

Carbon Busters



Action Plan 2008

**Canadian GHG
Challenge Registry©**

Carbon Busters Inc.
17205-107 Ave.
Edmonton, AB
www.carbonbusters.org



1. Primary Canadian GHG Challenge Registry© Contacts

The two primary contacts* for the Canadian GHG Challenge Registry© report are:

Executive Contact (President)		Primary Technical Contact (Report Author)	
Name:	Godo Stoyke	Name:	Richard Krause
Position title:	President	Position title:	Data Analyst
Organization	Carbon Busters Inc.	Organization	Carbon Busters Inc.
Name:		Name:	
Address 1:	17205-107 Ave	Address 1:	17205-107 Ave
Address 2:		Address 2:	
City, Province, Postal Code:	Edmonton, AB, T5S 1E5	City, Province, Postal Code:	Edmonton, AB, T5S 1E5
Telephone:	(780) 437-0023	Telephone:	(780) 437-0023
Fax:	(780) 437-1500	Fax:	(780) 437-1500
E-mail:	godo@carbonbusters.org	E-mail:	data@carbonbusters.org
Website:	www.carbonbusters.org	Website:	www.carbonbusters.org

2. Emissions Summary

Please complete the following table of emissions and intensity information.

	Base Year	Current Year
Absolute Emissions [tonnes CO₂e]		
Gross Direct Emissions	8.16	7.49
Gross Indirect Emissions	49.91	31.21
Offsets	0	38.7
Net Emissions	58.07	0
Production		
(kg CO ₂ e/unit of production) total company	kg CO ₂ e/tonne	kg CO ₂ e/tonne
GHG emissions (kg CO ₂ e) per client emissions	CO ₂ e	CO ₂ e
reduction achieved (tonnes of CO ₂ e)		
Emission Intensity [tonnes CO₂e/unit production]		
Gross Emission Intensity	10.58	7.34
Offsets Intensity	0	7.34
Net Emission Intensity	10.58	0

3. Sector Representation

Please mark the economic sector that best describes your organization. If you operate in several sectors, please rank them numerically with #1 representing your primary sector of operations.

Other:

Energy Efficiency & Environmental Consulting

4. Affiliation Identification

Please mark your organization's active partnerships, affiliations and / or programs relevant to GHG emissions reductions.

Member of Canada Green Building Council (www.cagbc.ca).

Licencee of "CO2 On line" (www.co2online.de), an organization that promotes reductions in greenhouse gas emissions.

Member of "Co-op America" based on stringent ethical, social and environmental business criteria.

5. Champion Level Reporting Checklist Self-evaluation

This checklist will be used as a cross-reference our staff to determine if your report has achieved Bronze, Silver, or Gold status in our Champion Level Reporting System. While you are not required to address every checklist element in your report, it is mandatory to complete this self-evaluation and the total number of points must reach at least 50.

Please identify the Champion Reporting categories that are documented in your report by marking the box [in the column 'Included'] for the appropriate category.

Bronze requires 50 points including all Bronze required elements. Silver requires 70 points including all Silver required elements. Gold requires 90 points including all Gold required elements. If your self-evaluation does not indicate at least Bronze Champion Level Reporter status, we cannot register your submission.

Checklist Element	Point Value	Required For	√
1 Senior Management Support			
1.1 Statement of endorsement	N/A	All	√
1.2 Commitment to regular reporting	N/A	All	√
1.3 Internal practices on climate change	2		√
1.4 Management system description	3		√
2 Base Year Quantification			
2.1 Any quantification that can be used in target setting	N/A	All	√
2.2 Provide methodology for the calculation of the base year quantification	2	Silver & Gold	√
2.3 Include GHG emissions inventory by gas type	4		√
2.4 Provide methodology for the calculation of the base year quantification by gas type	4		√
2.5 Include Indirect Emissions	2	Gold	√
3 Results Achieved			
3.1 Results reported within one year of commitment	N/A	All	√
3.2 Results in all years since base year quantification	2		√
3.3 Tonnage inventory of emissions	2	Silver & Gold	√
3.4 Tonnage inventory of emissions since base year quantification	2		√
3.5 Results in comparison with previous targets	4	Silver & Gold	√
3.6 Results that are below base year quantification levels of CO ₂ e or energy intensity per unit of output	6	Gold	√
3.7 Results that are verifiable	2	Gold	√
3.8 Results that have been externally verified			
3.9 Document emission reduction offsets			
4 Business-as-Usual Projection			
4.1 Describe basis for Business-As-Usual projection	2	Silver & Gold	√

Checklist Element	Point Value	Required For	√
4.2 Business-As-Usual projection	2	Gold	√
4.3 Identify major sources of GHG emissions	1		√
4.4 Include indirect emissions	1		√
4.5 Specified by GHG type	1		√
5. Target Setting			
5.1 Commit to target setting	N/A	All	√
5.2 Identify your target or explain the process by which you are selecting your target	3	Gold	√
5.3 Target projected to 2007 or beyond	2	Gold	√
5.4 Process for target review and update	2		√
6. Past Actions			
6.1 Estimate sum of impacts of identified key activities	2		√
6.2 Estimate individual impacts of key activities/projects	2		√
6.3 Estimate sum of impacts of key activities/projects in tonnes CO2 equivalent	2		√
6.4 Estimate individual impacts of key activities/projects in CO2 equivalent	2		√
7. Potential Future Actions to Achieve Targets			
7.1 List potential reduction activities and/or projects	N/A	All	√
7.2 Quantify the sum of all impacts of potential activities using any reporting format	4		√
7.3 Quantify the impact of individual potential activities using any reporting format	3		√
7.4 Quantify the sum of all impacts of potential activities in tonnes CO2 equivalent.	4		√
7.5 Quantify the impact of potential individual activities in tonnes CO2 equivalent	4		√
7.6 Categorize the activities	4		√
8 Education, Training and Awareness			
8.1 Climate change issue explained to employees	3	Silver & Gold	√
8.2 Communicate response to climate change	3	Gold	√
8.3 Identify opportunities for individual action	3	Gold	√
8.4 Create incentives for emission reductions by employees outside of work	2		√
8.5 Create incentives for emissions reductions through supply-side management	2		√
8.6 Create incentives for emissions reductions through demand-side management	2		√
8.7 Participate in life-cycle analysis or other activities to influence external contacts	1		√
8.8 Undertake public education	1		√
Maximum Total	95		100

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Editorial Staff: Richard Krause, Godo Stoyke

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i. Executive Summary

Carbon Busters® Inc. (CBI) is an innovative, progressive company committed to providing environmental education and technical consulting services to clients to enable them to reduce their utility consumption and GHG emissions. The company not only carries out energy audits for clients but has also developed new initiatives such as the Carbon Busters Program that help our clients in Europe and North America reduce their GHG emissions. (The Carbon Busters Program consists of a multi-faceted energy and water conservation program that provides facility audits, technical advice, utility tracking, monitoring and analysis, investment recommendations, environmental education and regular progress reports to program participants.) Carbon Busters employs customized software for recording utility consumption and emissions and calculating savings achieved through conservation initiatives both in our own office and for our clients. To date, Carbon Busters has helped achieve savings of over 23 million Canadian dollars and has reduced GHG emissions by over 69,000 metric tonnes of CO₂e worldwide. As part of its commitment to reducing GHG emissions worldwide, Carbon Busters has registered with the Canadian GHG Challenge Registry.

Base Year Period 2002-2003

The base year period mirrors the company's fiscal year (July 1, 2002 - June 30, 2003). Total corrected CO₂e emissions within the base year comprised 58.07 metric tonnes including 8.16 metric tonnes of direct emissions and 49.91 metric tonnes of indirect emissions (14.1% and 85.9% respectively). Since company travel primarily involves public transportation and/or rental vehicles, emissions from travel are treated as indirect emissions. Power consumption contributed 10% of the GHG emitted, travel produced 78.9% of the CO₂e, while heating consumption led to emissions of 14.1% of the total emissions of the office.

During the base year period the company achieved reductions of 5,490.5 metric tonnes of CO₂e for its clients. Thus office emissions comprise only 10.58 kg for every tonne that the CO₂e emissions of EEC's clients were reduced.

Fifth Reporting Year 2007-2008

During the fifth reporting year (July 1, 2007 - June 30, 2008) total corrected CO₂e emissions comprised 38.7 metric tonnes of which 7.49 metric tonnes were direct emissions and 31.21 metric tonnes were indirect emissions (19.4% and 80.6% respectively). Total corrected GHG emissions in the fifth reporting year therefore decreased by 19.37 metric tonnes CO₂e in comparison to the corrected base year.

Direct emissions in the office fell by 669 kg CO₂e compared to the base year, while indirect emissions dropped by 18,697 kg CO₂e for a total net decrease of 19,366 kg CO₂e. This decrease is primarily due to decreased business travel. Emissions from electricity, analyzed per full-time employee increased by 213 kg CO₂e/FTE.

According to the primary metric used to measure emissions, the company emitted 7.34 kg CO₂e per metric tonne of client CO₂e reductions in reporting year 5 compared to the 10.58 kg CO₂e per metric tonne of client CO₂e reductions emitted in the base year, thereby bettering the base year metric by 3.24 kg CO₂e per metric tonne of client CO₂e reductions. The target for year 5 emissions was 7.06 kg/tonne CO₂e, but actual emissions came in over this target by 0.28 kg/tonne CO₂e.



To compensate for the company's emissions, CBI is purchasing emission reduction offsets totalling 38.7 metric tonnes of CO₂e, effectively reducing net emissions to 0 kg CO₂e.

ii. Organizational Profile

Carbon Busters Inc. (CBI), formerly Energy and Environmental Consulting Inc. (EEC), was founded in Edmonton, Alberta in November 1992, and became operational in 1993. The company and its programs were conceptualized by efficiency engineer Eckhart Stoyke, who has over 30 years of experience conserving energy in industrial facilities, schools and municipal buildings. The company itself has grown from 2 FTE employees in 1993 to 5 FTE employees in the current reporting year.

Carbon Busters' mission is to assist building managers of schools and other facilities to reduce their energy consumption, utility costs and greenhouse gas emissions. Carbon Busters achieves its mission objectives through its self-funding utility conservation and environmental education programs offered in North America and Europe: the Carbon Busters® and Öko-Smart® programs. These programs offer energy audits, training, and



no-cost, low-cost and retrofit recommendations, and include a comprehensive energy and environmental education component for the building users. For the commercial, industrial and government sectors Carbon Busters offers comprehensive energy audits, utility tracking and analysis, training seminars, and offers assistance with the development of Energy Management Plans and funding applications.

Through its self-funding programs alone, Carbon Busters has helped achieve energy savings of over CDN \$20.9 million and has reduced GHG emissions by over 60,000 metric tonnes of CO₂ equivalents worldwide.

1. Senior Management Support

1.1 Signed statement of endorsement

At Carbon Busters, we have proven that significant GHG emissions reductions can be achieved through behaviour modifications and investments in inexpensive efficiency measures. Carbon Busters remains committed to reducing energy consumption and GHG emissions which result from its activities. Carbon Busters is also committed to assisting clients to achieve significant reductions in GHG emissions and increase their energy efficiency through its programs and services.



Godo Stoyke
President of Carbon Busters Inc.

1.2 Commitment to regular reporting

Through the above signature Carbon Busters commits to registering an update of this action plan with results by the end of October of each year.

1.3 Internal practices on climate change

Carbon Busters incorporates emissions management into daily business practices. Almost half (48%) of Carbon Busters' emissions comes from business-related travel with the remainder resulting from energy consumed in the day-to-day operations of the office. Carbon Busters has procedures in place to ensure that GHG emissions from the operation of its business are minimized and will continue to revise its procedures on a regular basis to account for changes in its emissions.

Travel Policy:

Public Transportation & Car Rental:

Carbon Busters encourages car-pooling and requires employees to use public transportation when on business trips whenever possible. If unable to use public transportation due to inaccessibility or excessive luggage, employees are required to rent the most efficient and economical car available. In North America this would be a Geo Metro, Toyota Prius, Honda Insight or Honda Civic Hybrid. In Europe this would be a Smart Car, the Renault Clio TDI or the Audi A2 TDI. This allows Carbon Busters to minimize GHG emissions by minimizing fuel consumption.

Business Trips:

Carbon Busters has seen an increase in business related trips over the past years as marketing efforts were increased. Carbon Busters continues to ensure that business trips are scheduled in order to complete the most possible business with the lowest number of people and trips to each area of business. This allows us to reduce the number of trips, thereby reducing GHG emissions due to travel by automobile, train or airplane.

Office Fleet:

Carbon Busters recognizes the need for active marketing, attending conferences and visiting existing clients. Carbon Busters' policy is to purchase the most energy efficient vehicle available for regional travel, such as the acquisition of the 2005 Toyota Prius ultra-low emission hybrid-electric vehicle.

Office Emissions:

Carbon Busters' office energy management policies includes four components: low-cost retrofits, operational changes, environmental purchasing policy and employee behaviour.

Low-cost retrofits:

The office is set up to maximize efficiency. Many lights have been retrofitted to be individually controllable so that lights can be switched off whenever natural light provides sufficient illumination in that area. Equipment is plugged into power bars to



permit its complete disconnection from the power source, thereby preventing power losses from power vampires (phantom loads). Timers and motion sensors are used wherever possible and practical. All computers are programmed to go into energy saver stand-by mode after a set period of inactivity. The heating system is programmed for temperature set-back at night, on weekends and holidays. The AC is similarly programmed during cooling months. Window kits have been applied to all windows to double window insulating values. 91% of workspaces are within 4 m of natural light.

Environmental Purchasing Policy:

Office policy states that any purchases made must be of environmentally superior products, where available. Up to 20% higher purchasing costs are automatically authorized. Equipment purchases must be the most energy-efficient models possible. As a result, most of the regularly used office computers are currently efficient laptop models, and most future computer replacements will consist of efficient laptop models.

Employee behaviour:

Carbon Busters employees are trained to consider energy efficiency in daily practice. They are responsible for ensuring that equipment and lighting is turned off or in stand-by mode when not in use, and that all equipment and lighting is shut down at the end of the day. In order to minimize the use of artificial lighting, all employee workspaces are set up so as to maximize the use of natural lighting. Employees are responsible for ensuring that used paper is in the default printer trays of all the printers and copiers in the office and garbage is minimized through an intensive re-use, recycle and composting program.

1.4 Management system description

As an energy and environmental consulting company, environmental management is integrated into all decision-making from day-to-day operations to business trips and long-term goals of the company. All staff are involved in and informed about the environmental policies and decisions. Management is committed to not only comply with environmental policies but to exceed them significantly wherever possible. CBI not only reduces pollution and GHG emissions on-site but also helps other organizations to achieve the same goals and continually improve performance. A team leader or energy champion is involved in ensuring that Carbon Busters stays on track with its environmental record and will continue working to minimize its ecological footprint. All employees are involved in implementing these goals through the assignment of various roles and tasks in the company. Projects, performance and any issues are communicated and discussed on a regular basis through lunch-meetings involving all employees, including top management. Carbon Busters is creating a standard procedure manual to facilitate training of new employees on environmental policies and procedures for the company.

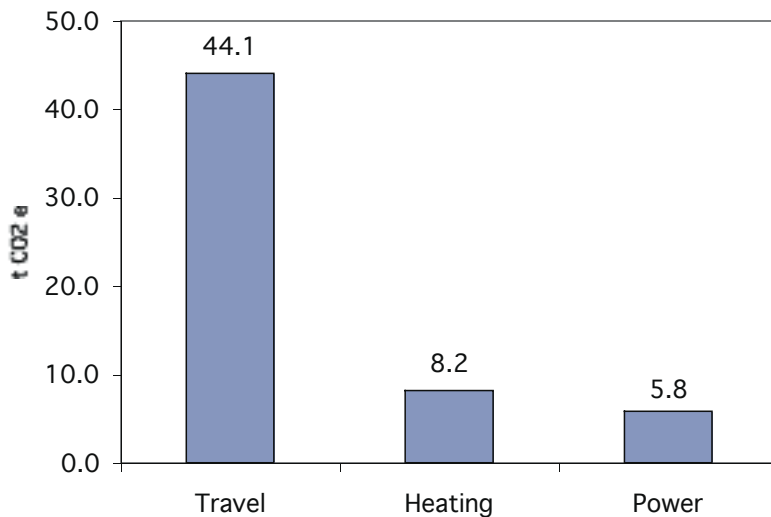
2. Base Year

The organization's greenhouse gas emissions result from regular facility operations, i.e. the consumption of electricity and natural gas, and from travel. Direct CO₂ emissions



are produced primarily by the consumption of natural gas for heating purposes. Indirect CO₂ emissions result from the consumption of electricity and from travel, primarily using public transport. The base year direct emissions (gas consumption) reflect the fact that Carbon Busters shares a common heating system with the office space situated below and that Carbon Busters is only responsible for 50% of the heating consumption. (See the graph below for a breakdown of base year emissions by category.)

Base Year - CO₂e Emissions by Category



Since power consumption is affected by the number of employees, FTE staff numbers will be used as one metric for comparing subsequent emissions from power consumption with those in the base year period, i.e. kg of GHG emissions in CO₂e per FTE.

The primary metric used for setting targets will be total company GHG emissions (in kg of CO₂e) per unit of production (client emissions reductions in metric tonnes of CO₂e).

We report direct and indirect GHG emissions according to the following formulas:

1 GJ of natural gas consumed = 49.639 kg CO₂ (carbon dioxide) + 0.00097 kg of CH₄ (methane) + 0.00087 kg of N₂O (nitrous oxide). Total CO₂e emissions were calculated on the basis of conversion factors of 1 kg N₂O = 310 kg CO₂ and 1 kg CH₄ = 21 kg CO₂.

1 kWh power consumption = 0.924 kg CO₂e (carbon dioxide equivalents).

Emissions factors resulting from travel are listed in Appendix A.1

See also Appendix A.2 for GHG emission conversion factors. (All emissions factors were drawn from the current (April, 2007) Canadian GHG Challenge Registry Guide and the links referenced therein or from the previous year's guide.)

Calculation of energy consumption was primarily based on the readings and



consumption estimates found in the utility bills. When no month-end readings were taken by the utility provider and no monthly consumption estimates were available, consumption was pro-rated based on the actual readings taken in the preceding and following months. The base year covers the period July 2002 – June 2003 (the company's fiscal year).

Base Year – Direct Emissions (Gas Consumption)

Carbon Busters' head office is heated in conjunction with identical office space situated on the floor below in the same building. Since both office suites share a common heating system with only one gas meter, the base year data comprise the consumption (and emissions) of the whole facility. Any reductions in emissions can likely be attributed primarily to conservation efforts of Carbon Busters Inc. Nevertheless, the decision was made to evaluate only the office share of the total facility consumption pro-rated on an area basis. Consequently, monthly consumption values were taken directly from the utility bills and the annual total was divided by 2 to reflect the fact that the office occupies only 50% of shared facility space.

A heating degree day (HDD) baseline was established by averaging the heating degree days over a recent 3-year period (July 2000- June 2003). The heating degree days for the base year period July 2002 - June 2003 were then compared and a correction factor was calculated. This correction factor represents the quotient of the base year HDD divided by the long-range baseline HDD. This correction factor was applied to the raw base year heating data to obtain temperature corrected heating data (consumption and emissions).

Base Year – Indirect Emissions (Electricity)

No actual readings were available for the power meter for the beginning and end of the base year period, so readings were based on the estimates provided in the utility bills. Whereas Carbon Busters shares a single gas meter with other building tenants, Carbon Busters' power consumption is metered separately.

Since power consumption is affected by the number of employees, FTE staff numbers will be used as a metric for comparing subsequent consumption with the base year period and making any necessary corrections.

The power consumption data serve as the basis for calculating the base year indirect GHG emissions.

Base Year – Indirect Emissions (Travel)

Business travel was recorded for the base year period and the resulting GHG emissions were calculated in kg of CO₂e as per the emissions factors outlined in Appendix A.1. See Appendix B for a breakdown of company business travel during the base year and the calculation of the resulting base year emissions.

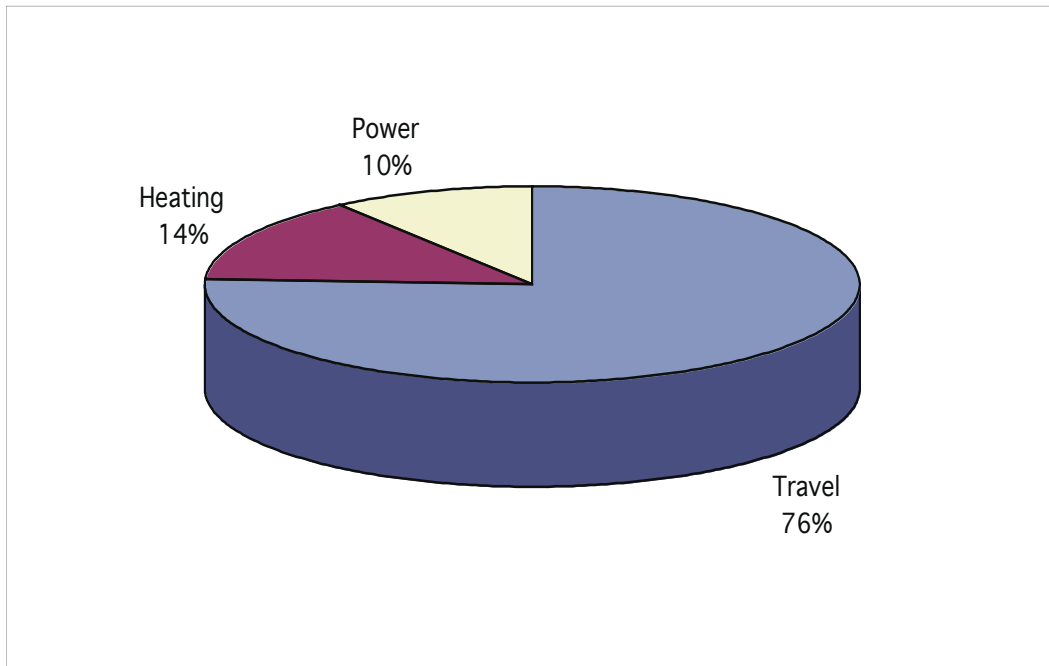
In the tables the base year GHG emissions are computed separately for each category listed above. The summary sheets provide information on the total emissions as well as consumption and emissions per m² of building area, total emissions per km of business travel, emissions per employee and emissions produced by the office per unit of emissions reduced for clients of the company. The last two metrics will serve as the primary criteria for comparing base year and reporting year emissions.



Total corrected CO₂e emissions within the base year comprised 58.07 metric tonnes including 8.16 metric tonnes of direct emissions and 49.91 metric tonnes of indirect emissions (14.1% and 85.9% respectively). Since company travel primarily involves public transportation and/or rental vehicles, emissions from travel are treated as indirect emissions. Power consumption contributed 10% of the GHG emitted, travel produced 75.9% of the CO₂e, while heating consumption led to emissions of 14.1% of the total emissions of the office.

During the base year period the company achieved reductions of 5,490.5 metric tonnes of CO₂e for its clients. Thus office emissions comprise only 10.58 kg for every tonne that the CO₂e emissions of EEC's clients were reduced.

Base Year Office Emissions Contributions in %



See Appendices C.1 - C.3 for the Updated Base Year Consumption and Emissions Data for Power, Heating and Travel and for tables showing the GHG emissions inventory by gas type, category and metric for the base year. The table in Appendix C.4 summarizes the Total GHG Emissions for the Base Year.

3. Results Achieved

Current Reporting Year:

The same criteria employed to correct and compute the base year data were utilized to correct and calculate the data in the fourth reporting year. Emissions were calculated based on the consumption indicated in the utility bills and the same emissions factors applied that were used to calculate base year emissions. In addition, changes in consumption units and emissions as well as percentage changes and changes in specific consumption were calculated and graphed. The current (fifth) reporting year comprises the period July 2007 – June 2008.

Direct Emissions: The heating degree days for the fifth reporting year July 2007 - June 2008 were compared with the long-range baseline and a corresponding correction factor was calculated, i.e. the correction factor represents the quotient of the reporting



year HDD divided by the baseline HDD. This factor was multiplied with the fifth year gas consumption to obtain the corrected fifth year consumption as it applies to that reporting year. The corrected fifth year emissions were calculated in a similar manner.

Indirect Emissions: No corrections were considered necessary. Power consumption decreased in comparison to the base year in spite of fluctuations in FTE staffing, the presence of additional equipment, and the increased need for air conditioning caused by climate change.

In the fifth reporting year indirect emissions comprised 31,210 kg CO₂e, direct emissions amounted to 7,491 kg CO₂e adding up to total GHG emissions of 38,701 kg CO₂e. Power consumption contributed 5,956 kg CO₂e to indirect emissions while emissions from travel comprised 25,254 kg CO₂e. During the same period FTE staff totalled 5.5 people, resulting in a proportion of 1,078 kg of CO₂e emitted (from power consumption) per FTE staff member.

Emission reductions achieved for clients: During the fifth reporting year (2007/2008) emissions reductions achieved for our clients amounted to 5,274.8 metric tonnes CO₂e, resulting in 7.34 kg CO₂e emissions produced by the company per tonne of CO₂e emissions reductions achieved by our clients. Through the purchase of 38.7 metric tonnes of CO₂e emissions offsets, the company's net GHG emissions will be reduced to 0 kg CO₂e, i.e. 0 kg CO₂e emissions produced by the company per tonne of CO₂e emissions reductions achieved by our clients.

For documentation of reporting year 5 results see the tables in Appendices D.1- D.4 and graphs in Appendices E.1 - E.5.

Comparison to base year: In the fifth reporting year direct emissions in the office decreased by 669.4 kg CO₂e in comparison to the base year, while indirect emissions decreased by 18,697 kg CO₂e for a total net decrease of 19,366 kg CO₂e. The decrease in indirect emissions is primarily attributable to decreased travel. Travel emissions in the fifth reporting year were 18,811 kg CO₂e lower than in the base year, while emissions due to electrical consumption increased by merely 114 kg CO₂e. The increase in power consumption may reflect the increased need for air conditioning because of warmer summers since the base year. The increase occurred despite a decrease in the number of FTE employees in the fifth reporting year compared to the base year, 5.52 FTE versus 6.8 FTE respectively. When emissions per FTE are analyzed, the indirect emissions for power rose from 865 kg CO₂e/FTE in the base year to 1,078 kg CO₂e/FTE in the fifth year, an increase of 213 kg CO₂e/FTE.

During the fifth reporting year (2007/2008) emissions reductions achieved for our clients comprised 5,274.8 metric tonnes CO₂e, a decrease of 215.7 metric tonnes CO₂e compared to the base year* This was significantly less than the emissions reductions of 11,228.6 metric tonnes CO₂e achieved in the first reporting year and also fell short of both the original target of 7,000 metric tonnes CO₂e and the revised target of 6,500 tonnes specified for year 5.

*These numbers include estimates that will be finalized once missing data are received from clients.

Compared to the base year, when CO₂e emissions produced by the company per



tonnes of CO₂e emissions reduced for our clients amounted to 10.58 kg/tonne, 7.34 kg/tonne were emitted in the fifth reporting year, an improvement of 3.24 kg/tonne CO₂e. Consequently, the company failed to reach its original target of reducing emissions to 6.7 kg/tonne CO₂e in year 5

As outlined in last year's GHG report, Carbon Busters has committed itself to completely offset any future emissions by purchasing emissions offsets. Offset purchases for year 5 will amount to 38.7 metric tonnes CO₂e. Therefore, once emissions offsets are taken into account, net emissions in the fifth reporting year fall to zero, thereby more than matching the targets originally set.

For documentation and additional metrics see the tables in Appendices D.1 - D.4 and the graphs in Appendices E.1 - E.5.

4. Business-as-Usual Projections

Within the framework of the company's business plan, consumption and emissions are expected to conform to the following projections:

Direct emissions: Local warming associated with global climate change should result in average annual heating degree days that are somewhat lower than those experienced in the base year. Consequently the actual gas consumption should drop by 3-5% over the next five years. However, once corrections for heating degree days are factored in, annual consumption and emissions are projected to remain relatively flat.

Indirect emissions (Power): Staff numbers (FTE) are expected to fluctuate in the coming years as the company utilizes contract staff on a temporary contract basis rather than hiring regular employees, as current employees retire, and as company focus shifts from long-term programs to research, writing, building design and short-term projects. In addition, office space will be used more frequently for meetings. The business as usual projections are therefore based on the assumption that emissions from power consumption will exceed base year emissions by 30% throughout the next five years.

Indirect emissions (Travel): Speaking engagements and efforts to expand the company's client base in conjunction with an emphasis on education and training will result in considerable business travel. However, the company's focus of operations has shifted from Europe to North America and it is expected that both the number length of business trips will drop during the coming years. In addition, an effort has been made to move away from renting vehicles for local travel overseas to utilizing public transportation instead. Since an increase in travel was anticipated in original projections, an overall net increase in emissions of 10% compared to the base year had been projected for the fifth reporting year. However, the distance travelled in the fifth reporting year was actually 43% lower than in the base year, although the emissions per kilometer travelled were 0.023 kg/km higher because of a higher proportion of air travel to land travel. A projected average decrease in travel emissions of 20% compared to that of the base year is therefore projected for the next five reporting years.



Travel constitutes the major sources of GHG emissions both in the 6 and 10 year projections.

For the current emissions estimates described above which outline the Business as Usual Projections for years 6 through 10 by category and GHG type see the tables and graphs in Appendix F. For the original business-as-usual projection for reporting year 5 see Appendix O below.

5. Target Setting

Ongoing education and training of employees may result in additional gains in energy efficiency within the office. However, emissions reductions among our clients remain our top priority. The original target set for the first reporting year (2003/2004) involved a reduction of client GHG emissions by 6,000 metric tonnes CO₂e, with the reductions increasing to 6,100 and 7,000 tonnes CO₂e by the second and fifth years respectively. This would correspond to a reduction in office CO₂e emissions to 6.8 kg per tonne of client CO₂e reductions in the first reporting year, with a further reduction to 6.7 kg per tonne of client CO₂e reductions by the fifth reporting year (2007/2008). Refer to Appendices K for further information on original targets and earlier target revisions.

The revised emissions targets for Year 5 comprised 5,800 metric tonnes CO₂e reductions achieved for clients, corresponding to a reduction in office CO₂e emissions to 6.8 kg per tonne of client CO₂e reductions Refer to Appendix K.3 for the relevant tables.

Actual emissions reductions achieved for clients in year 1 amounted to 11,228.6 metric tonnes CO₂e, resulting in office GHG emissions of 4.13 kg CO₂e per metric tonne of GHG emissions reductions for clients. Thus the target was not only met but exceeded. In reporting year 2 the actual emissions reductions achieved for clients amounted to 5,803.3 metric tonnes CO₂e, resulting in office GHG emissions of 7.54 kg per tonne of client CO₂e reductions achieved. However, once emissions offsets are factored in, the company's net emissions drop to zero kg CO₂e per tonne of client CO₂e reductions achieved. In reporting year 3 the estimated emissions reductions achieved for clients amounted to 5,993.4 metric tonnes CO₂e, resulting in office GHG emissions of 6.39 kg per tonne of client CO₂e reductions achieved. However, once emissions offsets are factored in, the company's net emissions again drop to zero kg CO₂e per tonne of client CO₂e reductions achieved. In reporting year 4 the estimated emissions reductions achieved for clients amounted to 5,285.7 metric tonnes CO₂e, resulting in office GHG emissions of 5.34 kg per tonne of client CO₂e reductions achieved. However, once emissions offsets are factored in, the company's net emissions again drop to zero kg CO₂e per tonne of client CO₂e reductions achieved.

In light of the emissions reductions actually achieved in years 1 - 5 and due to changes in our client base, revised targets have again been set. The target set for the sixth reporting year (2008/2009) involves a reduction of client GHG emissions by 5,000 metric tonnes CO₂e, with the reductions increasing to 6,000 tonnes CO₂e by the tenth year. Factoring in the anticipated changes in GHG emissions tied to fluctuations in staffing levels (power consumption) and shifts in travel patterns, this now corresponds to office CO₂e emissions of 10.21 kg per tonne of client CO₂e reductions in year 6, with a reduction to 8.51 kg per tonne of client CO₂e reductions by the tenth reporting year (2012/2013). However, the company plans to continue to utilize offsets in the future to



reduce its net emissions to zero for all future reporting years. Refer to Appendices G.1 through G.3 for tables and graphs with additional information.

These targets will be reviewed in each of the following reporting years in light of the actual reductions achieved by that time.

6. Past Actions

Carbon Busters implemented many energy efficiency upgrades and retrofits since moving into its current office space in 2000. Within the first month, light levels were determined in each office and lights were de-lamped when the light levels exceeded the recommended guidelines. Pull switches were installed to discourage the habitual flicking on of all lights when stepping into a room. Incandescent lamps were replaced with compact fluorescent lights. A motion sensor was installed in the copy room, and programmable timers were installed for the water fountain, the fish aquarium and the network hub. The night-, weekend- and holiday temperature setbacks for the heating and cooling systems were optimized by reprogramming the thermostat. Night setbacks were later reduced to 12°C. Dark blue office walls were repainted with a friendly, bright, light-reflecting yellow and the R-value of the windows was increased by adding a layer of plastic window insulation (window kit). Power bars were installed for every electronic appliance that consumes electricity when shut off. Office desks were re-arranged to optimize use of daylight. A 90% reduction in office power consumption compared to the national benchmark was achieved.

Installation of window kits in the office in year 1 resulted in a reduction of direct emissions by 424.2 kg CO₂e, significantly exceeding the impact originally estimated for year 1. However, these window kits are fragile and frequently require replacement. The 7,490.5 kg CO₂e in direct emissions recorded in year 5 reflect the heat losses experienced due to failure of some older window kits as well as incorrect thermostat settings.

Unfortunately, the originally estimated impact (emissions reductions of 50 kg CO₂e) of power conservation initiatives such as the installation of a new printer and more efficient computers was more than offset by increased power consumption due to a need for more air conditioning. Once a correction for the decreased staffing is factored in, the GHG emissions caused by power consumption increased by 213 kg CO₂e/ FTE in reporting year 5.

Carbon Busters is continuing to gradually replace all desktop computers with energy-efficient laptops and is also replacing old CRT monitors with LCD screens.. For the current reporting year all employees except one were using laptops as their main computer.

In year 5 the additional equipment acquired in the previous years and ongoing increased use of the office facilities, e.g. for numerous meetings, led to increased utility consumption that cancelled out the GHG savings achieved by the conservation measures that were being or had been implemented.

Carbon Busters uses a Toyota Prius, the most energy-efficient 5 seater vehicle on the market, as its company vehicle.



A staff handbook has been prepared that includes office energy efficiency measures. This will facilitate training of new employees.

In the summer of 2007 Carbon Busters also contracted to purchase green power, i.e. electricity produced from renewable sources, from Bullfrog Power for all the office's power consumption.

See Appendix H.1 for tables indicating the estimated impact of actions taken and the tables in appendices H.2 for a breakdown of the actual emissions changes.

7. Future Actions

To further decrease our greenhouse gas emissions, Carbon Busters is committed to implementing more measures to improve our efficiency. These measures include:

- replacing any damaged plastic window insulation.
- adding a second layer of plastic window insulation for all north-facing windows
- continuing to replace all desktop computers with laptops that are more energy-efficient
- continuing the use of energy-efficient technologies such as installing programmable timers, motion sensors, and power bars for all new electronic equipment acquired
- investing in state-of-the-art technology to reduce energy consumption, such as LED lights and Energy Star rated equipment
- minimizing waste creation through an internal re-use, recycle and compost program
- continuing the use of used paper in all default printing trays
- assigning responsibilities to individual employees for ensuring that all lights are turned off and all equipment has been turned off properly at the power bars
- assigning responsibility to an employee for ensuring that the thermostat as well as the timers for the fountain, aquarium and hub are set properly and are reset for day-light-saving time
- increasing our outreach to students and building users through our Carbon Busters Programs
- reading utility consumption meters on a monthly basis and graphing the consumption to better monitor energy use
- introducing the "innovative box" a monthly draw for innovative ideas on how to further reduce energy consumption in the office
- introducing "eco-memos" for offices. These eco-memos are friendly reminder notes that point out unnecessary use of energy such as a left-on computer or lights. All staff can distribute these eco-memos and receivers of these notes contribute 25¢ to a staff benefit fund.

Attitude and Behaviour:

- encouraging energy-efficient behaviour at the office through continued education such as learning lunches and encouraging employees to enrol in energy literacy or environmental classes
- switching off lights when daylight provides sufficient illumination, shutting off equipment when not needed, composting organic waste
- ensuring company policies such as the sustainable shopping policy are



implemented: Employees must buy environmentally superior products, even if up to 20% more expensive. This includes shopping locally, minimizing waste, making ethical choices (fair trade, organic)

- expanding a staff handbook to include office energy efficiency measures to facilitate training of new employees
- continuing to encourage car pooling, bicycling and using public transit for commuting to work.

Commuting:

- Carbon Busters is offering incentives in the form of gift certificates for employees who car pool, bike and/or take public transportation to work, thereby reducing GHG emissions from employee commuting. Typically two to three employees car pool to and from work.
- In addition, starting in 2007 Carbon Busters began to provide cash incentives to employees who purchase particularly fuel-efficient vehicles such as hybrids, the Smart car or the Toyota Yaris.



A Prius - the Carbon Busters company car

Business Trips and Travel:

- when on a business trip in Alberta, employees use the company vehicle, which with a fuel efficiency rating of 4.0 L/100 km in the city and 4.2 L/100 km on the highway is at least twice as efficient as average vehicles in Canada
- when on a business trip, employees are required to use public transportation whenever possible, rather than renting a vehicle
- if using public transportation is not a possibility, employees are required to rent the most efficient vehicle available

Through its Carbon Busters Program, Carbon Busters will reduce the consumption of utilities and emissions of greenhouse gases in buildings participating in our program by:

- improving the education of students and building users through hands-on workshops and providing more quality educational materials
- creating lesson plans on energy-related topics for each school grade
- helping set up environmental clubs at individual schools
- holding workshops for maintenance staff and/ or custodians on a regular basis to ensure they obtain up-to-date knowledge on energy-efficiency measures.

Conservation measures at CBI should lead to direct emissions reductions of 945 kg CO₂e in the fifth reporting year compared to the base year, rising to reductions of 950 kg CO₂e by the tenth year. Indirect emissions from power consumption will likely



continue to be higher than those recorded in the base year as increased equipment use, more meetings and greater need for air conditioning cancel out company initiatives to reduce emissions. On the other hand, travel emissions will be reduced as less trips or shorter trips are taken and as more fuel efficient transportation is used. Emissions reductions from travel are estimated at 2,200 kg CO₂e for reporting year 6 and at 2,400 kg CO₂e for reporting year 10. See Appendices I.1 - I.3 for the relevant tables and graphs including a breakdown by GHG gas type.

8. Education, Training and Awareness

8.1 Climate change issues explained to employees

Our planet is facing environmental challenges unprecedented in recorded history, dramatic loss of biodiversity due to the extinction of plant and animal species and increases in global greenhouse gas levels due to human activity. Carbon Busters' mandate is to provide solutions to these challenges that are inspiring, practical and effective.

Carbon Busters' vision is to reduce carbon and ecological footprints, encourage excellence in energy education and promote climate protection while maintaining and improving the health and comfort of the individuals in our program.

Carbon Busters offers comprehensive energy efficiency programs that combine energy audits and train building users and managers of schools, municipalities and industry while striving to reduce its own ecological footprint through leading by example.

Carbon Busters' efforts to become carbon neutral focus on education and encouraging staff to make energy-efficient choices both at work as well as at home, investing in energy-efficiency technology and committing to offsetting any remaining GHG emissions.

Employees:

- participate in lunchtime learning sessions, which encourage employees to research, present and learn about a wide variety of environmental and professional topics
- enrol in relevant classes and educational programs. Carbon Busters also invests in a range of newspapers, magazines and journals to enable office staff to be informed on the latest developments in the industry and to become aware of current environmental issues and their implications.
- participate and attend relevant conferences, workshops and community events which deal with topics such as energy efficiency and climate change.

See Appendix J.1 for a list of courses and conferences attended and accreditation received by various employees during the past 12 months.

8.2 Communicating response to climate change

From 1990 to 1999, energy efficiency in Canada improved by 8%, saving Canadians \$5.7 billion per year, and reducing greenhouse gas emissions by about 32 megatonnes.

Carbon Busters believes that energy efficiency can still be increased greatly. Along with the Rocky Mountain Institute in Colorado, a leading energy efficiency think-tank,



Carbon Busters believes that it is possible to reduce global energy consumption by up to 75% with technologies that are on the market today or are already in the prototype stage.

Carbon Busters' policy is to reduce the direct and indirect greenhouse gases the company emits and assist its clients and others in achieving significant reductions in energy consumption, utility costs and greenhouse gas emissions, while maintaining or increasing building comfort. Through its Carbon Busters Program and similar programs, Carbon Busters has helped schools and government buildings in North America and Europe reduce their energy consumption by more than \$20,900,000 and 60,000 metric tonnes of CO₂.

8.3 Identifying opportunities for individual action

Individual action to reduce greenhouse gas emissions is expected of all Carbon Busters employees. Carbon Busters trains its employees and issues frequent reminders to carry out specific measures to reduce the use of energy at work.

Following are some of the expected measures taken by employees:

- turning off lights in their workspace when sufficient daylight is available
- turning off lights when leaving any unoccupied room (washrooms, storage rooms, etc.)
- making adjustments to the programmable thermostat as well as the timers for the fountain, aquarium and hub, making sure that they are set properly and are reset for daylight saving time
- turning off office equipment after office hours and on weekends
- reusing shopping bags and purchasing environmentally friendly products for the office
- composting organic office waste
- using linen towels instead of using paper towels at the office
- sorting and recycling office waste
- participating in learning lunches and presenting on topics such as energy efficiency, climate change or the environment
- voluntarily participating in activities such as the "innovative box" and "office eco-memos".

8.4 Creating incentives for emission reductions by employees outside of work

Employees at Carbon Busters are committed to reducing the emission of greenhouse gases not only at work but also in their daily lives at home.

Following are some of the measures taken by employees:

- increasing the R-value of windows by applying plastic window insulation
- committing to biking to work, using public transportation or car pooling
- composting and recycling at home
- replacing regular light bulbs with compact fluorescent bulbs that are four times more efficient and last ten times longer
- using programmable thermostats at home to lower heat-energy consumption
- company will pay for 10% of staff volunteer time for environmental projects for a maximum of up to 2 days. In the past employees have volunteered for community events such as the Edmonton City Farm and the wildlife recovery program to help



rescue wildlife after the Wabamun oil spill in Alberta.

Carbon Busters installed a bicycle rack in 2003 to encourage workers to bicycle rather than drive to work and started an incentive program to encourage the use of alternative transportation to and from work. To qualify for a reward, staff can use public transportation or car pool three days per week. They can also bike, walk or roller blade to or from work three times a week. As part of this incentive program, qualifying CBI staff receive a \$50 gift certificate from a local sports and retail store.

Carbon Busters offers its employees free plastic window insulation for windows. This shrink-wrap can be applied at home and reduces the heating costs and natural gas consumption for the household.

Staff also have access to tools such as the Watts-Up meter or a light meter to measure the energy consumption of their appliances at home or measure the light level in different rooms. These tools help to identify the potential energy savings at home.

Education represents an important component of Carbon Busters' programs and Carbon Busters pays for courses and conferences related to energy and the environment. This knowledge often finds an application not only at the office but also at home.

8.5 Creating incentives for emissions reductions through supply-side management

Carbon Busters believes that encouraging environmentally responsible behaviour in the companies with which it does business is as important as encouraging this behaviour internally.

Water Cooler

For years Carbon Busters used to rely on a company to deliver drinking water in large bottles on a regular basis to the office. This drinking water is bottled outside the province, shipped to Alberta and then trucked to customers on a regular basis. Transportation is a major factor in GHG emissions; approximately 18% of Canada's emissions are a direct result of on-road and off-road transportation. Carbon Busters decided in 2004 that it could further decrease its ecological footprint by installing a filtration system in the office and cancelling its services with the delivery company.

Carbon Busters' Sustainable Shopping Policy

Carbon Busters' sustainable shopping policy directs company employees to purchase environmentally superior products even if up to 20% more expensive. All office copier and printer paper is recycled, usually with a 100% post-consumer content. This policy results in energy savings upstream as items such as recycled paper require 60-70% less energy to produce than paper from virgin pulp. The sustainable shopping policy also directs employees to shop locally, at the nearest retailers to the office, or to buy locally produced items where possible. This reduces greenhouse gas emissions produced in the transportation of goods and services. The policy also encourages employees to minimize waste by purchasing products with a minimum of packaging and always carrying reusable shopping bags. This reduces GHG emissions by reducing the need for the production of packaging and plastic shopping bags. Carbon Busters staff are required to favour purchasing food products from low-input ("organic") farming, which



reduces GHG emissions through increased carbon sinks from organic matter build-up in soil and reducing reliance on fossil fuels. Carbon Busters believes that by demanding environmentally superior products, it encourages suppliers to invest in these products.

Carbon Busters encourages staff to take their garments for dry cleaning to a local business that uses liquified carbon dioxide instead of toxic conventional chemicals. This process uses a mild soap in conjunction with liquified carbon dioxide, it does not require solvents and therefore does not produce toxic residue. About 98% of the carbon dioxide can be reused after a cleaning cycle.

Carbon Busters' Transportation policy while on business trips

When travelling, Carbon Busters employees are required to use public transportation such as trains whenever possible. If unable to use public transportation due to accessibility issues or heavy luggage employees must obtain the most energy-efficient and economical rental car possible, such as a Geo Metro, Toyota Prius or Honda Insight in North America, a compact vehicle such as the Smart or Lupo in Germany, or an efficient diesel car such as the Audi A2, or the Renault Clio. By demanding energy-efficient cars, Carbon Busters encourages rental companies to purchase these vehicles for their rental fleets. For regional business trips Carbon Busters purchased a hybrid vehicle which is more than twice as efficient as most vehicles in Alberta.

8.6 Create incentives for emissions reductions through demand-side management

Carbon Busters offers a comprehensive energy-efficiency program (Carbon Busters Program) to schools, municipalities and industries. This program incorporates in-depth energy audits, no-cost and low-cost recommendations for energy savings and a comprehensive energy and environmental education program. The Carbon Busters Program is currently offered to school districts and municipalities in Canada, the U.S., and overseas.

The Carbon Busters Program offers expertise, education and support to clients wanting to reduce the energy consumption of their operations. The environmental education component of the Carbon Busters Program encourages building users to take an interest in energy efficiency for its environmental benefits. Carbon Busters believes that this educational component increases potential energy savings by encouraging building users to modify their behaviour. It also encourages participants to use the ideas they have learned in the program in other situations. This sharing of ideas allows the Carbon Busters Program to reach a large number of people with the message of energy conservation.

The goal of Carbon Busters' business is to encourage clients and downstream businesses to permanently reduce energy consumption through modest retrofits and behaviour modification.

8.7 Participating in life-cycle analysis or other activities to influence external contacts

Carbon Busters aims to reduce its ecological footprint by communicating with its clients via email, mail and phone. Nevertheless, site visits remain very important to



facilitate effective communication with schools and motivate students to reduce their energy consumption through workshops and presentations. Carbon Busters recognizes that the transportation sector constitutes an important contributor to climate change. In 2000, according to Environment Canada, 17.9% of Canada's total GHG emissions resulted from the transportation sector, of which 72.7% were due to on-road transportation.

The Carbon Busters company fleet consists of a hybrid-electric vehicle. Approximately 80 to 85% of life cycle energy use for vehicles occurs in the use of the vehicle, that is driving, while 15% are accounted for during the vehicle production phase and 3% in the recovery phase for recycling. The Prius has a 50% lower CO₂ emission from cradle to grave and a recyclability of about 90%.

Thus fuel efficiency remains the most important choice when selecting a car. The fuel consumption of the Toyota Prius is approx. 4.2 L/100 km for highway driving and 4.0 L/100 km for city driving with average emissions of about 120 g CO₂/km. Fuel consumption is about 1/3 of that of conventional vehicles for city driving.

The Toyota Prius achieves its low fuel efficiency through a hybrid synergy drive. Power can be either supplied through a conventional internal combustion engine or an electric motor. In conventional vehicles energy is lost through stopping and decelerating. The Prius recovers this energy and uses it to recharge its batteries. The batteries in turn drive the electric motor at low speeds and give additional boosts when accelerating. In addition, the Prius eliminates the energy waste involved in idling, since the gasoline engine is shut down when the vehicle is stopped. The Toyota car also features smaller engine and a more aerodynamic design which reduces drag.

CBI is currently investigating the life-cycle cost of houses through its low-carbon building research program as well as conducting on-going research into low energy intensity heating and cooling approaches for buildings. The company's president is currently completing a book that provides residential carbon life cycle analysis.

8.8 Undertaking public education

Through its programs, Carbon Busters is heavily involved in educating the public about climate change, greenhouse gas emissions, energy conservation measures and other environmentally related issues. The team of environmental educators at Carbon Busters reaches students and staff through presentations, workshops and instructional materials. Carbon Busters is continuing to develop lesson plans adapted to the curriculum of various provinces to facilitate the teaching of energy issues. Schools are provided with posters and stickers, and project contests are held on an annual basis. At workshops, students and staff learn what they can do to reduce energy consumption and greenhouse gas emissions at their school.

For a partial list of workshops and presentations held by Carbon Busters employees, please refer to Appendix J.2.



Appendix A.1 Greenhouse Gas Emissions Factors

Emissions Factors	Base Year	Reporting Year
kWh Power --> kg CO ₂ e	0.985	0.924
kWh Gas --> kg CO ₂	0.17869807	0.17869807
m ³ Water --> kg CO ₂	0.78	0.78
GJ Gas --> kg CO ₂	49.639	49.639
GJ Gas --> kg CH ₄	0.00097	0.00097
GJ Gas --> kg N ₂ O	0.00087	0.00087

Appendix A.2 Conversion Factors for Travel

Conversion Factors:

Mode of Transportation		Units	Emissions Kg CO ₂ e
Car	per	1 km -->	0.28
Gasoline (car)	per	1 L -->	2.36
Diesel (car)	per	1 L -->	2.73
Train	per	1 km -->	0.103
Bus	per	1 km -->	0.059
Plane	per	Take-off	34.1
	+	1 km -->	0.105
Train	per	Euro-->	0.576
Taxi	per	\$ CDN	0.21
Bus	per	\$ CDN	0.32



Appendix B Base Year CO2e Emissions from Business Travel

CO2 e Emissions from Business Travel
Base Year (July 2002 - June 2003)

Date	Staff FTE	Country/ Destination	Mode	Total km	Emissions kg CO2e
July, 2002	6	Canada	car	55.0	15.4
August, 2002	5	Canada	car	5.9	1.65
August, 2002		Canada	car	10.0	2.80
September, 2002	7	Germany	plane	17603	2011.77
October, 2002	7	Germany	plane	15680	1776.53
October, 2002		Germany	plane	54348	6094.0
October, 2002		Germany	plane	17899	2008.64
October, 2002		Germany	plane	18116	2031.33
October, 2002		Germany	car	1237.3	346.44
October, 2002		Germany	train	27	2.79
November, 2002	7	Germany	plane	17899	2008.64
November, 2002		Canada	car	190.5	53.34
November, 2002		Germany	plane	16567	1869.31
November, 2002		Germany	car	322.6	90.34
November, 2002		Germany	plane	16567	1869.31
November, 2002		Germany	car	1692.7	473.96
November, 2002		Germany	plane	15680	1776.53
November, 2002		Germany	car	1921.1	537.91
December, 2002	7	Canada	car	85.3	23.88
December, 2002		Germany	car	1834.4	513.62
January, 2003	6	USA	plane	21788	2551.82
January, 2003		Canada	car	111	31.08
February, 2003	6	Canada	car	1600	448.0
February, 2003		Canada	car	1644	460.3
February, 2003		Germany	plane	17330	1983.22
March, 2003	7	Germany	car	1053.8	295.06
March, 2003		Germany	plane	17580	2009.37
March, 2003		Germany	plane	17280	1977.99
March, 2003		Germany	car	532.7	149.17
March, 2003		Germany	car	241.3	67.57
March, 2003		Canada	car	3108	870.24
March, 2003		USA	plane	5382	699.36
March, 2003		Germany	train	2020.3	208.69
March, 2003		Germany	car	412.0	115.36
March, 2003		Canada	plane	6238	788.89
March, 2003		Canada	plane	5694	663.79
March, 2003		Canada	car	46.1	12.9
April, 2003	7	Canada	car	253.9	71.1
April, 2003		Canada	car	78	21.8
May, 2003	8	Canada	car	2549	713.7
May, 2003		Canada	car	1738	486.64
May, 2003		Canada	car	50	14.0
May, 2003		Germany	plane	15120	1649.75
May, 2003		Canada	car	880	246.4
June, 2003	8	Canada	car	156	43.7
June, 2003		Canada	bus	310	18.20
June, 2003		Canada	bus	85.2	5.00
June, 2003		Canada	plane	280	63.39
June, 2003		Germany	plane	16604	1907.3
June, 2003		Germany	car	386.4	108.18
June, 2003		Germany	car	143.5	40.17
June, 2003		Germany	train	2893	298.85
June, 2003		Germany	car	42.5	11.91
June, 2003		Canada	car	633	177.24
June, 2003		USA	car	60	16.8
June, 2003		Canada	car	44	12.3
June, 2003		USA	plane	7954	1002.5
June, 2003		Canada	car	198.9	55.68
June, 2003		Canada	car	711	199.08
June, 2003		Canada	car	216	60.48
Total:				351,188.3	44,065.2

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Appendices C Base Year Data

Appendix C.1 Base Year Power Consumption Data

Carbon Busters Inc.											
Head Office											
Base Year Consumption (2002/2003)											
POWER											
Current	Base Year	Base Year	Corrected	Base Year	Base Year	Base Year	Base Year	Base Year	Base Year	Base Year	Base Year
Bldg. Area (m ²)	Staff Numbers (FTE)	Client CO ₂ e Reductions Achieved (t)	Base Year Consumption (kWh)	Emissions (in kg CO ₂ e)	Specific Consumption (kWh/m ²)	Emissions (CO ₂ e) (kg/m ²)	Consumption per FTE (kWh/FTE)	CO ₂ e-Emissions per FTE (kg/FTE)	Consumption per FTE (kWh/FTE)	CO ₂ e-Emissions per Tonnes CO ₂ e Reduction (kg/t)	Base Year
250.83	6.8	5490.5	5931	5842	23.6	23.3	879	865	879	865	1.064



Appendix C.2 Base Year Heating Consumption Data

Carbon Busters Inc.,
Head Office
 Base Year Consumption (2002/2003)

Current Bldg. Area (m ²)	Base Year Staff Numbers (FTE)	Base Year Client CO ₂ e Reductions Achieved (t)	HEATING			Emissions Corrected Base Year CH ₄ (kg)	Corrected Base Year CO ₂ (kg)	Total Corr. Base Year Emissions in CO ₂ e (kg)
			Uncorrected Base Year (GJ)	Base Year (Temperature Corrected) (GJ)	Base Year (Temperature Corrected) (kWh)			
250.83	6.8	5490.5	164.52	163.43	45399	8112.7	0.16	8159.9

HEATING					
Corrected Base Year Specific Consumption (kWh/m ²)	Corrected Base Year CO ₂ -Emissions (kg/m ²)	Corrected Base Year CH ₄ -Emissions (kg/m ²)	Corrected Base Year N ₂ O-Emissions (kg/m ²)	Corrected Base Year Consumption per FTE (kWh/FTE)	Corrected Base Year CO ₂ e Reduction per tonnes CO ₂ e (kg/t)
181.0	32.3	0.0	0.0	6725.8	1.5
				1208.9	

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Appendix C.3 Base Year Travel Consumption Data

Carbon Busters Inc.									
Head Office									
Base Year Consumption (2002/2003)									
TRAVEL									
Current Bldg. Area (m ²)	Base Year Staff Numbers (FTE)	Base Year Client CO ₂ e Reductions Achieved (t)	Base Year Distance Travelled (km)	Base Year Emissions in CO ₂ e (kg)	Base Year CO ₂ e Emissions per m ² area (kg/m ²)	Base Year CO ₂ e Emissions per km travelled (kg/km)	Base Year CO ₂ e Emissions per FTE (kg/FTE)	Base Year CO ₂ e Emissions per tonnes	Base Year CO ₂ e Reduction (kg/t)
250.83	6.8	5490.5	351188.3	44065.2	175.7	0.125	6528.2	8.0	



Appendix C.4 Base Year Total Emissions Data

Carbon Busters Inc.									
Head Office									
Year 1 Corrected Emissions (2003/2004)									
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e in (kg)	Total Emissions Achieved for Clients (in tonnes)	Year 1 CO2 e Emissions per m2 area (kg/m2)	Year 1 CO2 e Emissions per km travelled (kg/km)	Year 1 CO2 e Emissions per FTE (kg/FTE)	Year 1 CO2 e Emissions per tonnes of Client (kg/t)	Year 1 CO2 e Reduction (kg/t)	
7,735.8	38,685.6	46,421.3	11,228.6	185.07	0.19	5134.16		4.13	
Total CO2e - Year 1 Emissions by Category									
Travel		32.0	31993.3				Direct	16.7%	
Heating		7.7	7735.8				Indirect	83.3%	
Power		6.7	6692.3						



Appendices D Fifth Year Data

Appendix D.1 Year 5 Power Consumption Data

Carbon Busters Inc.										
Head Office										
Year 5 Consumption (2007/2008)										
POWER										
Current Bldg. Area (m ²)	Year 5 Staff Numbers (FTE)	Year 5 Client CO ₂ e Reductions Achieved (t)	Year 5 Consumption (kWh)	Year 5 Emissions (in kg CO ₂ e)	Year 5 Specific Consumption (kWh/m ²)	Year 5 Emissions (CO ₂ e) (kg/m ²)	Year 5 Consumption per FTE (kWh/FTE)	Year 5 CO ₂ e-Emissions per FTE (kg/FTE)	Year 5 CO ₂ e Reduction per tonnes (kg/t)	Year 5 CO ₂ e Reduction (kg/t)
250.83	5.5	5274.8	6047	\$956	24.1	23.7	1094	1078		1.129

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Appendix D.2 Year 5 Heating Consumption Data

Carbon Busters Inc.									
Head Office									
Year 5 Consumption (2007/2008)									
HEATING									
Current Bldg. Area (m ²)	Year 5 Staff Numbers (FTE)	Year 5 Client CO ₂ e Reductions Achieved (t)	Consumption		Year 5 (Temperature Corrected) (kWh)	Emissions		Corrected Year 5 CH ₄ (kg)	Corrected Year 5 N ₂ O (kg)
			Uncorrected Year 5 (GJ)	Year 5 (Temperature Corrected) (GJ)		Corrected Year 5 CO ₂ (kg)	Corrected Year 5 CH ₄ (kg)		
250.83	5.5	5274.8	153.65	150.03	41674	7447.1	0.1	0.1	0.1

HEATING										
Total Corr. Year 5 Emissions in CO ₂ e (kg)	Corrected Year 5 Specific Consumption (kWh/m ²)	Corrected Year 5 CO ₂ -Emissions (kg/m ²)	Corrected Year 5 CH ₄ -Emissions (kg/m ²)	Corrected Year 5 N ₂ O-Emissions (kg/m ²)	Corrected Year 5 Consumption per FTE (kWh/FTE)	Corrected Year 5 CO ₂ e-Emissions per FTE (kg/FTE)	Corrected Year 5 CH ₄ per FTE (kg/FTE)	Corrected Year 5 N ₂ O per FTE (kg/FTE)	Corr. Year 5 CO ₂ e Emissions per tonnes	Corr. Year 5 CO ₂ e Reduction (kg/t)
7490.5	166.1	29.7	0.0	0.0	7543.0	1355.8				1.4



Appendix D.3.A Year 5 Travel Consumption Data

Carbon Busters Inc.										
Head Office										
Year 5 Consumption (2007/2008)										
TRAVEL										
Current	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5
Bldg.	Staff	Client CO2e	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5	Year 5
Area	Numbers	Reductions	Distance	Emissions	CO2 e Emissions	CO2 e Emissions	CO2 e Emissions	CO2 e Emissions	CO2 e Emissions	CO2 e Emissions
(m2)	(FTE)	(t)	Travelled	In CO2 e	per m2 area	per km travelled	per FTE	per tonnes	per FTE	per tonnes
		Achieved	(km)	(kg)	(kg/m2)	(kg/km)	(kg/FTE)	CO2 e Reduction	(kg/FTE)	(kg/t)
250.85	5.5	5,274.6	170,698.9	25,253.8	100.7	0.148	4,570.9	4.8		



Appendix D.3.B Year 5 CO2e Emissions from Business Travel

CO2 e Emissions from Business Travel Year 2007/2008

Date	Staff FTE	Destination/ Country	Mode	Distance travelled	
				km	kg CO2
July, 2007		Germany	taxi	10	3
July, 2007		Toronto	plane	16272	1,907
July, 2007		Stony Plain	car g	240	67
Jul. 07, 2007		Yellowknife	plane	1980	275
Jul. 18, 2007		Valleyview	car g	230	64
Jul. 19, 2007		Valleyview	car g	253	71
Aug. 4, 2007		Yellowknife	plane	3960	551
Aug. 8, 2007		Yellowknife	car g	150	42
Aug. 13, 2007		Canada	car g	253	71
Aug. 17, 2007		Canada	car g	187	52
Aug. 19, 2007		Edm. Airport	car g	300	84
Aug. 19, 2007		Yellowknife	car g	151	42
Aug. 20, 2007		Yellowknife	cab	12	3
Sep. 6, 2007		Canada	car g	20	6
Sep. 25, 2007		Manning	car g	264	74
Sep. 26, 2007		Leduc, Drayton	car g	453	127
Oct. 29, 2007		Canada	car g	87	24
Oct. 29, 2007		Canada	car g	200	56
Oct. 29, 2007		Germany	plane	16,488	1,929
Oct. 29, 2007		Germany	train	1,593	165
Nov. 2, 2007		U.S.	plane	17,202	5,705
Nov. 5, 2007		U.S.	taxi	65	18
Nov./Dec. 2007		Germany	train	2,239	231
Nov./Dec. 2007		Germany	train	30	3
Nov. 12, 2007		Canada	car g	12	3
Dec. 4, 2007		U.S.	plane	4,812	640
Dec. 5, 2007		Manning	car g	204	57
Dec. 6, 2007		Manning	car g	170	48
Dec. 6, 2007		Manning	car g	129	36
Dec. 6, 2007		Manning	car g	216	60
Dec. 11, 2007		U.S.	taxi	31	9
Dec. 2007		U.S.	taxi	36	10
Jan. 2008		Canada	car g	370	104
Jan. 8, 2008		Canada	car g	18	5
Jan. 15, 2008		Yellowknife	plane	1980	275
Jan. 15, 2008		Yellowknife	plane	1980	275
Jan. 22, 2008		U.S.	plane	7,720	944
Jan. 29, 2008		U.S.	taxi	9	3
Jan. 29, 2008		U.S.	taxi	77	21
Jan. 30, 2008		Slave Lake	car g	344	96
Feb. 7, 2008		U.S.	taxi?	60	17
18-Mar-08		U.S.	plane	3,409	425
18-Mar-08		Canada	plane	16,880	1,902
18-Mar-08		Canada	plane	6,750	877
4-Apr-08		Canada	car g	27	8
5-Apr-08		Canada	car g	186	52
8-Apr-08		Canada	car g	27	8
8-Apr-08		Canada	car g	139	39
8-Apr-08		Canada	car g	115	32
24-Apr-08		Canada	car g	42	12
May 2008		Germany	car g	175	49
May 2008		Germany	car g	285	80
May 2008		Germany	car g	103	29
May 2008		Germany	car g	309	87
May 2008		Germany	ferry	32	3
May 2008		Germany	train	3	0
May 2008		Germany	train	563	58
May 19, 2008		Canada	plane	5,424	636
May 19, 2008		Canada	plane	8,136	953
May 28, 2008		Canada	plane	4,183	506
June 2008		Germany	plane	15,680	1,777
10-Jun-08		Whistler	bus	130	8
12-Jun-08		U.S.	plane	3,690	454
13-Jun-08		U.S.	plane	3,409	425
16-Jun-08		Canada	car g	163	46
17-Jun-08		Canada	car g	231	65
2007/2008		Canada	car g	19,800	2,552
Total:				170,698.9	25,253.8

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Appendix D.4 Year 5 Total Emissions Data

Carbon Busters Inc.									
Head Office									
Year 5 Emissions (2007/2008)									
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e in (kg)	Total Emissions CO2 e Achieved for Clients (in tonnes)	Year 5 CO2 e Emissions per m2 area (kg/m2)	Year 5 CO2 e Emissions per km travelled (kg/km)	Year 5 CO2 e Emissions per FTE (kg/FTE)	Year 5 CO2 e Emissions per tonnes of Client CO2 e Reduction (kg/t)		
7,490.5	31,210.1	38,700.6	5,274.8	154.29	0.23	7,004.73	7.34		
Total CO2e - Year 4 Emissions by Category									
Travel		25.3 t	25253.8 kg					19.4%	
Heating		7.5	7490.5					80.6%	
Power		6.0	5956.3						

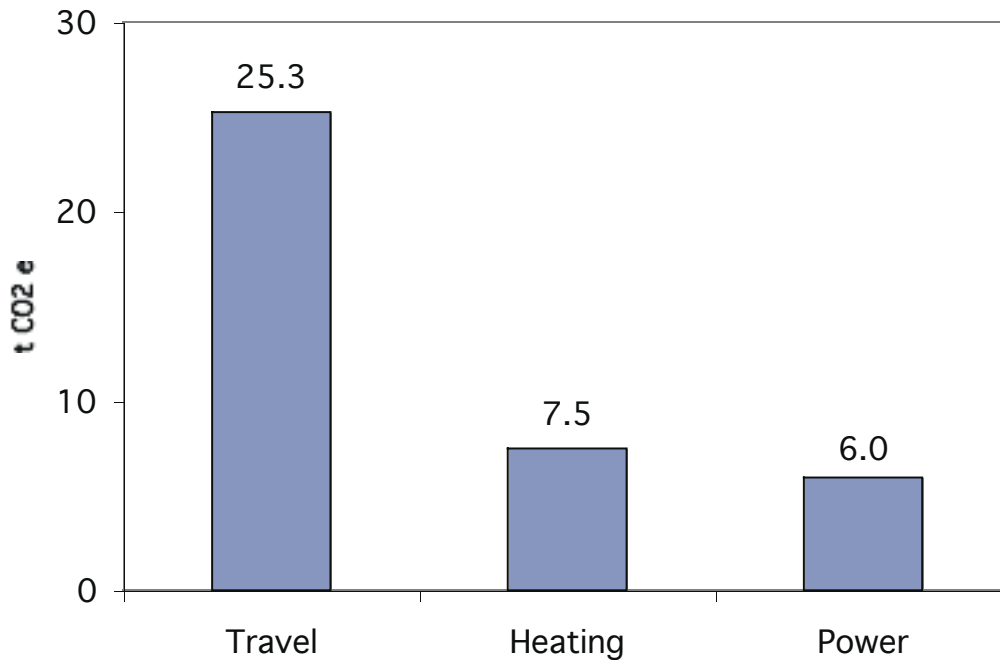
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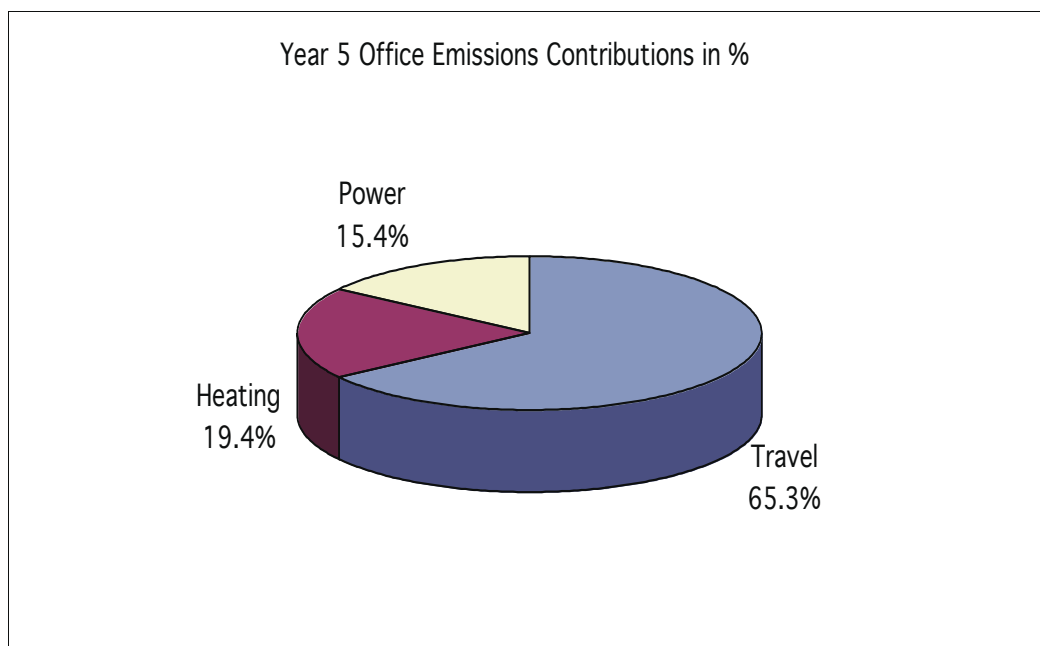
Appendices E Fifth Year Data

Appendix E.1 Year 5 CO₂e Emissions by Category

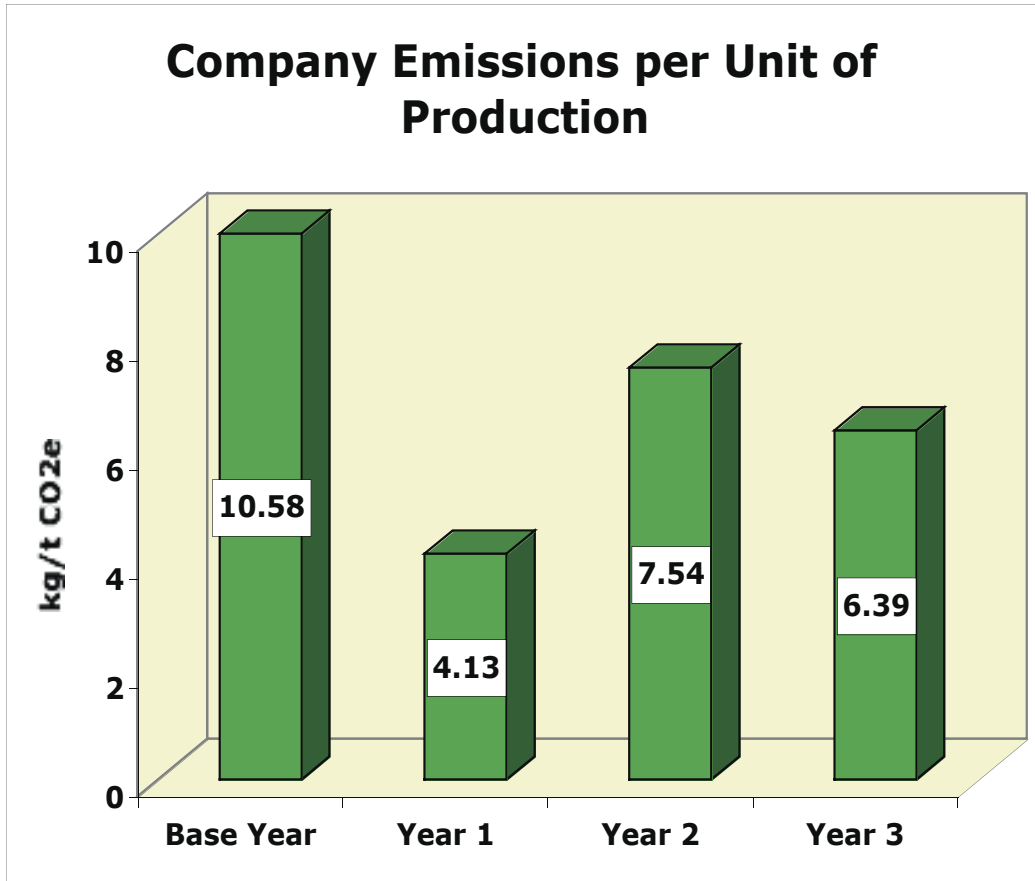
Year 5 CO₂e Emissions by Category



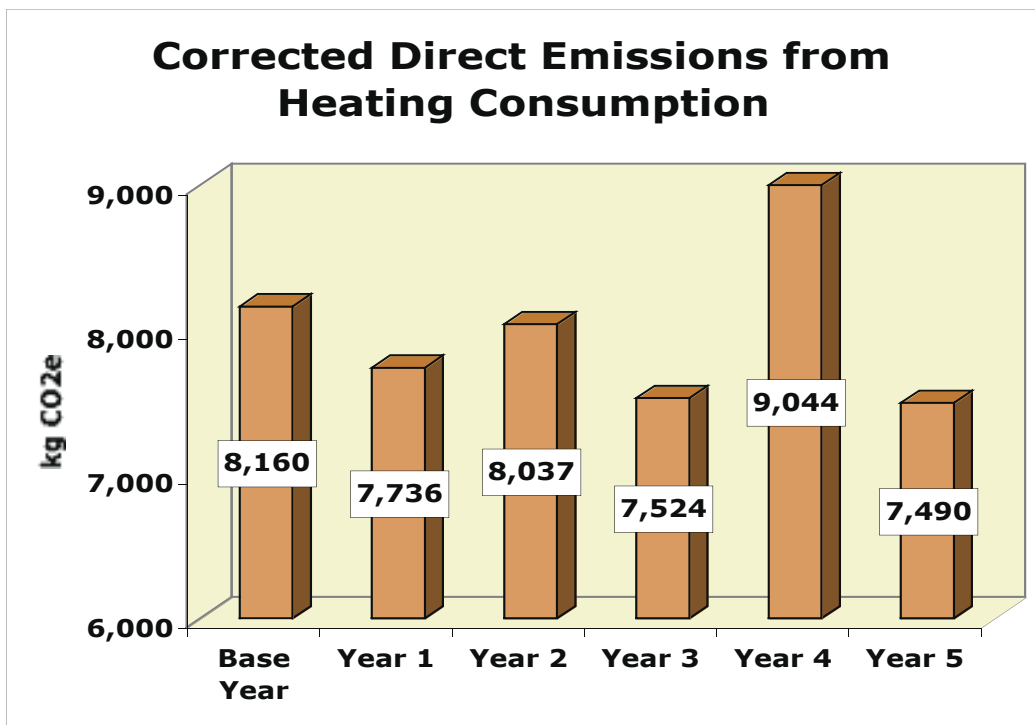
Appendix E.2 Year 5 Office Emissions Contributions in %



Appendix E.3 - Company Emissions per Unit of Production



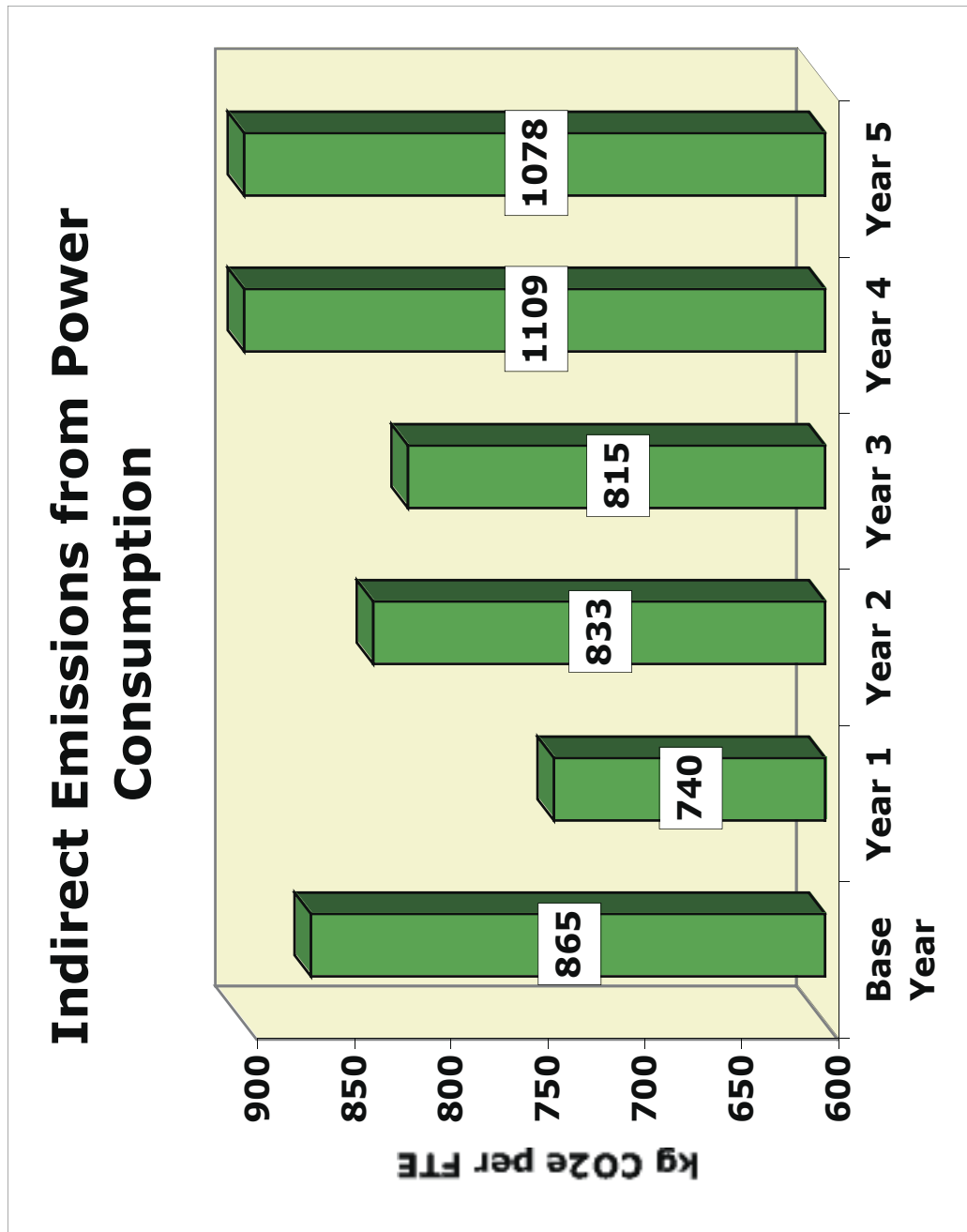
Appendix E.4 Corrected Direct Emissions from Heating Consumption



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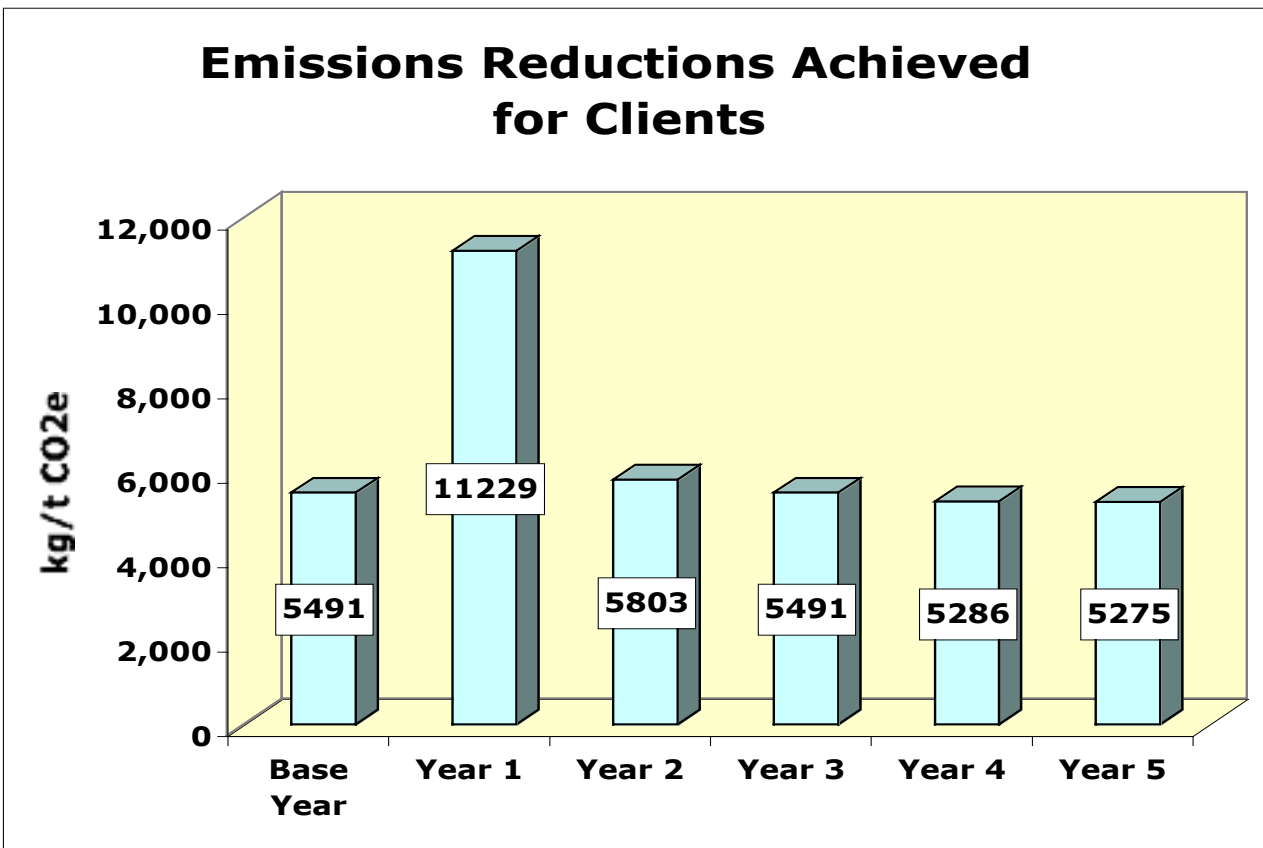
Appendix E.5 Indirect Emissions from Power Consumption



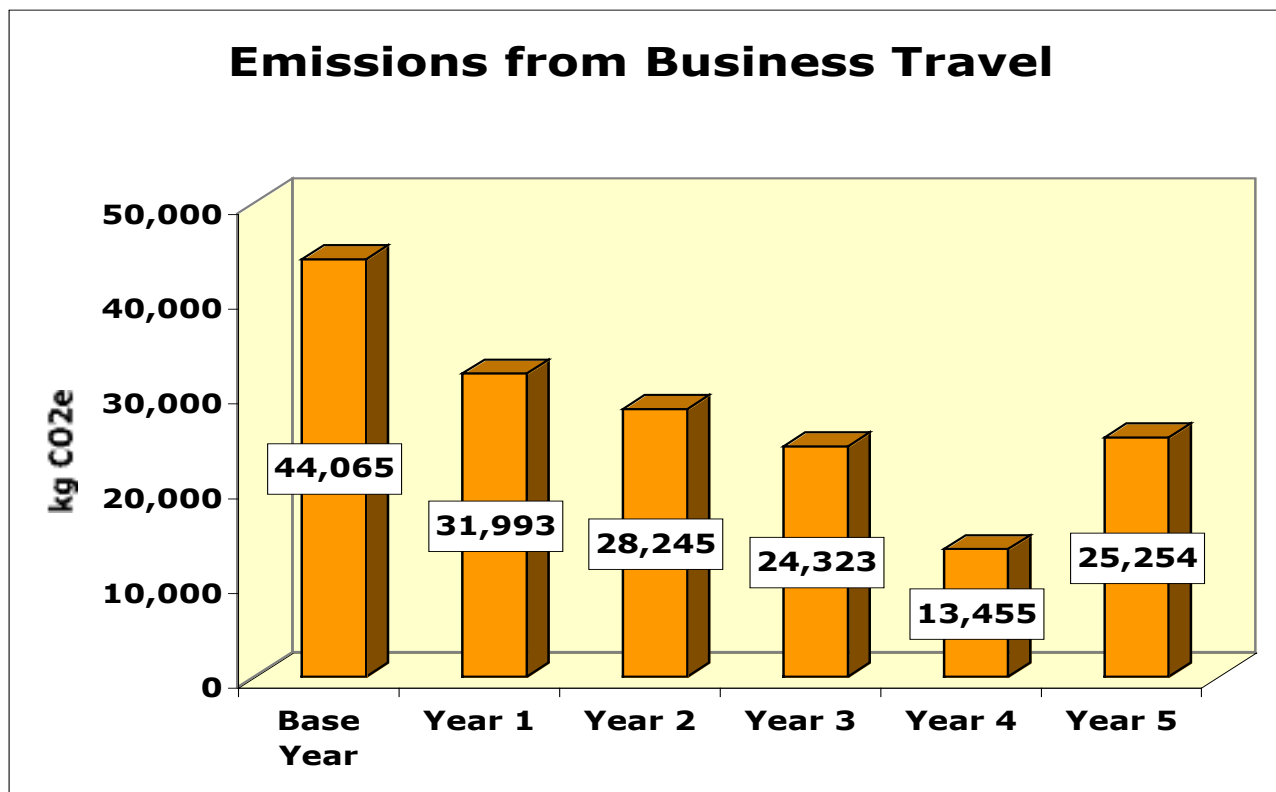
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Appendix E.6 Emissions Reductions Achieved for Clients



Appendix E.7 Emissions from Business Travel



Appendix F.2 Year 10 Business-As-Usual Projection

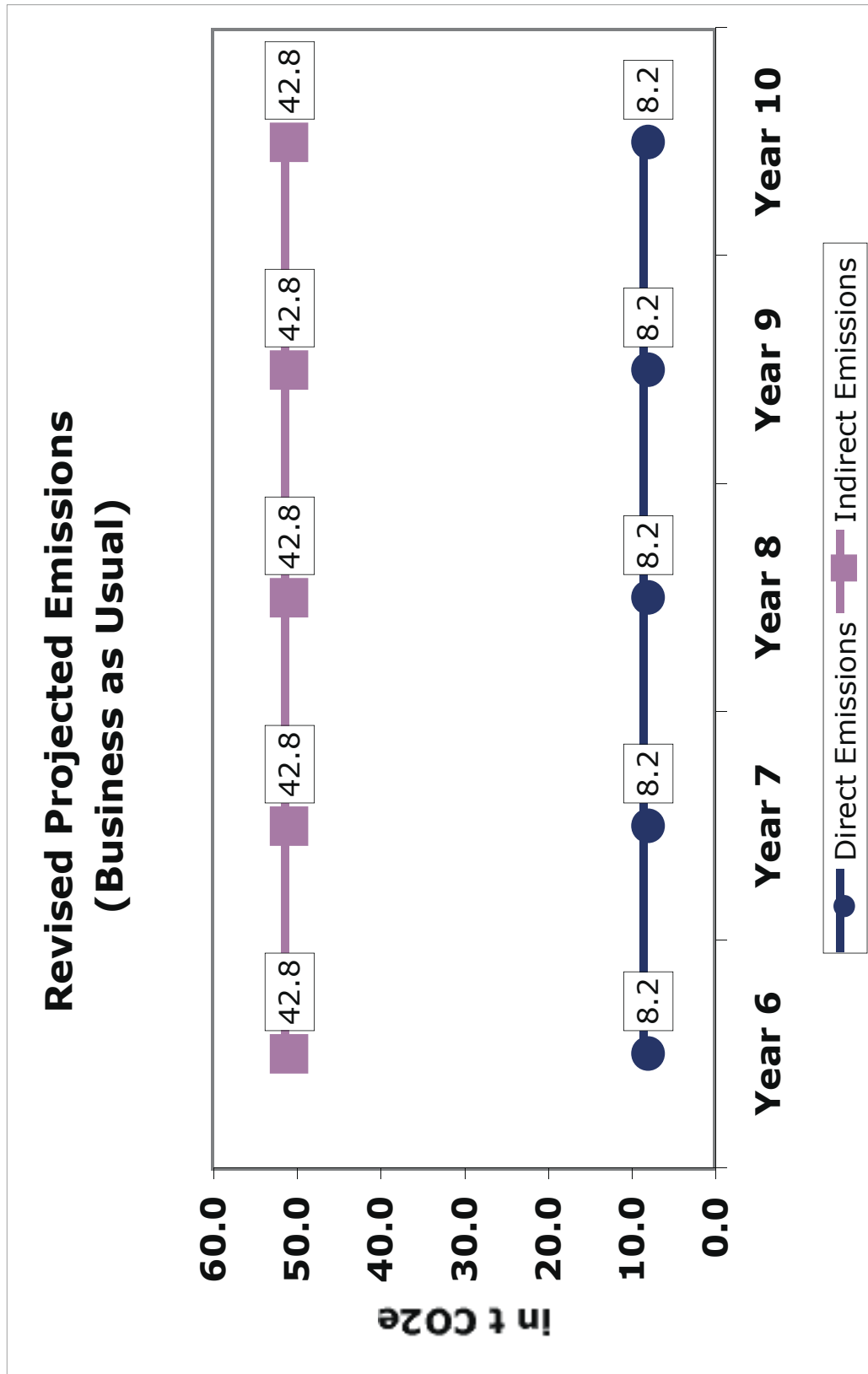
Year 10 (2012/2011) Projected Corrected Emissions by Category

Projected Power Emissions (in CO ₂ e)	Projected Heating Emissions (in CO ₂)	Projected Heating Emissions (in CH ₄)	Projected Heating Emissions (in N ₂ O)	Projected Travel Emissions (in CO ₂ e)	Projected Total Emissions (in CO ₂ e)	Projected Total Direct Emissions (in CO ₂ e)	Projected Total Indirect Emissions (in CO ₂ e)
7,594	8,160	0.2	0.1	35,252	51,054	8,207	42,847
Projected Total Emissions	Projected Total Distance Travelled (km)	Projected Total FTE Staff Numbers	Projected Total CO ₂ e Emissions per m ² area	Projected Total CO ₂ e Emissions per km travelled	Projected Total CO ₂ e Emissions per FTE	Projected Total CO ₂ e Emissions per tonnes Client	Projected Total CO ₂ e Emissions
5,000	280,951	6.0	203.54	0.18	8508.9	8.51	

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Appendix F.3 Long Term Projections



Appendices G Targets

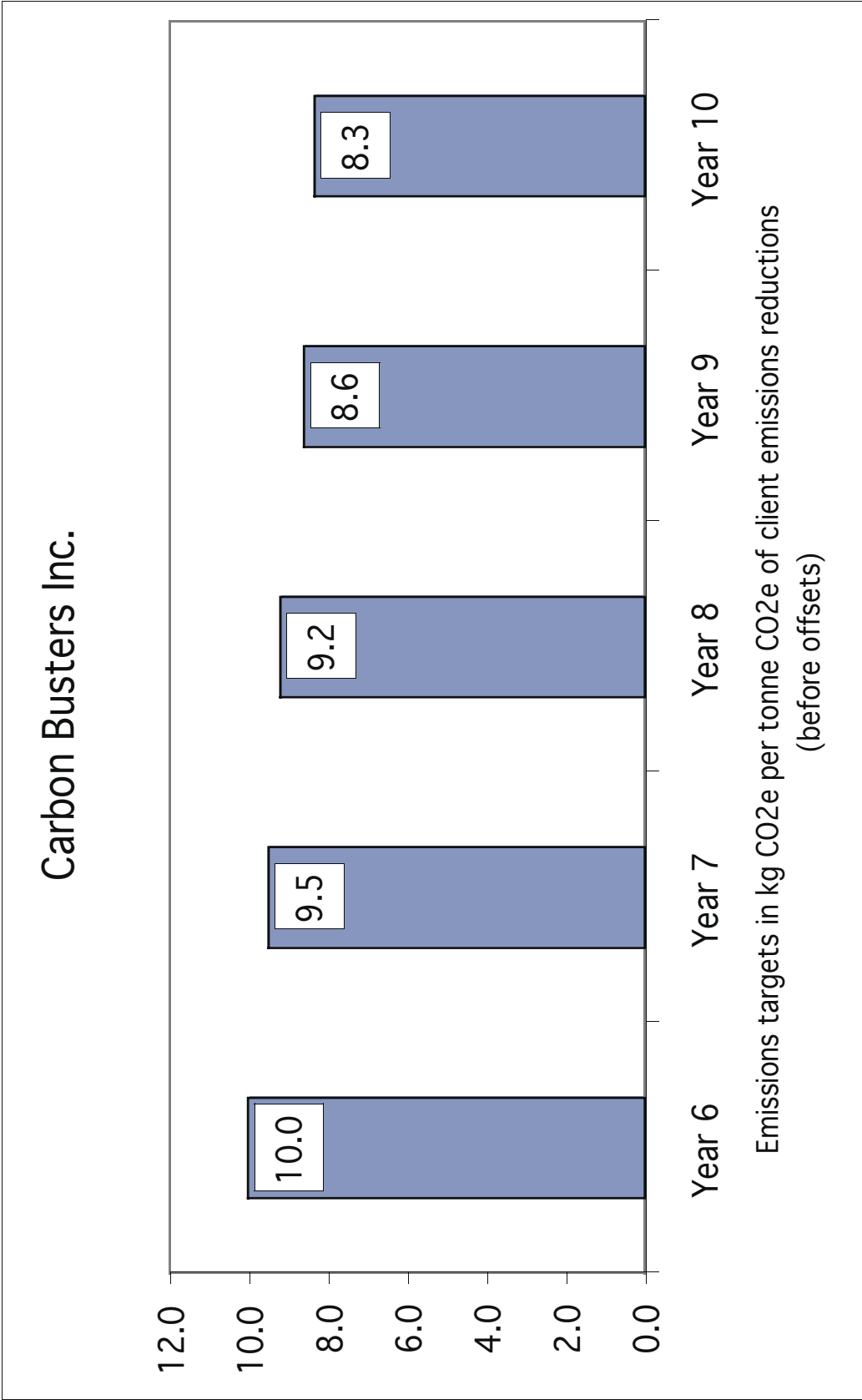
Appendix G.1 Revised Targets for Year 6

Year 6 (2008/2009) Corrected Emissions Targets by Category									
Target for	Target for	Target for	Target for	Target for	Target for	Target for	Target for	Target for	Target for
Power Emissions in (kg CO2e)	Heating Emissions in (kg CO2)	Heating Emissions in (kg CH4)	Heating Emissions in (kg N2O)	Travel Emissions in (kg CO2e)	Total Emissions in (kg CO2e)	Total Emissions in (kg CO2e)	Total Emissions in (kg CO2e)	Total Emissions in (kg CO2e)	Total Emissions in (kg CO2e)
7,544	7,280	0	0	35,252	50,118	50,118	50,118	50,118	7,322
Total Emissions	Total Distance Traveled (km)	Total FTE Staff Numbers	Total CO2 e Emissions per m2 area	Total CO2 e Emissions per km travelled	Total CO2 e Emissions per FTE	Total CO2 e Emissions per tonnes Client	Total CO2 e Emissions per tonnes Client	Total CO2 e Emissions per tonnes Client	Total CO2 e Emissions per tonnes Client
5,000	280,951	6.0	199.81	0.18	8353.1	8353.1	8353.1	8353.1	10.02

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Appendix G.3 Revised Long Term Targets



Appendices H Past Actions

Appendix H.1 Year 5 Estimated Impact of Measures

Carbon Busters Inc.		Head Office		Year 5 (2007/2008) Estimated Cumulative Impact of Conservation Measures	
Power Emissions Reductions in (kg CO2e)	Heating Emissions Reductions in (kg CO2)	Heating Emissions Reductions in (kg CH4)	Heating Emissions Reductions in (kg N2O)	Travel Emissions Reductions in (kg CO2e)	Total Emissions Reductions in (kg CO2e)
50	880	0.02	0.02	2,000	2,935
Year 6 Total Direct CO2 e Emissions Reductions in (kg)	Year 6 Total Indirect CO2 e Emissions Reductions in (kg)	Year 6 Total CO2 e Emissions Reductions in (kg)			
885	50	2,935			

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Appendix H.2 Year 5 Emissions Reductions

		Carbon Busters Inc.							
		Head Office							
		Year 5 Emissions Reductions (2007/2008)							
Total Direct Emissions Reductions in (kg CO2 e)	Total Indirect Emissions Reductions in (kg CO2 e)	Total Emissions Reductions in (kg CO2 e)	Year 5 Emissions Reductions per m2 area (kg CO2 e/m2)	Year 5 CO2 e Emissions Reductions per km travelled (kg/km)	Year 5 CO2 e Emissions Reductions per FTE (kg/FTE)	Year 5 Emissions Reductions per tonnes of Client CO2 e Reduction (kg CO2 e / t CO2 e)			
669.4	18,696.9	19,366.4	77.21	0.11	1597.78	3.24			

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Appendices I Future Actions

Appendix I.1 Year 6 Projected Impact of Conservation Measures

Carbon Busters Inc.						
Head Office						
Year 6 (2008/2009) Estimated Cumulative Impact of Conservation Measures						
Power Emissions Reductions in (kg CO2e)	Heating Emissions Reductions in (kg CO2)	Heating Emissions Reductions in (kg CH4)	Heating Emissions Reductions in (kg N2O)	Travel Emissions Reductions in (kg CO2e)	Total Emissions Reductions in (kg CO2e)	
50	945	0	0	2,200	3,195	
Year 5 Total Direct CO2 e Emissions Reductions in (kg)	Year 5 Total Indirect CO2 e Emissions Reductions in (kg)	Year 5 Total CO2 e Emissions Reductions in (kg)				
945	50	3,195				

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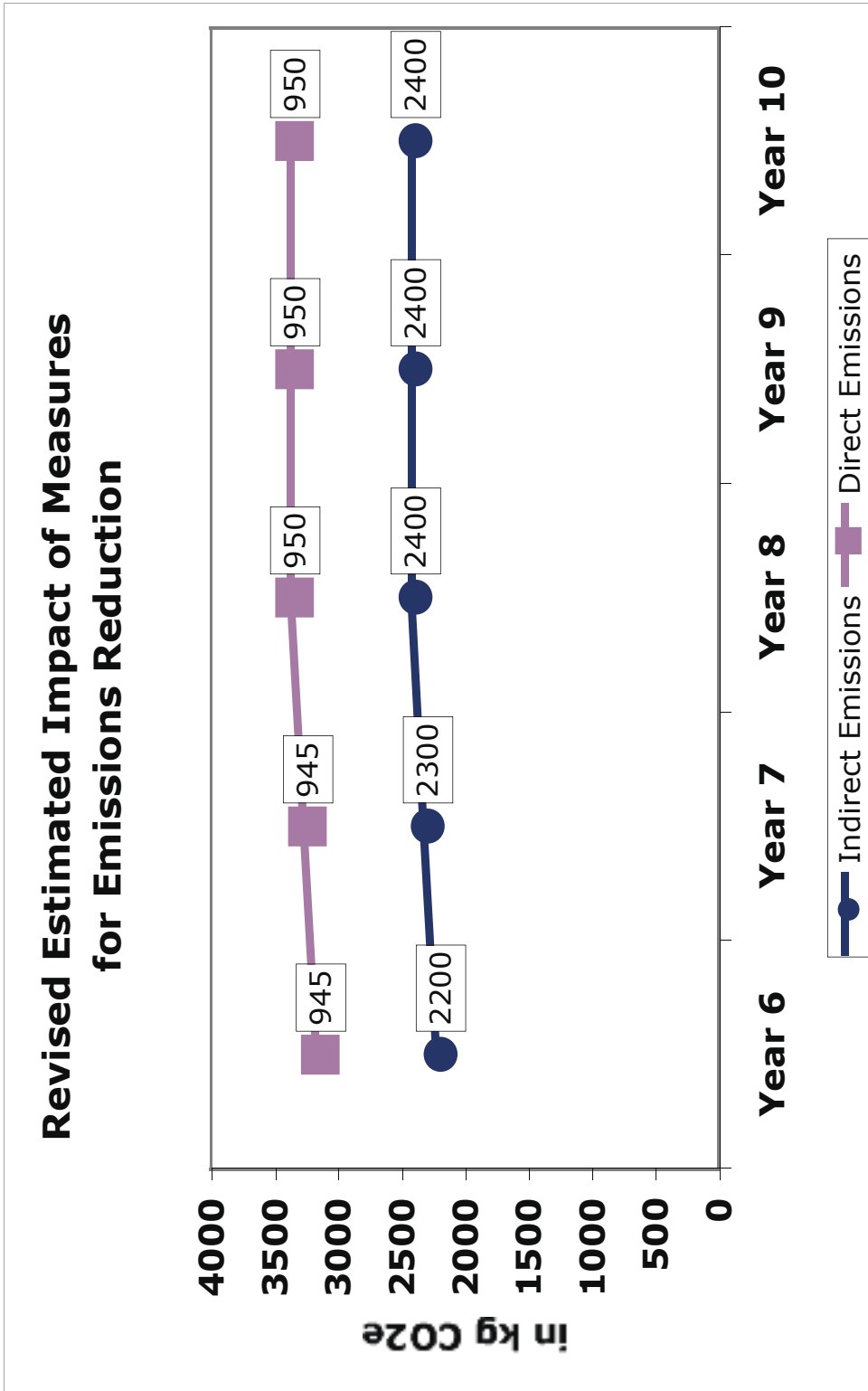
Appendix I.2 Year 10 Projected Impact of Conservation Measures

		Carbon Busters Inc.		Head Office				
Year 10 (2012/2013) Estimated Cumulative Impact of Conservation Measures								
Power Emissions Reductions in (kg CO2e)	Heating Emissions Reductions in (kg CO2)		Heating Emissions Reductions in (kg CH4)		Heating Emissions Reductions in (kg N2O)		Travel Emissions Reductions in (kg CO2e)	
50		950		0		0		2,400
								3,400
Year 10 Total Direct CO2 e Emissions Reductions in (kg)		Year 10 Total Indirect CO2 e Emissions Reductions in (kg)		Year 10 Total CO2 e Emissions Reductions in (kg)				
950		50		3,400				

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Appendix I.3 Long Term Projected Impact of Measures



Appendix J.

Appendix J.1 Staff Education

Courses, Workshops, Presentations, Conferences, Seminars and Classes attended by current Carbon Busters staff for the period of November 1st 2007 - October 31, 2008

Godo Stoyke

USGBC Greenbuild Conference
November 6-9, 2007
Chicago, Illinois

RETScreen Training Seminar
Jan. 8, 2008.
Edmonton, Alberta

EUEC Energy & Environment Conference
January 27 – 30, 2008
Tuscon, Arizona)

Environmental Action Summit
February 29, 2008
Sarasota, Florida

Building Saskatchewan Green- Sustainable Building Conference
Oct. 31, 2008
Saskatoon, Saskatchewan

Slave Lake Environmental Conference and Trade Show
March 1 & 2, 2008
Slave Lake, Alberta

Emerald Awards,
June 3, 2008
Edmonton, Alberta

“Sustainability at Interface Carpets”
Canada Green Building Council, Alberta Chapter
Oct. 15, 2008
Edmonton, Alberta

Powerful Solutions – Building a Sustainable Electrical Supply in Alberta
Solar Energy Society of Canada, Northern Chapter
October 21, 2008
Edmonton, Alberta

Building Saskatchewan Green- Sustainable Building Conference
Oct. 31st, 2008
Saskatoon, Saskatchewan

Shanthu Mano

RETScreen Training Seminar
Jan. 8, 2008.
Edmonton, Alberta

Richard Krause

RETScreen Training Seminar
Jan. 8, 2008.
Edmonton, Alberta

Appendix J.2 Public Education**Publications and presentations by Carbon Busters Staff from November 1st 2007 - October 31, 2008:****Shanthu Mano**

Presentation: Sustainable Communities
Feb 2008
Alberta Chamber of Technologies
Edmonton, Alberta

Presentation: Carbon Busting for Fun and Profit
2008
Edmonton Women's Council
Edmonton, Alberta

Presentation: Lifestyles Village
July 18th, 2008
E-Sage (Edmonton's Environmental Businesses)
Edmonton, Alberta

Godo Stoyke

Lecture: Carbon Busting for Fun and Profit
USBGC Greenbuild Conference
November 7, 2007
Chicago, Illinois
<http://www.greenbuildexpo.org>

Lecture: Carbon Busting 101: Profitable Sustainability Strategies for your Business
EUEC Energy & Environment Conference
January 27 – 30, 2008
Tuscon, Arizona
<http://www.euec.com>

Carbon Buster's handbook interview
February 22, 2008, 7:00 pm
KDUD FM

Home Energy Savings, 6 hour workshop,

University of Alberta Devonian Botanic Garden
February 24, 2008
Devon, Alberta
www.devonian.ualberta.ca

Keynote Address
Environmental Action Summit
February 29, 2008
Sarasota, Florida
www.selby.org

Lecture: Find out what your ecological footprint is
Slave Lake Environmental Conference and Trade Show
March 1 & 2, 2008
Slave Lake, Alberta
www.slavelake.ca

Talk
Garneau School - Child Study Centre, Grade 3/4
March 7, 2008
Edmonton, Alberta
<http://www.childstudycentre.ualberta.ca/>

Interview: Home Energy Savings
Access Television – Help TV
April 3, 2008
Edmonton, Alberta
<http://www.accesstv.ca/>

Presentations on home energy savings
Edmonton Home and Garden Show
April 4 & 5, 2008
Edmonton, Alberta
<http://www.edmontonhomeshow.ca>

Keynote Address
Edmonton Federation of Community Leagues AGM
April 19, 2008
Edmonton, Alberta
<http://www.efcl.org> <<http://www.efcl.org/>>

Interview: Home Energy Savings
City TV Breakfast Television
April 28 2008, 9:20 am,
Edmonton, Alberta
<http://www.citytv.com/edmonton>

Interview: Green Building Products
City TV Edmonton
April 30, 2008, 6:00 pm,
Edmonton, Alberta

<http://www.citytv.com/edmonton>

Talk

Edmonton Lifelong Learners Association

May 5, 2008

Edmonton, Alberta

<http://www.extension.ualberta.ca/ella>

Presentation

Immanuel Lutheran Church

May 26, 2008, 7:00 pm

Stony Plain, Alberta

<http://www4.incentre.net/immanuel>

Finalist, Climate Change Category

Emerald Awards

June 3, 2008

Edmonton, Alberta

<http://www.emeraldfoundation.ca>

Interview: "Off-grid Living"

Green Living Series

CBC Radio Edmonton

June 4, 2008, 6:40 am

Edmonton, Alberta

<http://www.cbc.ca/edmonton/features/livinggreen/>

Lecture: Corporate Sustainability

Landmark Homes

June 6, 2008

Edmonton, Alberta

<http://www.landmarkhomes.ca>

Keynote Address: "Global Energy Turning Points: A Sustainability Perspective"

Bentall Capital Conference

June 10, 2008

Whistler, BC

<http://www.bentall.com>

Book signing

Landmark Homes

June 21, 2008

Edmonton, Alberta

www.landmarkhomes.ca

Seminar: "Carbon Busting for Fun and Profit"

University of Alberta Devonian Botanic Garden

July 20, 2008

Devon, Alberta

<http://www.devonian.ualberta.ca>

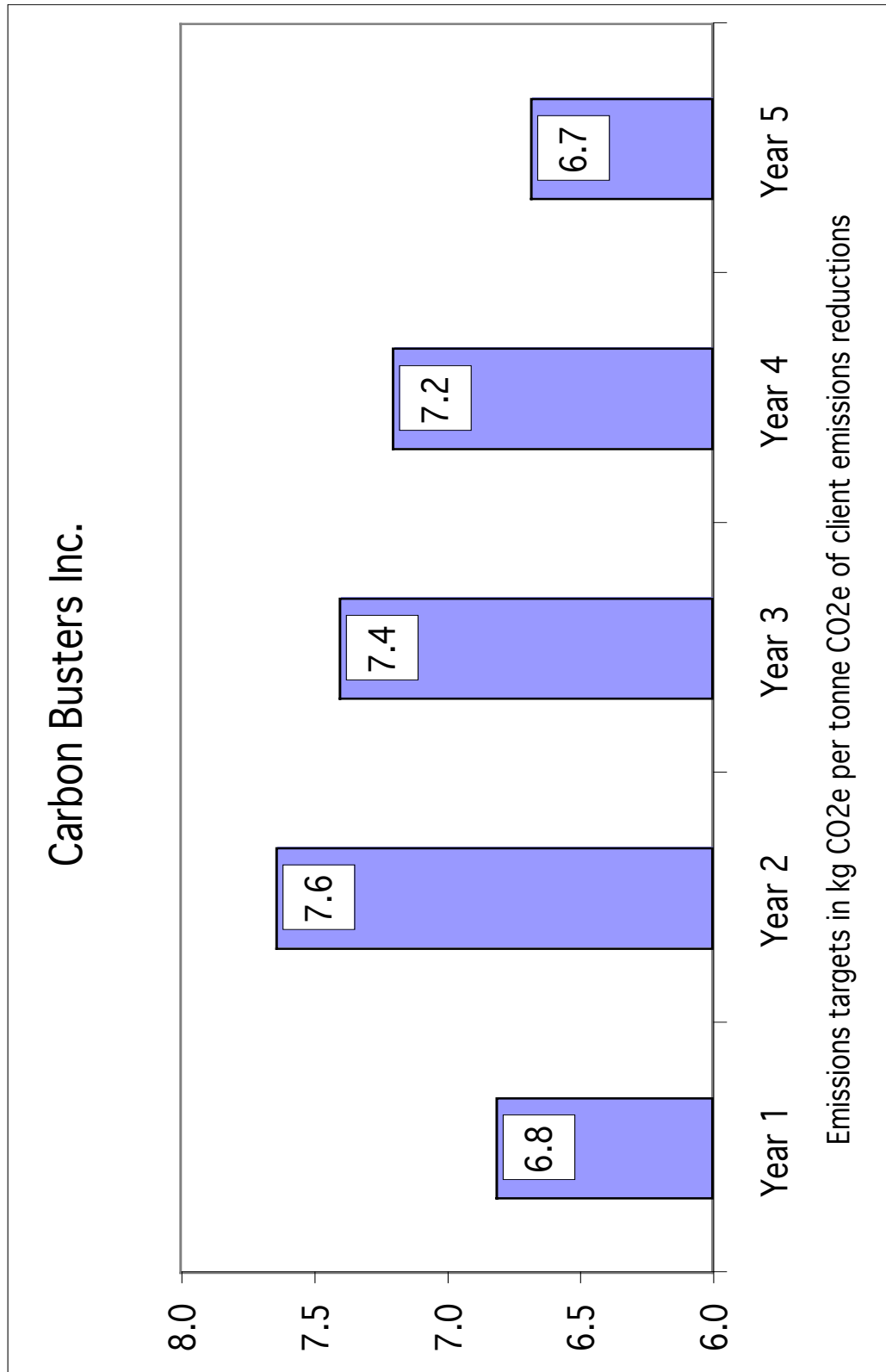
Lecture: "Moving Towards Zero Carbon"
Canada Green Building Council, Alberta Chapter
Oct. 15th, 2008
Edmonton, Alberta
www.abcagbc.org

Lecture: "The Carbon Charter: Building Sustainable Communities"
North Section, Planning & Policy Services Branch
Oct. 23rd, 2008
Edmonton, Alberta
www.edmonton.ca

Opening Session- Plenary Speaker
"Moving Towards Zero Carbon"
Building Saskatchewan Green- Sustainable Building Conference
Oct. 31st, 2008
Saskatoon, Saskatchewan
www.buildsaskgreen.ca

Appendices K: Previous Target-Setting

Appendix K.1 Original Long Term Targets



Appendix K.2 Year 5 Targets as set out by the original action plan

Year 5 (2007/2008) Corrected Emissions Targets by Category									
Target for	Target for Heating Emissions in (kg CO2e)	Target for Heating Emissions in (kg CH4)	Target for Heating Emissions in (kg N2O)	Target for Travel Emissions in (kg CO2e)	Target for Total Emissions in (kg CO2e)	Target for Total Direct Emissions in (kg CO2e)	Target for Total Indirect Emissions in (kg CO2e)		
Power Emissions	7,280	0.14	0.13	15,925	31,083	7,322	23,762		
Total Emissions									
CO2 e Reductions Estimated for Clients (in tonnes)	166,433	4.0	123.92	0.19	7770.9	6.22			
Target for Total Emissions	Target for Total Distance Traveled (km)	Target for Total FTE Staff Numbers (FTE)	Target for Total CO2 e Emissions per m2 area (kg/m2)	Target for Total CO2 e Emissions per km travelled (kg/km)	Target for Total Emissions per FTE (kg/FTE)	Target for CO2 e Emissions per tonnes Client (kg/t)			

Appendix K.3 Revised Year 5 Targets

Year 5 (2007/2008) Corrected Emissions Targets by Category							
Target for Power Emissions in (kg CO2e)	Target for Heating Emissions in (kg CO2)	Target for Heating Emissions in (kg CH4)	Target for Heating Emissions in (kg N2O)	Target for Travel Emissions in (kg CO2e)	Target for Total Emissions in (kg CO2e)	Target for Total Direct Emissions in (kg CO2e)	Target for Total Indirect Emissions in (kg CO2e)
7,836	7,260	0	0	24,306	39,450	7,307	32,143
Target for Total Emissions CO2 e Reductions Estimated for Clients (in tonnes)	Target for Total Distance Travelled (km)	Target for Total FTE Staff Numbers (FTE)	Target for Total CO2 e Emissions per m2 area (kg/m2)	Target for Total CO2 e Emissions per km travelled (kg/km)	Target for Total CO2 e Emissions per FTE (kg/FTE)	Target for CO2 e Emissions per tonnes Client CO2 e Reduction (kg/t)	
5,800	166,433	6.0	157.27	0.24	6575.0	6.80	

Appendix L: Year 1 Emissions

Carbon Busters Inc.									
Head Office									
Year 1 Corrected Emissions (2003/2004)									
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e in (kg)	Total Emissions CO2 e Reductions Achieved for Clients (in tonnes)	Year 1 CO2 e Emissions per m2 area (kg/m2)	Year 1 CO2 e Emissions per km travelled (kg/km)	Year 1 CO2 e Emissions per FTE (kg/FTE)	Year 1 CO2 e Emissions per tonnes of Client CO2 e Reduction (kg/t)		
7,735.8	38,685.6	46,421.3	11,228.6	185.07	0.19	5134.16	4.13		
Total CO2e - Year 1 Emissions by Category									
Travel		32.0	31993.1					Direct	16.7%
Heating		7.7	7735.8					Indirect	83.3%
Power		6.7	6692.3						



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Appendix M: Year 2 Emissions

Carbon Busters Inc.											
Head Office											
Year 2 Emissions (2004/2005)											
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e in (kg)	Total Emissions CO2 e Achieved for Clients (in tonnes)	Year 2		Year 2		Year 2		Year 2	
				CO2 e per m2 area	CO2 e per km travelled	CO2 e per FTE	CO2 e per tonnes of Client	CO2 e Reduction (kg/t)	CO2 e Reduction (kg/t)	CO2 e Reduction (kg/t)	CO2 e Reduction (kg/t)
8,037.5	35,745.4	43,782.8	5,803.3	174.55	0.19	4864.76					7.54
Total CO2e - Year 2 Emissions by Category											
Travel	26.2	28244.6						Direct		18.4%	
Heating	8.0	8037.5						Indirect		81.6%	
Power	7.5	7500.8									



Appendix N: Year 3 Emissions

Carbon Busters Inc.									
Head Office									
Year 3 Emissions (2005/2006)									
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e in (kg)	Total Emissions CO2 e Reductions Achieved for Clients (in tonnes)	Year 3 CO2 e Emissions per m2 area (kg/m2)	Year 3 CO2 e Emissions per km travelled (kg/km)	Year 3 CO2 e Emissions per FTE (kg/FTE)	Year 3 CO2 e Emissions per tonnes of Client CO2 e Reduction (kg/t)		
7,524.1	30,779.0	38,303.2	5,871.0	152.70	0.18	4,838.29	6.52		
Total CO2e - Year 2 Emissions by Category									
Travel		24.3	24323.3					Direct	19.6%
Heating		7.5	7524.1					Indirect	80.4%
Power		6.5	6455.7						



Appendix O: Year 4 Emissions

Carbon Busters Inc.									
Head Office									
Year 4 Emissions (2005/2006)									
Total Direct Emissions CO2 e in (kg)	Total Indirect Emissions CO2 e in (kg)	Total Emissions CO2 e	Total Emissions CO2 e Reductions Achieved for Clients (in tonnes)	Year 4 CO2 e Emissions per m2 area (kg/m2)	Year 4 CO2 e Emissions per km traveled (kg/km)	Year 4 CO2 e Emissions per FTE (kg/FTE)	Year 4 CO2 e Emissions per tonnes of Client CO2 e Reduction (kg/t)		
9,043.8	19,185.1	28,228.9	5,285.7	112.54	0.27	5,463.66	5.34		
Total CO2e - Year 4 Emissions by Category									
Travel	13.5	13455.3						32.0%	
Heating	9.0	9043.8						68.0%	
Power	5.7	5729.7							

Appendix P Original Year 5 Business-As-Usual Projection

Carbon Busters Inc.		Head Office		Year 5 (2007/2008) Projected Corrected Emissions by Category											
Projected Power Emissions in (kg CO2e)	7,886	Projected Heating Emissions in (kg CO2)	8,160	Projected Heating Emissions in (kg CH4)	0.2	Projected Heating Emissions in (kg N2O)	0.1	Projected Travel Emissions in (kg CO2e)	20,417	Projected Total Emissions in (kg CO2e)	36,510	Projected Total Direct Emissions in (kg CO2e)	8,207	Projected Total Indirect Emissions in (kg CO2e)	28,303
Projected Total Emissions CO2 e Reductions Estimated for Clients (in tonnes)	6,000	Projected Total Distance Travelled (km)	198,134	Projected Total FTE Staff Numbers (FTE)	4.0	Projected Total CO2 e Emissions per m2 area (kg/m2)	145.56	Projected Total CO2 e Emissions per km travelled (kg/km)	0.18	Projected Total CO2 e Emissions per FTE (kg/FTE)	9127.6	Projected Total CO2 e Emissions per tonnes Client (kg/t)	6.09		

