices and facilities	181 Beck St	Thunder Bay	P7A 2J7	2,888.00	Square feet	168	12,613.57000	kWh	5,339.04000	Cubic Meter	11,052.91586	24.01513		
Brodie St Library	Public libraries	216 Brodie St S	Thunder Bay	P7E 1C2	23,232.00	Square feet	62	265,712.54000	kWh	39,144.77000	Cubic Meter	94,205.50066	29.34463		Based on hours of operations
Brown Street Fire Station	Fire stations and associated offices and facilities	1321 Brown St	Thunder Bay	P7E 2M4	3,972.00	Square feet	168	43,896.18000	kWh	9,262.36000	Cubic Meter	20,848.30433	35.83446		
Canada Games Complex	Indoor swimming pools	420 Winnipeg Ave	Thunder Bay	P7B 6B7	113,022.00	Square feet	92	2,265,188.02000	kWh	593,375.80000	Cubic Meter	1,294,033.78040	75.83881		pased on hours of operations
Churchill Pool	Indoor swimming pools	130 Churchill Dr W	Thunder Bay	P7C 1V5	11,015.00	Square feet	92	88,887.00000	kWh	174,292.80000	Cubic Meter	336,279.15223	176.23532		Based on hours of operations
City Hall	Administrative offices and related facilities, including municipal council chambers	500 Donald St E	Thunder Bay	P7E 5V3	43,500.00	Square feet	65	702,905.60000	kWh	92,487.97000	Cubic Meter	228,289.51372	38.75511		
Conmee EMS	Ambulance stations	Fire #5750 Hwy 11/17	Conmee	P0T 1W0	3,000.00	Square feet	84	8,476.75000	kWh			644.33472	2.82558		
County Park #16	Public libraries	1020 Dawson Rd	Thunder Bay	P7B 1K6	4,000.00	Square feet	40	9,514.61000	kWh			723.22454	2.37865		Based on hours of operations
County Park #17	Public libraries	1020 Dawson Rd	Thunder Bay	P7B 1K6	4,000.00		40	31,448.18000	kWh			2,390.43906	7.86205	В	Based on hours of operations
Current River Arena	Indoor ice rinks	425 Grenville Ave	Thunder Bay	P7A 2B9	26,310.00	Square feet	126	519,163.84000	kWh	60,424.72000	Cubic Meter	153,703.28891	44.14079	c n	April - October - ice olant runs continuous to naintain ice quality

Current River Community Centre	Community centres	450 Dewe Ave	Thunder Bay	P7A 2G7	8,000.00	Square feet	33	129,790.96000	kWh	14,446.48000	Cubic Meter	37,178.57559	35.41562	Office hours 9am- 3pm M-F one time rentals not included in hours of operations
Delaney Arena	Indoor ice rinks	300 Legion Track Dr/200 Hyde Park Ave	Thunder Bay	P7E 1Y2	35,100.00	Square feet	126	827,219.35000	kWh	114,367.07000	Cubic Meter	279,104.06769	58.19621	April - October - ice plant runs continuous to maintain ice quality
Fort William Gardens	Indoor ice rinks	901 Miles St E	Thunder Bay	P7C 1J9	66,814.00	Square feet	126	1,379,675.79000	kWh	220,246.90000	Cubic Meter	521,276.65196	55.68310	April - October - ice plant runs continuous to maintain ice quality
	Storage facilities where equipment or vehicles are maintained, repaired or stored	155 Front St	Thunder Bay	P7A 2P3	39,010.00	Square feet	60	254,095.50802	kWh	149,085.33129	Cubic Meter	301,179.06039	47.13000	
AfterHours& Stores &	Storage facilities where equipment or vehicles are maintained, repaired or stored	155 Front St	Thunder Bay	P7A 2P3	4,000.00	Square feet	168	50,770.99000	kWh	12,124.74337	Cubic Meter	26,782.57168	44.90751	
Geraldton EMS		815 Main St, Box 1350	Geraldton	P0T 1M0	3,961.00	Square feet	140	29,514.49000	kWh	7,785.72000	Cubic Meter	16,963.34786	28.34117	
Grandview Arena	Indoor ice rinks	300 Madeline St	Thunder Bay	P7A 5Y9	23,310.00	Square feet	126	277,701.18000	kWh	46,096.13000	Cubic Meter	108,259.21007	32.93010	April - October - ice plant runs continuous to maintain ice quality
Greenstone EMS (Longlac)	Ambulance stations and associated offices and facilities	105 Skinner Ave, PO Box 640	Longlac	P0T 2A0	3,280.00	Square feet	84	25,527.31000	kWh	10,347.14000	Cubic Meter	21,502.96414	41.30927	
Hodder Avenue Fire Station	Fire stations and associated offices and facilities	300 Hodder Ave	Thunder Bay	P7A 1T3	3,000.00	Square feet	168	21,689.63000	kWh	10,720.94000	Cubic Meter	21,917.97078	45.20980	

Human Resources	Administrative offices and related facilities, including municipal council chambers	141 May St S	ŕ	P7E 1A9	9,400.00	feet	60	304,218.95000				23,124.29083	32.36372	
Jackpine Community Centre	Community centres	260 Jackpine Rd	Thunder Bay	P7G 1P6	4,400.00	Square feet	2	10,727.82000	kWh	11,674.69000	Cubic Meter	22,887.92718	30.63723	no office hours - one time rentals not included in hours of operations
James Street Fire Station	Fire stations and associated offices and facilities	501 Churchill Dr W	Thunder Bay	P7C 1W2	4,000.00	Square feet	168	46,357.75000	kWh	10,842.24000	Cubic Meter	24,022.37698	40.39666	
John Jumbo Community Centre	Community centres	330 Toivo St	Thunder Bay	P7B 6K8	2,878.00	Square feet	5	6,374.78000	kWh	2,701.54000	Cubic Meter	5,592.16424	12.19116	no office hours - one time rentals not included in hours of operations
Junot Ave EMS	Ambulance stations and associated offices and facilities	105 Junot St S	Thunder Bay	P7B 4X6	38,000.00	Square feet	168	405,544.09000	kWh	54,660.87000	Cubic Meter	134,169.53403	25.95967	
Junot Avenue Fire Station	Fire stations and associated offices and facilities	20 Junot Ave N	Thunder Bay	P7A 7L1	3,600.00	Square feet	168	62,338.19000	kWh	12,058.44000	Cubic Meter	27,536.46274	52.91461	
Manitouwadge EMS		1 Paramedic Lane, PO Box 548	Manitouwadge	POT 2CO	5,300.00	Square feet	84	80,668.13000	kWh			6,131.74590	15.22040	
Mapleward Fire Station	Fire stations and associated offices and facilities	3000 Government Rd	Thunder Bay	P7G 1V5	4,130.00	Square feet	168	51,670.89000	kWh	6,395.74000	Cubic Meter	16,019.56642	28.96934	
	Storage facilities where equipment or vehicles are maintained, repaired or stored	Rd	Thunder Bay	P7G 1R8	1,750.00	Square feet	61	13,735.81000	kWh			1,044.08639	7.84903	Main also feeds out to power 3 transtor units
Mapleward	Storage facilities where equipment or vehicles are maintained, repaired or stored	5405 Mapleward Rd	Thunder Bay	P7G 1R8	17,510.00	Square feet	61	309,647.60000	kWh			23,536.93337	17.68404	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	5,140.00	Square feet	61	90,895.98000	kWh	56,688.51000	Cubic Meter	114,086.01283	134.89666	Main also feeds out to power 3 transtor units
Marathon EMS	Ambulance stations and associated offices and facilities	26 Peninsula Rd, PO Box 459	Marathon	POT 2E0	3,078.00	Square feet	84	18,211.88000	kWh			1,384.32142	5.91679	
Mary J L Black Library (new)	Public libraries	901 Edward St S	Thunder Bay	P7E 6R2	9,440.00	Square feet	41	120,921.73000	kWh	13,580.02000	Cubic Meter	34,866.25501	28.09822	Based on hours of operations
	Storage facilities where equipment or vehicles are maintained, repaired or stored	Ave	Thunder Bay	P7E 6G8	26,900.00	Square feet	60	185,538.07000	kWh	163,307.61000	Cubic Meter	322,856.89655	71.41766	
	Storage facilities where equipment or vehicles are maintained, repaired or stored	Ave	Thunder Bay	P7E 6G8	14,400.00	Square feet	60	194,572.00000	kWh	42,395.28000	Cubic Meter	94,943.46790	44.80136	
Mountdale Administration Building	Administrative offices and related facilities, including municipal council chambers	410 Mountdale Ave	Thunder Bay	P7E 6G8	10,760.00	Square feet	60	126,359.01000	kWh	18,623.50000	Cubic Meter	44,814.89300	30.13805	
Nakina EMS	Ambulance stations and associated offices and facilities	204-B Thornton St, Box 429	Nakina	P0T 2H0	2,100.00	Square feet	84	21,064.77000	kWh			1,601.17530	10.03084	
Neebing Arena	Indoor ice rinks	1715 Bowlker Rd	Thunder Bay	P7K 1L4	25,000.00	Square feet	126	286,486.80000	kWh	59,015.00000	Cubic Meter	133,351.78705	36.54740	April - October - ice plant runs continuous to maintain ice quality
Neebing Fire Station TEMP	Fire stations and associated offices and facilities	2065 - 20th Side Rd	Thunder Bay	P7K 1H6	400.00	Square feet	168	9,126.71000	kWh			693.73948	22.81678	
Neebing Fire Station	Fire stations and associated offices and facilities	2065 - 20th Side Rd	Thunder Bay	P7K 1H6	2,986.00	Square feet	168	11,607.75000	kWh	4,957.00000	Cubic Meter	10,254.16633	21.53036	

Nipigon EMS	Ambulance stations and associated offices and facilities	125 HOGAN RD, UNIT R	Nipigon	POT 2JO	2,080.00	Square feet	84			5,729.32000	Cubic Meter	10,832.00708	29.27401		
North Central Fire Station	Fire stations and associated offices and facilities	60 Water St S	Thunder Bay	P7B 6E8	24,711.00	Square feet	168	319,377.20000	kWh	33,385.21000	Cubic Meter	87,395.47915	27.28290		
North End Community Centre	Community centres	954 Huron Ave	Thunder Bay	P7A 6L4	4,916.00	Square feet	3	56,953.24000	kWh	15,121.63000	Cubic Meter	32,918.49164	44.27635	no office ho one time rer not included hours of operations	entals
North McIntyre	Community centres	2051 Government Rd	Thunder Bay	P7G 2E9	10,200.00	Square feet	13	49,512.85000	kWh	15,055.96000	Cubic Meter	32,228.77524	20.54159	office hours 11 am T-Th of time rentals included in h of operation	one s not hours
North Neebing Community Centre	Community centres	2145 Rosslyn Rd	Thunder Bay	P7K 1H6	3,490.00	Square feet	3	30,722.67000	kWh	6,041.32000	Cubic Meter	13,757.17430	27.20014	Change of operation to Station in Ap 2013	
Oliver Road Community Centre	Community centres	563 Oliver Rd	Thunder Bay	P7B 2H2	9,644.00	Square feet	24	70,870.14000	kWh	11,863.78000	Cubic Meter	27,816.96387	20.42262	Office hours 1 pm one tir rentals not included	
Parks North Admin/Garage	Storage facilities where equipment or vehicles are maintained, repaired or stored	St N	Thunder Bay	P7A 4S2	19,273.00	Square feet	60	70,505.75000	kWh	34,577.02000	Cubic Meter	70,731.53066	22.72519		
Port Arthur Arena	Indoor ice rinks	420 Lisgar St	Thunder Bay	P7B 6T4	30,087.00	Square feet	126	716,471.13000	kWh	110,860.58000	Cubic Meter	264,056.40932	62.97313	Summer ice main operat Sept - April - plant runs continuous I maintain ice quality	tions - ice to
Red Rock EMS - Frost St	Ambulance stations and associated offices and facilities	30 Frost St	Red Rock	P0T 2P0	700.00	Square feet	84	6,529.36000	kWh			496.30971	9.32766		
Red Rock EMS	Ambulance stations and associated offices and facilities	4 Taylor St, Box 217	Red Rock	P0T 2P0	1,638.00	Square feet	84	14,629.52000	kWh	4,250.23000	Cubic Meter	9,147.61867	36.50795		

Shuniah EMS		1700A Lakeshore Dr	Shuniah	P7A 0T1	4,750.00	Square feet	84	30,619.04000 k	kWh			2,327.41447	6.44611		
South Neebing Community Centre		1841 Mountain Rd	Thunder Bay	P7J 1A8	6,960.00	Square feet	6.3	33,232.19000 k	kWh	6,294.09000	Cubic Meter	14,425.82172	14.38569		no office hours - one time rentals not inlcuded in hours of operations
Terrace Bay EMS	Ambulance stations and associated offices and facilities	20 Cartier Dr, Box 400	Terrace Bay	POT 2W0	2,790.00	Square feet	84	63,476.20000	kWh			4,824.95291	22.75133		.,
Thunder Bay Community Auditorium	Auditoriums	1 Paul Shaffer Dr	Thunder Bay	P7B 6C7	60,000.00	Square feet	88	775,912.05000	kWh	85,635.09000	Cubic Meter	220,882.64005	28.10038		Hours of operations vary depeind on events held - approximately 140 events per year - hours depend on type of show - range fro 9:30am to 1am or 24 hours a day. The box office is opened from 9:30am to 5:30pm Tues-Sat.
Thunder Bay Training Centre	Fire stations and associated offices and facilities	750 Hammond Ave	Thunder Bay	P7B 6T5	13,717.00	Square feet	40	64,475.93000 k	kWh	11,793.75000	Cubic Meter	27,198.52657	13.83810		Based on hours of operations
& Streetlighting	Storage facilities where equipment or vehicles are	625 Cumberland St N	Thunder Bay	P7A 4S2	10,552.00	Square feet	60	42,208.11000 k	kWh	17,731.53000	Cubic Meter	36,732.03223	21.85888		_
Transit Adminstration/ Garage	Administrative offices and related facilities, including municipal council chambers	570 Fort William Rd	Thunder Bay	P7B 2Z8	91,247.00	Square feet	140	752,155.71000	kWh	173,273.43000	Cubic Meter	384,768.28497	28.42468		

	Ambulance stations and associated offices and facilities	20 North Rd	Upsala	POT 2YO	1,982.00	Square feet	84	55,627.82000 k	kWh			4,228.38185	28.06651	
Vale Community Centre	Community centres	420 Vale Ave	Thunder Bay	P7C 5E7	6,528.00	Square feet	40	33,221.27000 k	kWh	12,081.66000	Cubic Meter	25,367.12778	24.75834	Office hours 8:30- 4:30 M-F One time rentals not included in hours of operations
Vickers Heights Community Centre	Community centres	1695 Broadway Ave	Thunder Bay	P7K 1M6	3,760.00	Square feet	4	22,205.37000 k	kWh	8,702.36000	Cubic Meter	18,140.79136	30.50322	No office hours - one time rentals not included in hours of operations
Fire Station	Fire stations and associated offices and facilities	330 Vickers St N	Thunder Bay	P7C 4B2	13,000.00	Square feet	168	142,159.40000 k	kWh	50,382.55000	Cubic Meter	106,060.42967	52.12415	
Civic Centre	Administrative offices and related facilities, including municipal council chambers	111 Syndicate Ave S	Thunder Bay	P7E 6S4	39,000.00	Square feet	60	602,338.06000 k	kWh	13,154.66000	Cubic Meter	70,655.47599	19.02930	
Volunteer Pool Community Centre	Community centres	180 Martha St	Thunder Bay	P7A 8C1	6,624.00	Square feet	5	47,264.53000 k	kWh	7,742.56000	Cubic Meter	18,230.96444	19.55778	No office hours - one time rentals not included in hours of operations
Volunteer Pool	Indoor swimming pools	180 Martha St	Thunder Bay	P7A 8C1	21,000.00	Square feet	85	425,380.74000 k	kWh	69,683.04000	Cubic Meter	164,078.67767	55.52174	based on hours of operations
Waterfront Parkade	Parking garages		Thunder Bay	P7C 5K4	3,000.00	Square feet	40	4,114.27000 k	kWh	2,601.43000	Cubic Meter	5,231.06769	10.58723	
ol 6	Administrative offices and related facilities, including municipal council chambers	53 Water Street S	Thunder Bay	P7B 6E8	8,525.00	Square feet	60	140,446.59000 k	kWh	34,388.60000	Cubic Meter	75,691.64185	59.34557	
Waverly St Library	Public libraries	285 Red River Rd	Thunder Bay	P7B 1A9	23,300.00	Square feet	58	391,061.83000 k	kWh	46,981.46000	Cubic Meter	118,549.80860	38.21332	Based on hours of operations
West Arthur Community Centre	Community centres	1914 Arthur St W	Thunder Bay	P7K 1C7	8,184.00		15	79,673.03000 k	kWh	9,658.19000	Cubic Meter	24,316.14114	22.27739	Office hours 10am- 2pm T/W, 3pm - 7pm Th - one time rentals not included

West Thunder Community Centre	Community centres	915 Edward St S	Thunder Bay	P7E 6R2	14,456.00	Square feet	36		218,794.29000	kWh	27,470.22000	Cubic Meter	68,566.93120	35.33077		Office hours 9am- 3pm m-th - one time rentals not included
	Administrative offices and related facilities, including municipal council chambers	34 N. Cumberland	Thunder Bay	P7A 4L3	80,000.00	Square feet	60		1,082,319.96000	kWh	45,863.37000	Cubic Meter	168,979.83043	19.62182		meladed
Atlantic Ave	Facilities related to the treatment of sewage	901 Atlantic Ave	Thunder Bay	P7E 2T2	117,631.00	Square feet	168	29948.20000	13,428,449.10000	kWh	1,059,413.80000	Cubic Meter	3,023,679.60744	209.87378	824.34546	
WTP - Bare Point	Facilities related to the treatment of water	RR#13 Bare Point Rd	Thunder Bay	P7A 8C6	67,339.00	Square feet	168	13735.00000	6,885,875.00000	kWh	444,041.35000	Cubic Meter	1,362,925.69593	172.33769	844.92519	