



TOWN OF
Newmarket

Corporate Greenhouse
Gas Emission Inventory
1996-2006

PCP Milestone 1

February 2008



List of Contents

Section	Title	Page
1	Executive Summary	1
2	Background	2
	2.1 Climate Change	2
	2.1.1 Kyoto Protocol	2
	2.1.2 Canada's Involvement	2
	2.2 Partners for Climate Protection	2
3	Methodology	6
	3.1 Data Collection	6
	3.2 Historical Comparison	8
4	Corporate Inventory	8
	4.1 Overview	8
	4.1.1 Buildings	9
	4.1.2 Vehicle Fleet	10
	4.1.3 Streetlights	11
	4.1.4 Water & Sewage	11
	4.1.5 Corporate Waste	12
	4.1.6 Corporate Inventory Summary	12
5	References	14
6	Acknowledgements	15

List of Contents (Cont'd)

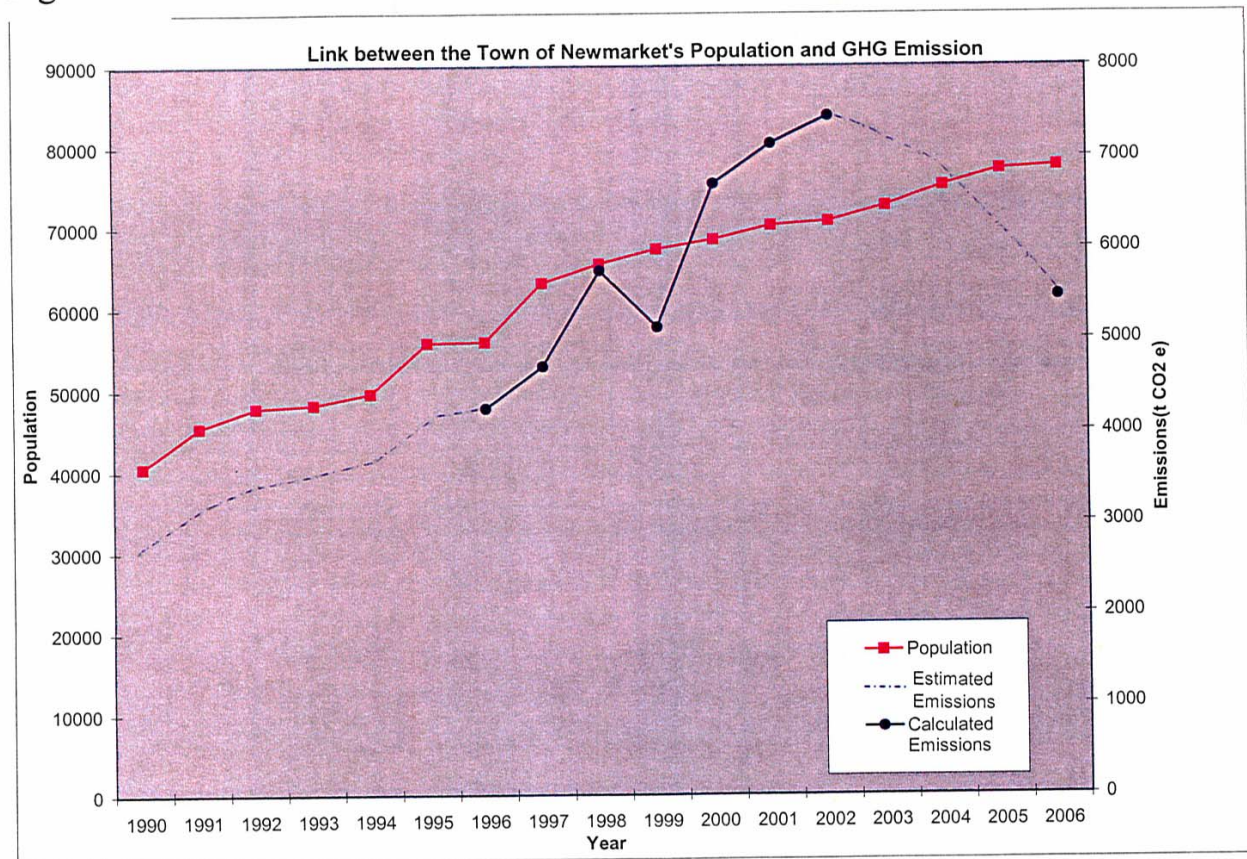
Title	Page
7 List of Figures and Tables	
Figures	
Figure A - Newmarket's Population and Corporate GHG Emissions	1
Figure B - 2006 Corporate GHG Emission by Sector	9
Tables	
Table 1 - Municipal PCP Membership	3
Table 2 - Milestone Status of PCP Members	5
Table 3 - Annual Energy Consumption – 1996	6
Table 4 - Annual Energy Consumption – 2002	7
Table 5 - Annual Energy Consumption – 2006	7
Table 6 - 2006 Town of Newmarket GHG Emissions and Energy Costs	8
Table 7 - Buildings – Energy Costs and Usage	10
Table 8 - Vehicle Fleet - Energy Costs and Usage	10
Table 9 - Streetlights - Energy Costs and Usage	11
Table 10 - Water and Sewage - Energy Costs and Usage	12
Table 11 - GHG's by Corporate Sector - 2002 to 2006	13
Table 12 - GHG's by Corporate Sector - 1996 to 2006	13
8 Appendices	
Appendix A - Corporate Inventory Summary - 1996	
Appendix B - Corporate Inventory Summary - 2002	
Appendix C - Corporate Inventory Summary - 2006	
Appendix D - Fuel Consumption	
Appendix E - Energy Consumption (Buildings)	
Appendix F - Energy Consumption (Water/Sewage Pumping Stations)	
Appendix G - Energy Consumption (Streetlights)	

1 Executive Summary

Between 1996 and 2006, the Town of Newmarket's corporate greenhouse gas (GHG) emissions increased by 36% from 4,022 tonnes to 5,465 tonnes. This increase can be attributed to the growing infrastructure needs of the community in which population grew by 38% during the same time period.

The following figure illustrates the link between the Town of Newmarket's population and corporate GHG emissions. The Town of Newmarket's efforts between 2002 and 2006 have resulted in 1,235 tonnes of annual GHG emission reductions despite the fact that population grew 9% during the same time period. This significant annual GHG emission reduction has been gained through efficiencies and initiatives affecting corporate energy consumption, water use, and vehicle energy use, including the implementation of such initiatives as municipal building energy audits and retrofits, green fleet strategy, green procurement policy, the mega-watt challenge, LED streetlight bulb replacements, regional uptake of sewage treatment pumping stations, and the naturalization of trails and parks.

Figure A



2 Background

2.1 Climate Change

Recent attention to global warming and climate change refers to the changes or variations in the Earth's global climate experienced regionally caused by human activities in comparison to the historical and evolutionary changes caused by natural Earth processes. Human activities leading and contributing to climate change include those resulting in the increase in atmospheric concentrations of greenhouse gases, urbanization, and deforestation.

2.1.1 Kyoto Protocol

The Kyoto Protocol is a code of practice developed during the international Framework Convention on Climate Change to reduce greenhouse gases causing climate change. It was agreed on December 11, 1997 at the 3rd Conference of the Parties held in Kyoto and entered into force on 16 February 2005. As of November 2007, 174 parties have ratified the protocol.

2.1.2 Canada's Involvement

Canada was one of the first countries to sign the Kyoto Protocol on April 29, 1998. The implication of Canada's ratification of the Kyoto Protocol at a national level is to reduce greenhouse gas emissions by 6% below the 1990 level by 2012. Scientists contend that there is a large gap between the Kyoto Protocol target and the growing annual GHG emissions. It has been argued that a 50-70% reduction in global GHG emissions is required to stabilize greenhouse gas concentrations to pre-industrial levels. The Kyoto agreement is one important step in affecting climate change caused by GHG emissions.

2.2 Partners for Climate Protection

International and national organizations advocate the protection of the earth from various angles, i.e. improvements to quality of life caused by air quality issues, resource use, etc. resulting in climate change. In particular, the International Council for Local Environmental Initiatives (ICLEI) and the Federation of Canadian Municipalities (FCM) have partnered to create and sponsor a program called Partners for Climate Protection (PCP).

The PCP program focuses on municipal operational and community sustainability by reducing greenhouse gases. Initiatives that reduce

greenhouse gas emissions will have a positive impact on the social, economic, and environmental sustainability of all communities. Specific impacts on public health, natural resources, and employment are anticipated.

Many Canadian municipalities have taken the lead and joined the PCP program to address climate change and have achieved tangible results. Table 1 shows the number of participant municipalities by province or territory joining the PCP program as of January 2008*.

Table 1 - Municipal PCP Membership

Province/Territory	Number of Participants
Alberta	14
British Columbia	48
Manitoba	8
New Brunswick	14
Newfoundland	7
Northwest Territories	3
Nova Scotia	10
Nunavut	1
Ontario	38
Prince Edward Island	1
Quebec	7
Saskatchewan	2
Yukon	1
Total	154

*Based on information posted at:
<http://www.sustainablecommunities.fcm.ca/Partners-for-Climate-Protection/>

The PCP program is based on the completion of five milestones. In order to see the tangible improvement, commitment is encouraged to complete all the five milestones.

Milestone One: To complete greenhouse gas inventories for the community as well as municipal operations. ICLEI provides the software for this purpose. The suggested base year is 1994, or the year with the best available data, and forecast energy use and emissions over the next 10 or 20 years for municipal operations and the community.

Milestone Two: To establish a reduction target. A reduction of 20% in GHG emission is expected from municipal operation, and minimum of 6% reduction from the community. These targets are to be achieved within the ten years of joining the program.

Milestone Three: To develop and finalize a local action plan to reduce emissions and energy use in municipal operations and the community. The local action plan will provide public education and local awareness.

Milestone Four: To implement the local action plans.

Milestone Five: To monitor, measure, verify and report the actual greenhouse gas emissions after implementations of local action plans.

Table 2 shows the status of PCP members involvement with respect to their efforts to complete the 5 milestones relative to corporate (municipal operations) and/or community implementation of the milestones*.

Table 2 - Milestone Status of PCP Members

Milestone	Description	# of municipalities working on Corporate Milestones	# of municipalities working on Community Milestone	# of municipalities working on both Corporate and Community Milestones
1	To complete inventory of Greenhouse Gas at community /corporate municipal	20	26	16
2	To establish a reduction target from community /corporate municipal	12	11	9
3	To develop and finalize a local action plan to reduce emissions and energy use in the community/corporate municipal	17	12	7
4	To implement the local action plans	3	2	5
5	To monitor, measure, verify and report the actual greenhouse gas emissions after implementations of local action plans	3	0	0

Based on information posted at:
http://www.sustainablecommunities.fcm.ca/Partners-for-Climate-Protection/Milestone_Status.asp

The Town of Newmarket became a member of the PCP program in December 2001. As part of the Town's commitment, action was taken to inventory GHG emissions. The first milestone (inventory of greenhouse gases) for the Town of Newmarket began on October 2002 by the former Town Engineer, Mr. Roy Howard. Based on data availability, the year 1996 was set as the base year for the Town of Newmarket. Monthly invoices for electricity, natural gas, and fuel consumption of the municipal facilities and operations formed the data base for analysis. This data was collected for the period between 1996 and 2002.

The annual energy consumed for each facility at each sector of municipal operation with the dollar value was entered in the computer software (designed by Torrie Smith Associates) that is specifically for the Cities for Climate Protection (CCP) campaign of the ICLEI. The required coefficients of each greenhouse gas are defaulted. So, the software calculates and converts the amount of usage (kWh, L, m³) into tonnage of carbon dioxide or equivalent of carbon dioxide that is emitted into the air. There are many alternative carbon output calculators which, depending on the data required, can produce varying results.¹ Therefore it is essential for consistency and comparison purposes to utilize the same software program for each inventory and comparison measurement undertaken.

3 Methodology

3.1 Data Collection

In September 2007, data was collected for the Town's corporate GHG emissions for 2006 to update the GHG emission inventory for comparison against the previous 1996 and 2002 inventories. The PCP's Inventory Quantification Support Spreadsheet was utilized to calculate and convert the data collected for 2006. The same spreadsheet was used to compare the emission data gathered from the previous inventory conducted in 2002 for the years between 1996 and 2002. It is noted that the GHG emission data for 1996 and 2002 are slightly different than the numbers calculated by the Torri Smith software.

The annual energy consumption of the Town's facilities is summarized in Tables 3, 4 and 5 for the years of 1996 (base year), 2002 and 2006 respectively.

Table 3 - Annual Energy Consumption - 1996

Energy	Sector	Consumption	Amount \$	eCO2 (t)
Electricity (kWh):				
	Facilities	7,977,151.00	601,316.78	
	Water/ Sewage Pumps	195,097.00	16,486.24	
	Streetlights	3,772,322.00	614,438.27	
	Total	11,944,570.00		1,637
Natural Gas (m³):				
	Facilities	1,014,068.00	184,519.65	1,907
Fuel (L):				
	Vehicle Fleet	185,242.40	97,130.01	478
Total			1,513,890.95	4,022

Note: Average price of utilities was not available in 1996.

Table 4 - Annual Energy Consumption – 2002

Energy	Sector	Consumption	Amount \$	eCO2 (t)
Electricity (kWh):				
	Facilities	9,358,061.00	924,785.37	
	Water/ Sewage Pumps	585,367.00	60,197.34	
	Streetlights	3,907,087.00	721,022.35	
Sub-Total		13,850,515.00		3,601
Natural Gas (m³):				
	Facilities	1,334,789.00	404,372.28	2,509
Fuel (L):				
	Vehicle Fleet	214,318.05	119,800.94	590
Total			2,230,178.28	6,700

Note: Average price of Natural Gas was 18.17/m³ in 2002. The price of electricity varies based on demand/peak time usage. The average price of fuel is dependant upon supplier cost and fuel type.

Table 5 - Annual Energy Consumption – 2006

Energy	Sector	Consumption	Amount \$	eCO2 (t)
Electricity (kWh):				
	Facilities	8,615,337.00	909,710.00	
	Water/ Sewage Pumps	113,974.00	13,135.00	
	Streetlights	5,181,025.00	757,726.00	
Sub- Total		13,910,336.00		3,060
Natural Gas (m³):				
	Facilities	968,962.00	364,978.00	1,822
Fuel (L):				
	Vehicle Fleet	238,080.00	192,726.00	583
Total			2,238,274.00	5,465

Note: Average price of Natural Gas was 25.7/m³ in 2006. The price of electricity varies based on demand/peak time usage. The average price of fuel is dependant upon supplier cost and fuel type.

3.2 Historical Comparison

An exercise was undertaken to place historical data into perspective with Canada's Kyoto target of 6% below the 1990 levels. Since empirical data for GHG emissions was not available pre-1996, GHG emissions were estimated to decrease proportionally with the changes in population growth between 1990 and 1996. This is shown in Figure A of the Executive Summary on page 1.

4 Corporate Inventory

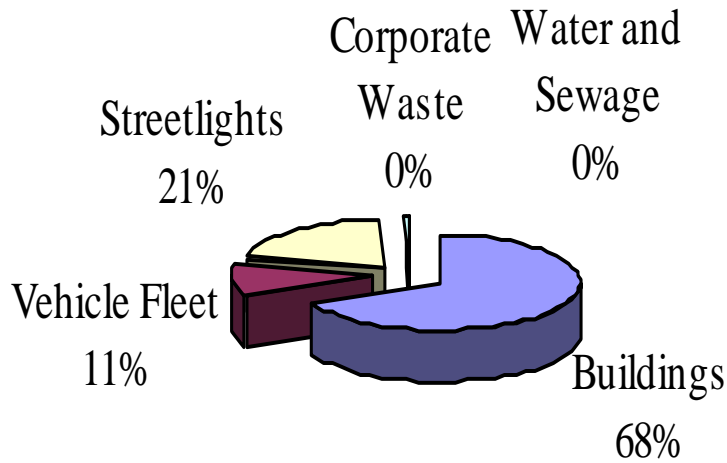
4.1 Overview

The summary of the Town of Newmarket GHG emissions and energy costs in 2006 (based on 2005 GHG coefficients*) is shown in the Table 6 and Figure B. The total cost of energy used for corporate operations was \$2,238,274 in 2006, emitting 5,465 (tonnes) of GHG emissions.

Table 6 – 2006 Town of Newmarket GHG Emissions and Energy Costs

Sector	Costs (\$)	GHG (t)
Buildings	1,274,668	3,717
Vehicle Fleet	192,726	583
Streetlights	757,726	1,140
Water/ Sewage Pumps	13,135	25
Corporate Waste**	-	0
Total	2,238,274	5,465

Figure B - 2006 Corporate GHG Emissions Breakdown by Sector



- * The 2006 GHG coefficients had not been released by the Ministry of Environment at the time of study. ICLEI recommended use of the 2005 coefficients for 2006 data as the expected difference between 2005 and 2006 coefficients is minimal.
- ** For more information on Corporate Waste, refer to section 4.6 on page 14.

Overall, energy operating cost for Town of Newmarket buildings increased 45% between 1996 and 2006, and emissions increased 36% during the same time period. The corporate inventory summary is provided in Appendices C, D and E for year 1996, 2002 and 2006 by sector and by source.

4.1.1 Buildings

For the purpose of calculating the energy usage and expenses for the Town of Newmarket facilities and buildings, electricity and natural gas consumptions and expenses was obtained through hydro and gas bills from Newmarket Hydro and Enbridge Gas. The summary of data for 2006 is shown in Appendix E. The total Energy Cost and GHG emissions for the Town of Newmarket buildings in 1996, 2002 and 2006 are shown in Table 7.

Table 7 – Buildings – Energy Costs and Usage

Year	Cost (\$)	GHG (t)
1996	785,836	2,983
2002	1,329,421	4,943
2006	1,274,668	3,717

4.1.2 Vehicle Fleet

The information relative to the Town's vehicle fleet fuel consumption has been obtained through the existing data in Operations Center and Parks Shop. The total volume of all types of fuel used by the Town's vehicles in 2006 is 219,190 liters with the cost of \$183,861. The summary of the Town's vehicle fleet fuel consumption can be found in Appendix D.

Also, propane gas usage information for the vehicles was obtained from Superior Propane. In total, 18,889 liters of propane consumed in 2006 for vehicles with the cost of \$8,864.

In order to be consistent with the method used in the previous GHG inventory which was conducted by the former Town Engineer, we did not include the amount of fuel consumed in the Fire Department as well as staff fuel usage during business trips. Fire department consumed 64,893 liters of different types of fuel in 2006. Moreover, staff used their vehicles for about 248,067 kilometers during business trips. Total Energy Cost and GHG emissions for the Town of Newmarket vehicle fleet in 1996, 2002 and 2006 is shown in Table 8.

Table 8 – Vehicle Fleet – Energy Costs and Usage

Year	Cost (\$)	GHG (t)
1996	103,996	478
2002	126,805	590
2006	192,726	583

4.1.3 Streetlights

The streetlighting sector represented within this inventory includes park, street and traffic lighting operated by the Town of Newmarket. Also, Newmarket Hydro provided energy consumption information for those light standards that they supply power to. (Refer to Appendix G)

In general, the number of street lights increased from 6,325 in December 2002 to 7,032 in December 2006 (an approximate 11% increase in the number of streetlights) resulting in increased GHG emissions of approximately 12% during the same time period. The total Energy Cost and GHG emissions for the Town of Newmarket street lights in 1996, 2002 and 2006 are shown in Table 9.

Table 9 – Streetlights – Energy Costs and Usage

Year	Cost (\$)	GHG (t)
1996	614,438	509
2002	721,022	1,016
2006	757,726	1,140

4.1.4 Water & Sewage

Energy use related to water and wastewater treatment and pumping services was provided by staff at Town of Newmarket's water and wastewater division and Newmarket Hydro. (Refer to Appendix F).

From 2002 to 2006 electricity use related to pumping stations operations decreased from 585,367 (kWh) to 113,974 (kWh) resulting in decreasing 127 tonnes of annual GHG emissions. The main reason being for this reduction is due to the fact that the Region of York has taken responsibility for couple of pumping stations (4 pumping stations) which the Town of Newmarket previously owned and operated them. The total Energy Cost and GHG emissions for the Town of Newmarket water and sewage in 1996, 2002 and 2006 are shown in Table 10.

Table 10 – Water and Sewage – Energy Costs and Usage

Year	Cost (\$)	GHG (t)
1996	31,066	51
2002	60,197	152
2006	13,135	25

4.1.5 Corporate Waste

Corporate waste generally accounts for one to three percent of all waste generated within a municipality. To accurately calculate the GHG emissions attributable to corporate waste, the municipality must keep accurate records of the quantity and content of the waste it produces. In calculating corporate waste for the Town of Newmarket, gross assumption would be necessary, compromising the accuracy of the data. Corporate Waste Bins are accessible by the public for dumping garbage. Waste bins are not necessarily full at the time of pick-up and disposal. Actual weight is not calculated at the time of pick-up. In order to track corporate waste, a corporate bin not accessible to the public would be required and accurate data for measuring corporate waste is necessary to report on this sector.

4.1.6 Corporate Inventory Summary

Between 1996 and 2002, Town of Newmarket's Corporate GHG emissions increased from 4,022 tonnes per year to 6,700 tonnes per year. This report will not speculate on the reasons for increase beyond the increase in population and required municipal services. Council took action to mitigate GHG emission's inclining trend and successfully implemented many initiatives that significantly reduced emissions in various sectors between 2002 and 2006 as indicated in the Table 11.

Table 11 – GHGs by Corporate Sector - 2002 to 2006

Sector	Cost (%)	GHG (%)	GHGs (t)
Building	69	66	1960
Vehicle Fleet	22	25	112
Streetlights	17	97	507
Water/wastewater	94	298	101
Total	48	67	2678

Overall emission from the Town of Newmarket's corporate operations increased 36% between 1996 and 2006 (refer to Table 12). The absolute GHG emissions increases were in the building, vehicle fleet and street light sectors in average 22% to 25% which population grew by 38% during the same time period. Emissions from water and wastewater decreased between the inventory years due to the Region of York taking responsibility of 4 pumping stations that originally the Town of Newmarket owned and operated them back in 1996.

Table 12 – GHGs by Corporate Sector - 1996 to 2006

Sector	Cost (%)	GHG (%)	GHGs (t)
Building	62	25	737
Vehicle Fleet	85	22	105
Streetlights	23	24	631
Water and wastewater	-236	- 49	- 26
Total	46	36	1443

5 References

Consumer Reports - "Carbon Conundrum", February 2008, page 9.
www.ConsumerReports.org

Environmental Commissioner of Ontario, Neglecting Our Obligations, Annual Report 2005-2006.

Harder, Steve, The Town of New Glasgow's Energy Sustainability and Local Action Plan 2007-2013, June 27, 2007.

McKinsey & Company, Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?, December 2007.

<http://www.sustainablecommunities.fcm.ca/Partners-for-Climate-Protection/>

<http://en.wikipedia.org/wiki/>

6 Acknowledgements

This report has been prepared in accordance with the Town of Newmarket Council's (2006-2010) commitment to the Partners for Climate Protection program and conscious environmental efforts to "Making Newmarket even better". This project has been completed under the direction of the Chief Administrative Officer, Bob Shelton, coordinated by Cindy Wackett (Corporate Project Consultant in the Office of Continuous Improvement), with the assistance of Reza Massir (Project Coordinator, Public Works and Environmental Services), and support of the members of the Town of Newmarket's Executive Management Team.

Members of Council 2006-2010



**Tony Van Bynen,
Mayor**



**John Taylor,
Regional Councillor**



**Tom Vegh,
Councillor – Ward 1**



**Dave Kerwin,
Councillor – Ward 2**



**Victor Woodhouse,
Councillor – Ward 3**



**Larry Blight,
Councillor – Ward 4**



**Joe Sponga,
Councillor – Ward 5**



**Dennis Ramsarran,
Councillor – Ward 6**



**Chris Emanuel,
Councillor – Ward 7**

Appendix A

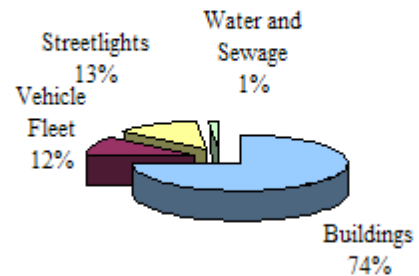
Corporate Inventory Summary-1996

Town of Newmarket

Energy Costs and eCO2 Emissions by Sector

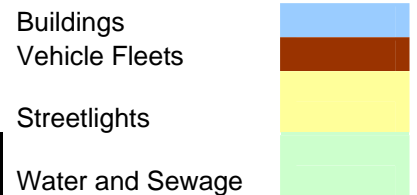
Sector	Total Cost (\$)	Total eCO2 (t)
Buildings	785,836	2,983
Vehicle Fleet	103,966	478
Streetlights	614,438	509
Water and Sewage	31,066	51
Total	1,535,307	4,022

Corporate eCO2 Emissions Breakdown by Sector

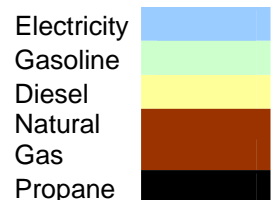
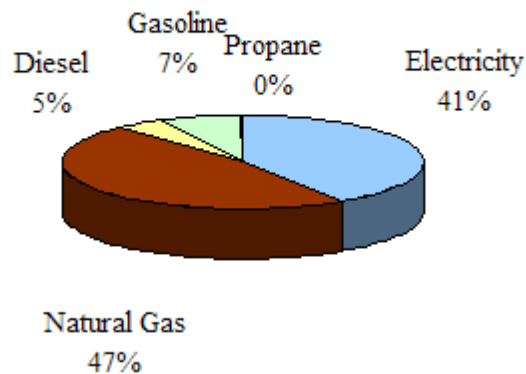


Energy Costs and eCO2 Emission by Source

Energy Type	Total Use	Total Cost (\$)	Total eCO2 (t)
Electricity	12,126,730	1,246,821	1,637
Natural Gas	1,014,068	184,520	1,907
Diesel	66,711	30,667	182
Gasoline	118,531	66,463	280
Propane	10,563	6,836	16
Total	-	1,535,307	4,022



Corporate eCO2 Emissions by Source



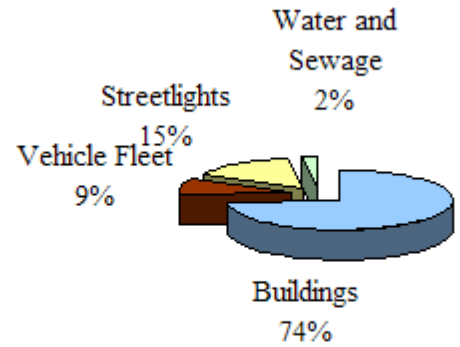
Appendix B

Corporate Inventory Summary-2002

Town of Newmarket

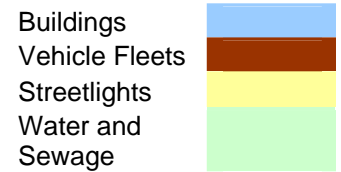
Energy Costs and eCO2 Emissions by Sector

Sector	Total Cost (\$)	Total eCO2 (t)
Buildings	1,329,421	4,943
Vehicle Fleet	126,805	590
Streetlights	721,022	1,016
Water and Sewage	60,197	152
Total	2,237,446	6,700

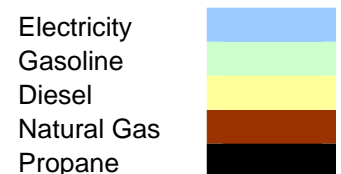
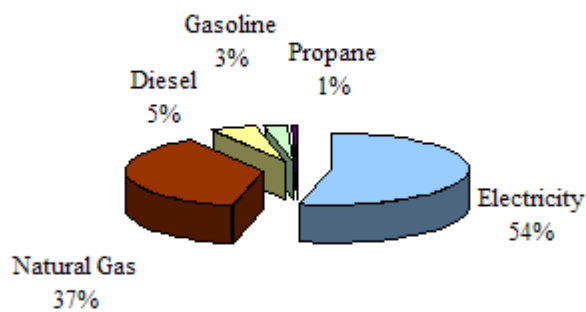


Energy Costs and eCO2 Emission by Source

Energy Type	Total Use	Total Cost (\$)	Total eCO2 (t)
Electricity	13,850,515	1,706,269	3,601
Natural Gas	1,334,789	404,372	2,509
Diesel	134,405	70,437	367
Gasoline	79,913	49,364	189
Propane	22,093	7,004	34
Total	-	2,237,446	6,700



Corporate eCO2 Emissions by Source



Appendix C

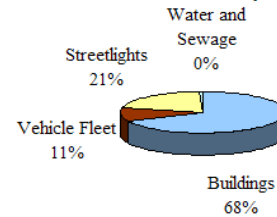
Corporate Inventory Summary-2006

Town of Newmarket

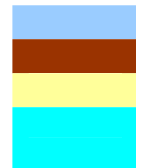
Energy Costs and eCO2 Emissions by Sector

Sector	Total Cost (\$)	Total eCO2 (t)
Buildings	1,274,688	3,717
Vehicle Fleet	192,726	583
Streetlights	757,726	1,140
Water and Sewage	13,135	25
Total	2,238,274	5,465

Corporate eCO2 Emissions Breakdown by Sector



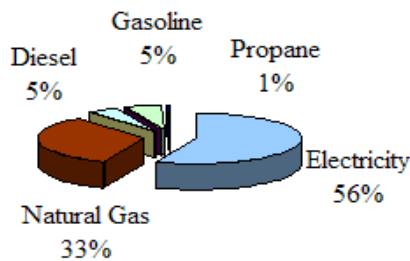
Buildings
 Vehicle Fleets
 Streetlights
 Water and Sewage



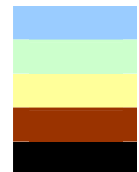
Energy Costs and eCO2 Emission by Source

Energy Type	Total Use	Total Cost (\$)	Total eCO2 (t)
Electricity	13,910,336	1,680,571	3,060
Natural Gas	968,962	364,978	1,822
Diesel	99,395	81,442	271
Gasoline	119,796	102,420	283
Propane	18,889	8,864	29
Total	-	2,238,274	5,465

Corporate eCO2 Emissions by Source



Electricity
 Gasoline
 Diesel
 Natural Gas
 Propane



Note:

We were advised by ICLEI to use 2005 Coefficients for 2006 data as they did not expect the major change from 2005 to 2006 coefficients.

APPENDIX D - Energy Consumption

Vehicle Fleet 2006

Type of Fuel								
	Gasoline (Bronze/ Regular)		Low Sulphur Diesel		Regular Sulphur Diesel		Low Sulphur Diesel Coloured	
	Volume(L)	Amt (\$)	Volume(L)	Amt (\$)	Volume(L)	Amt (\$)	Volume(L)	Amt (\$)
Month								
Jan	10,867.10	8,709.98	9,825.40	7,955.63	1,204.90	845.24		
Feb	9,981.10	8,321.24	12,582.50	9,996.80	2,598.30	1,783.22		
Mar	9,163.80	6,867.35	4,975.00	3,794.43	810.30	530.34		
Apr	7,739.00	6,523.98	1,641.50	1,339.46	537.10	380.15		
May	12,167.00	11,344.51	8,263.30	7,184.94	2,790.40	2,124.33		
Jun	10,458.60	9,446.21	4,538.20	3,923.27	3,243.50	2,453.06		
July	11,912.90	10,897.92	3,057.10	2,633.39	4,238.60	3,192.51		
Aug	11,180.80	10,825.25	6,465.90	5,770.82	1,938.90	1,520.68		
Sep	9,322.30	8,391.93	5,080.70	4,547.23	2,990.40	2,351.71		
Oct	11,035.30	8,510.42	4,517.00	3,504.74	1,395.90	932.04		
Nov	9,132.30	7,042.83	5,273.50	4,091.71	953.90	634.82		
Dec	6,835.40	5,538.04	3,009.90	2,488.28				
Total	119,795.60	102,419.66	69,230.00	57,230.70	22,702.20	16,748.10	7,463.03	7,463.03
Grand Volume Total:	219,190.83							
Grand Amount Total:	183,861.49							

APPENDIX E - Energy Consumption

Municipal Buildings - 2006

No	Facility	Electricity		Natural Gas	
		Usage (kWh)	Total Amount (\$)	Usage (m ³)	Total Amount (\$)
1	100 Eagle St. W., Ray Twinney Complex	3,523,340.87	349,601.58	400,891.00	146,414.24
2	260 Eagle St., Parks Shop	226,993.50	29,812.39	37,898.00	13,587.65
3	438 Park Ave, Public Library	492,544.80	55,218.81	21,231.00	9,524.04
4	465 Davis Dr., Tannery	714,687.48	77,026.80	19,237.00	7,981.14
5	474 Davis Dr., Senior Centre	209,296.90	28,672.48	28,420.00	11,545.34
6	Darcy St., Gorham Pool/ Lions Park	317,542.14	39,726.56	33,765.00	12,540.83
7	984 Gorham St., Fire Hall	212,026.44	23,450.91	24,697.00	10,073.33
8	134 Main St, Museum	71,725.80	8,116.56	14,578.00	5,683.81
9	460 Botsford St., Town Hall	159,869.76	17,610.82	5,703.00	3,969.13
10	Chamber of Commerce			0.00	18.00
11	200 Doug Duncan Dr. Community Centre			32,130.00	15,825.41
12	221 Cedar St., Community Centre	808,470.00	83,587.18		
13	200 Civic Dr., Community Centre Arena	149,256.00	16,560.79	14,924.00	6,444.98
14	170 Civic Dr., Winter Tennis	11,256.39	1,521.76		
15	200 Civic Dr., Winter Tennis	117,103.77	12,884.28	0.00	18.00
16	6691 Bayview Ave., Bayview Park Hydro Line	0.00	270.88		
17	Art Ferguson Park	53,980.92	6,142.96	0.00	18.00
18	235 Pine St., Scouts Hall	9,494.35	1,237.58	4,651.00	2,217.41
19	125 McCaffrey Rd., Fire Dept	95,275.09	9,979.17	15,274.00	6,442.95
20	395 Mulock Dr., Town of Newmarket	1,269,833.67	129,863.45	95,204.00	32,130.67
21	623 Timothy St. A, Works Dept.	96,643.26	10,835.85		
22	623 Timothy Street Works	24,108.97	1,598.46	24,179.00	9,696.24
23	623 Timothy Street North	24,317.33	2,813.81	8,289.00	3,641.74
24	623 Timothy Street South	27,569.85	3,176.79		
25	35 Patterson Street, Civic Arena, HW			44,198.00	16,190.18
26	100 William Street, Quaker Pool			36,878.00	9,354.02
27	56 Charles Street, Youth Centre			65,050.00	25,310.54
28	220 Edward St., Aurora fire Hall			41,765.00	16,278.01
29	543 Timothy St., Office Specialty Bldg			0.00	18.00
30	543 Timothy St., Office Specialty Bldg			0.00	18.00
31	244 Main St., Youth Centre			0.00	18.00
32	Civitan Club House			0.00	18.00
Total		8,615,337.29	909,709.87	968,962.00	364,977.66

APPENDIX F - Energy Consumption

Sewage Pumping Stations - 2006

Facilities	Account No.	Total	
		Usage (kWh)	Amount (\$)
811 Gorham St., Sewage Pumping Stn.			
Kirby Cr., Glenway Booster Stn.	17225		
Woodmount Place	24947	3325.09	605.07
Cotter St. & Manho, Pumping Stn	2496	2295.82	503.92
16300 Bayview Ave., Pumping Stn	242944	74348.19	8325.7
Pearson & Hamilton - Pumping Stn	11856	189057.6	26597.64
380 Bayview PKY, Pumping Stn			
409 Sydor Court, St Andrews Pumping Station	466770	36,300	4204.26
Total		305327.01	40,236.59

Appendix G - Energy Consumption Streetlights - 2006

(Park, Street and Traffic Lighting)

No	Facility	Total	
		Usage (kWh)	Amount (\$)
1	Wesley Brook Park Pole	723	341.39
2	Main & Queen Lights	5606.43	837.5
4	Main Street & Bristol Road, Stop Lights	4,321	677.12
5	Clearmeadow Blvd Park, Whipper Billy Watson Park	12313.62	1617.32
6	North Bayview Avenue, Baview Avenue Park	43.54	275.46
7	Bayview Avenue Park	848.89	357.6
8	Millard Avenue, Haskett Park	595	309.39
10	College Manor Park Washroom	902	362.04
12	Keith & McCafrey, Joe Persechini Park	78.77	278.56
17	Timothy St. & Civic, (Outdoor)	601	333.99
18	Fairy Lake Park North	7545.72	1081.45
19	Fairy Lake Park South	4394.76	731.02
20	Fairy Lake Light	10.38	272.01
23	Fairy Lake Fountain	40063.86	4792.29
24	Eagle St. & William S, Fountain Fairy Lake	556	329.18
25	100 Eagle Street West Sign	6092.55	889.73
26	Rene Bray Park- washroom, Ivsbridge Blvd	229	294.45
27	Ken Sturgeon Park	2280.3	508.43
28	Savage Park, Savage Road, Paul Semple Park	673.72	338.83
29	Street Lights Town	4,550,663	665294.42
30	Muriel St, Ladies Softball Diamond	4,809	769
31	395 Mulock Drive - Fountain	4,775	785.5
33	Lions Park Darcy St.	24,287	2829.67
34	16640 Yonge Street Light	4,042	705.57
36	896 Mulock Drive	44319.69	4381.67
37	Market Squire - Ped A	5398.12	815.54
38	Market Squire - Ped B	18908.87	2273.44
39	Market Squire - Ped C	40419.35	4022.61
40	Market Squire - Ped D	45072.21	5154.65
41	Bonshaw Avenue Park	20978.76	11115.81
42	Joe Persechini Drive Park	9950.4	5604.43
43	56 Charles St, Youth Center	314370.45	38552.4
44	Harrison Drive Park	5150.37	793.35
Total		5,181,025.00	757,725.82