

GreenSaver Sustainability Report 2014



green  saver

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A Message From Our CEO

GreenSaver is Ontario's oldest organization promoting energy efficiency, a cornerstone of environmental sustainability. 2016 will in fact mark a quarter of a century that GreenSaver has been actively working, to help homeowners and businesses be more energy efficient, and ensuring that we leave this Earth as a more sustainable place, for those who come after us.

Over the past 25 years, GreenSaver has completed over 90,000 energy audits, over 15,000 insulation projects and over 55,000 low income retrofits, across Ontario. From a small Toronto non-profit, we have become the premier choice for energy conservation programs and services for homeowners, businesses, utilities and government agencies. One thing has not changed - our dedicated staff continue to ensure that GreenSaver's business is not only done in an efficient and effective manner, but that it is managed as an environmentally sustainable effort!



Vladan Veljovic
President and CEO

While many companies publish sustainability reports, showing how much of their carbon footprint is reduced by employee and corporate initiatives, on an annual basis, GreenSaver is different. Because it actually reduces society's carbon footprint, through its everyday actions, it is a net contributor to sustainability. In fact, we decided to report the two figures separately, as we did not want our in-house efforts to be dwarfed by the societal contributions that we make.

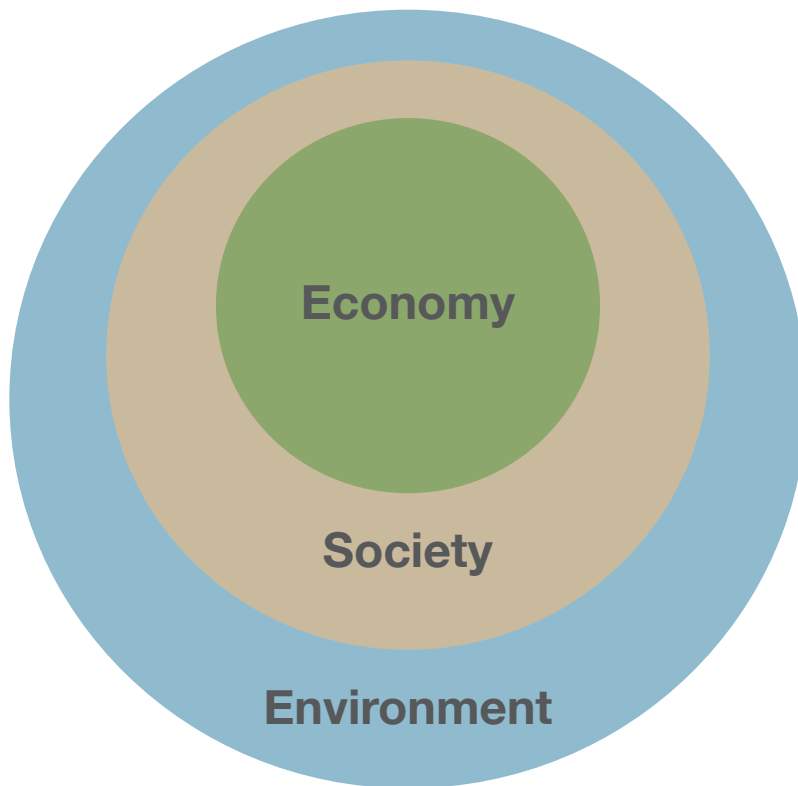
This report, which examines Fiscal 2014, shows that corporate GreenSaver activities contributed 187 T/yr of CO₂ emissions. At the same time, our societal activities reduced 4,373 T/yr of CO₂ emissions, for a net CO₂ reduction, of over 4,000 T/yr. Very few organizations in Ontario can claim this kind of achievement, and GreenSaver is proud of these sustainability results.

Finally, a word of thanks to the GreenSaver Environmental Committee, which spearheaded the initiative to develop the first ever GreenSaver Sustainability Report. And of course many thanks to all the GreenSaver employees, Board members and contributors, whose daily efforts make the achievement of these goals possible. I look forward to an even more impressive 2015 Sustainability Report.

Executive Summary

The term *sustainable development*, coined by the Brundtland Commission of the United Nations on March 20, 1987, is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” GreenSaver recognizes its role as a responsible organization to operate and conduct business in a sustainable manner.

The pillars of sustainability are: economy, society and environment. The diagram below emphasizes the relationship between pillars - highlighting that the economy and society are not only social constructs, but they are constrained by environmental limits. In this report, GreenSaver focuses on its impact on the environment and society.



In the tracking phase, monitoring and reporting represent the initial step towards setting targets for more sustainable actions. This report highlights GreenSaver’s environmental impacts in terms of natural resource consumption. It also acknowledges GreenSaver’s social impacts as they relate to inner office activities and the general public.

GreenSaver’s 2013 carbon report, our first carbon report, monitored the company’s emissions from the 2013/14 fiscal year. This 2013 Carbon report was elaborated upon to create the 2014 Sustainability Report. The 2014 Sustainability Report will be used as a template to monitor future years as well as to develop carbon reduction targets and other sustainability goals.

Program Emission Reductions

Helping People and the Planet is Our Business

GreenSaver is Ontario's oldest not-for-profit energy efficiency organization. We're an integrative company focused on solutions to conservation and the built environment. We work for electric utilities, gas utilities, homeowners and contractors all in an effort to reduce energy consumption, lower costs and reduce our collective environmental footprint. And we're proud of the work we do.

Through the programs we deliver on behalf of hydro and gas utilities across Ontario, we are able to reduce the amount of greenhouse gases released into our atmosphere. Many of our programs also help those who are disadvantaged and marginalized to overcome the barriers of energy poverty.

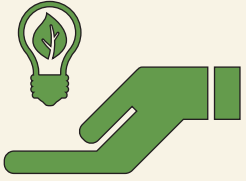
GreenSaver programs resulted in 4,373 tonnes of greenhouse gas emission reductions in the 2014 fiscal year.

Program	Electricity Savings (kWh)	Gas Savings (m3)	GHG Reductions (tonnes)
Home Assistance Program	12,443,845.55	N/A	2,115.45
Home Winterproofing Program	N/A	403,692.29	758.54
Home Assistance Support Program	N/A	64,023.80	120.30
Retrofit Program	1,138,444.26	N/A	193.54
Private Sales	N/A	630,753.00	1,185.18
Total	13,582,289.82	1,098,469.98	4,373.01

*The carbon emission reductions in this table are a result of the programs that GreenSaver delivers on behalf of electric and gas utilities across Ontario.

Program Descriptions

[Home Assistance Program](#)



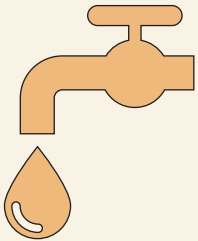
We have a strong commitment to helping those in need. We're the provincial leader in delivery of the Home Assistance Program, which provides free home upgrades to Ontarians who have the highest energy burden. Over the past 2 decades, we've performed over 55,000 HAP energy assessments, helping people province-wide to reduce their energy bills.

[Enbridge Home Winterproofing Program](#)



The Enbridge Home Winterproofing Program was created to help income-eligible households conserve energy and save money. This program, which provides free installed insulation and draft proofing for older homes, is completely free those who qualify.

[Home Assistance Support Program](#)



The Home Assistance Support Program was created to work in partnership with the Home Assistance Program for residents of Kitchener, Ontario. Income-eligible households who participate in the Home Assistance Program can also receive free installed water saving measures including low flow shower heads, tap aerators and hot water tank insulation free of charge from Kitchener Utilities.

[Retrofit Program](#)



We provide application support and engineering assistance to business owners in select areas in Ontario. Most small business owners would be happy to upgrade their facilities and install energy-efficient equipment. However, capital costs, paperwork and delays make saying yes sometimes difficult. The RETROFIT Program's incentives can reduce the project cost of an energy efficient upgrade by up to 50%.

Environmental Pillar

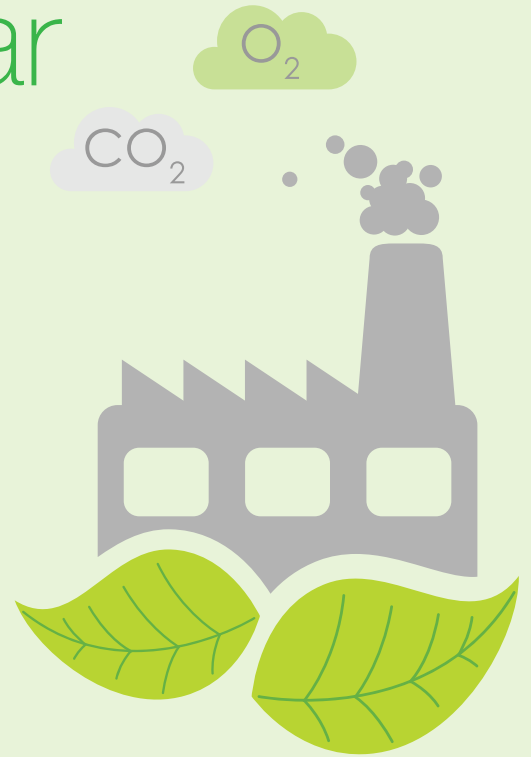
As an environmental non-profit and an ambassador for energy efficiency, GreenSaver helps individuals and businesses reduce their environmental footprint. We strive to do the same internally.

During the 2014 fiscal year, GreenSaver was responsible for 187.58 Tonnes of CO₂ emissions.

Internationally, greenhouse gas emissions are categorized into three scopes. Scope 1 emissions are from sources that are directly owned and controlled by an organization such as on-site combustion of fossil fuels. Scope 2 emissions come from indirect sources, mainly the purchase and consumption of electricity. Scope 3 emissions are other indirect sources that occur during the general operation of the organization. The table below highlights the activities that GreenSaver has assessed in this Sustainability Report. This year, GreenSaver recorded an additional scope 3 emission category: employee commuting.

Scope	Definition	Recorded Activities
Scope 1	All direct GHG emissions from mobile combustion (owned or leased vehicles) and stationary combustion (furnaces, boilers etc.)	Company owned vehicles Natural gas consumption
Scope 2	Indirect GHG emissions from consumption of purchased electricity, heat or steam	Electricity
Scope 3	Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc.	Water Waste Employee commuting Air travel

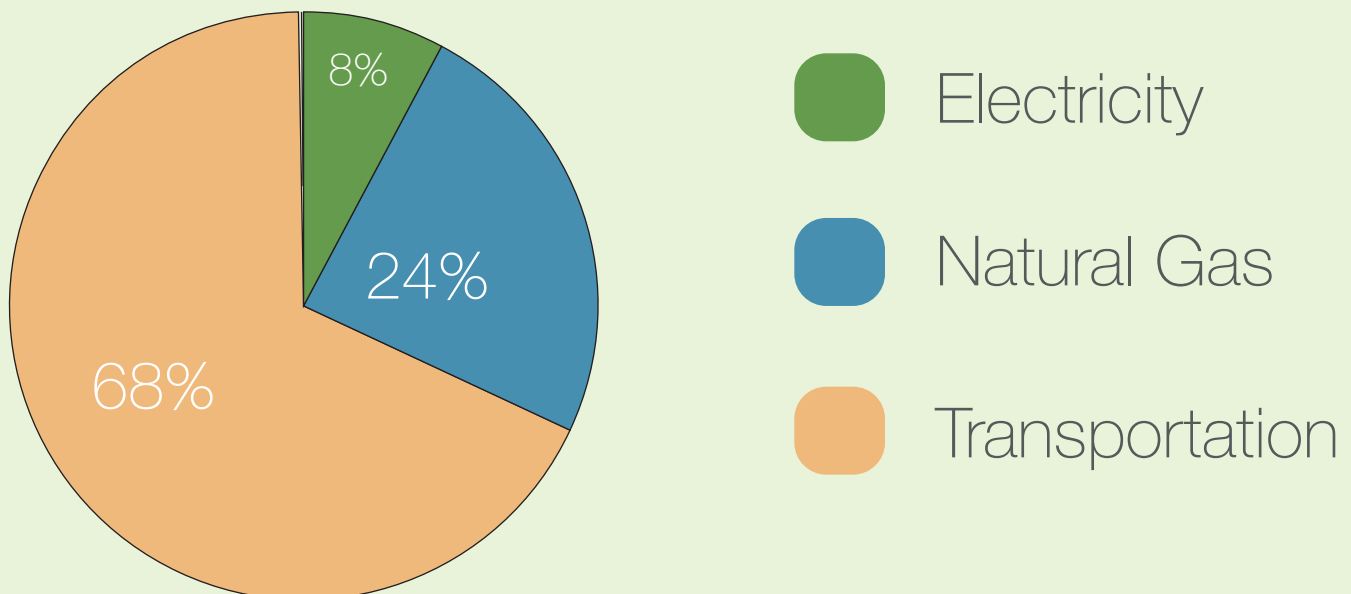
Environmental Pillar



Source	Tonnes of CO ₂ (2014)
Electricity	12.62
Natural Gas	38.99
Transportation	149.52
Waste	-13.67
Water	0.12
Total	187.58

GreenSaver's carbon emissions are mostly attributed to transportation and natural gas. While electricity consumption accounts for another 10% of the total carbon footprint, water consumption is almost negligible. As a result of our recycling and composting practices, emissions from waste are offset.

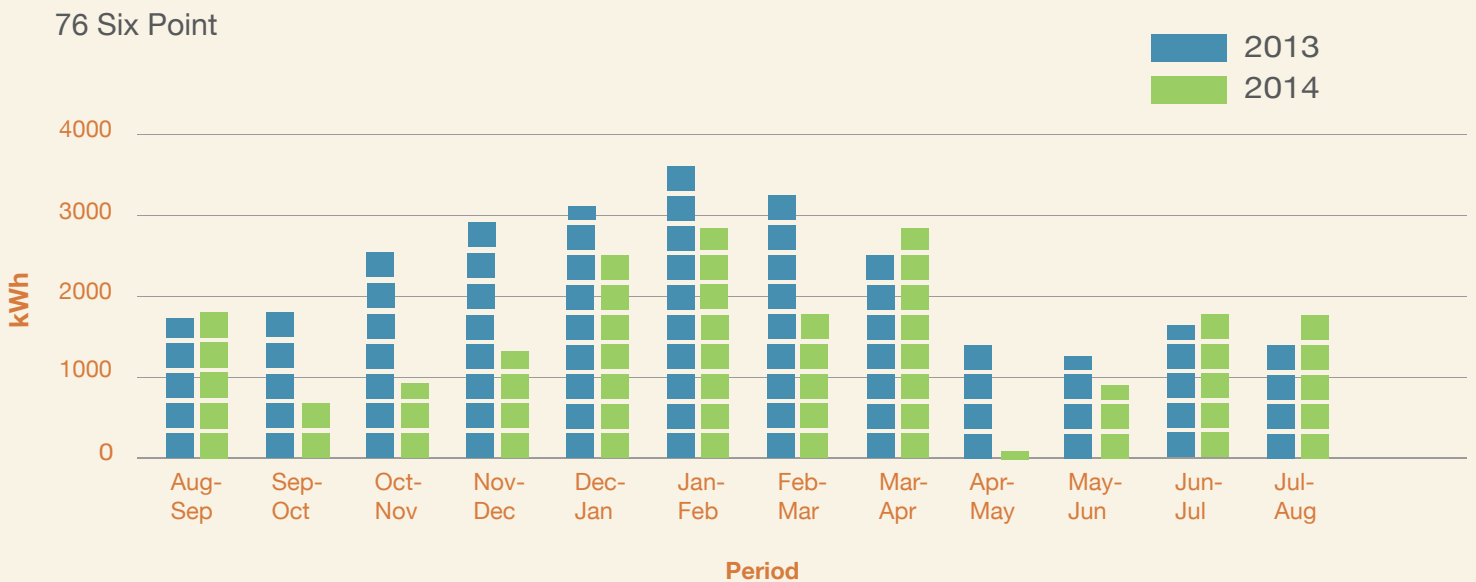
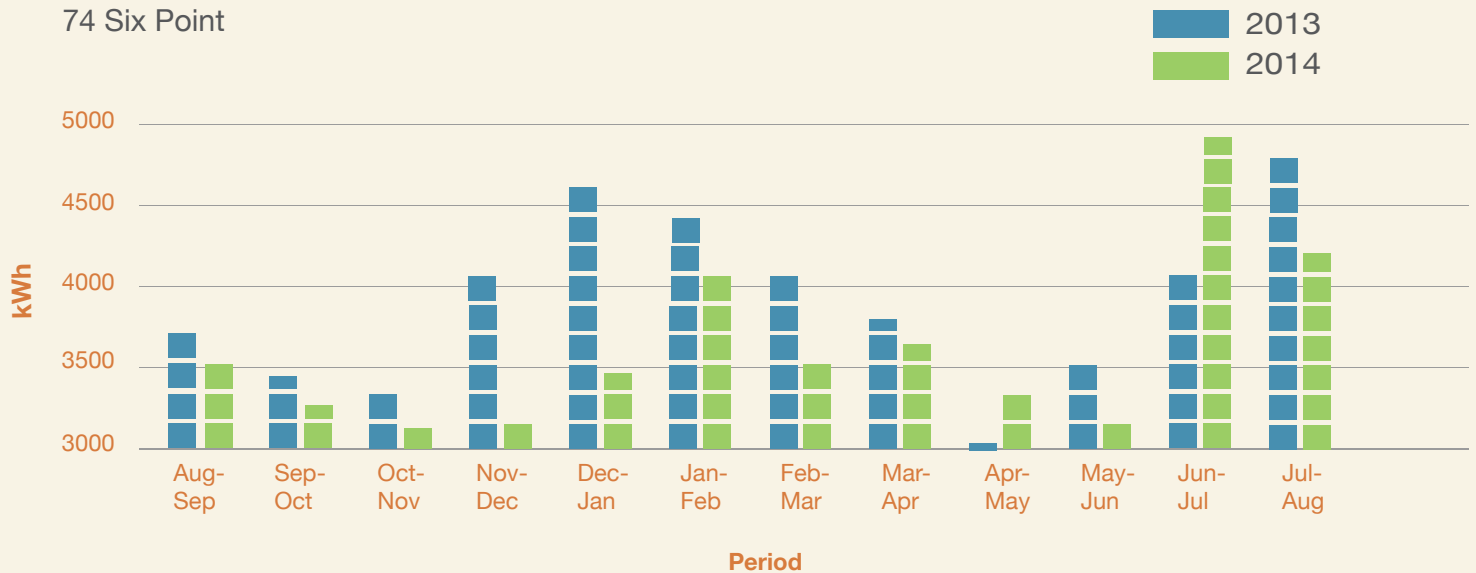
GreenSaver's Carbon Emissions 2014



Electricity

Consumption

GreenSaver consumed 74,224 kWh of electricity in the 2014 fiscal year - over 12,000 kWh more than last year.



Emissions

GreenSaver emitted 12.62 tonnes of carbon dioxide attributed to electricity consumption in the 2014 fiscal year - 2 tonnes more than last year.

Assumptions

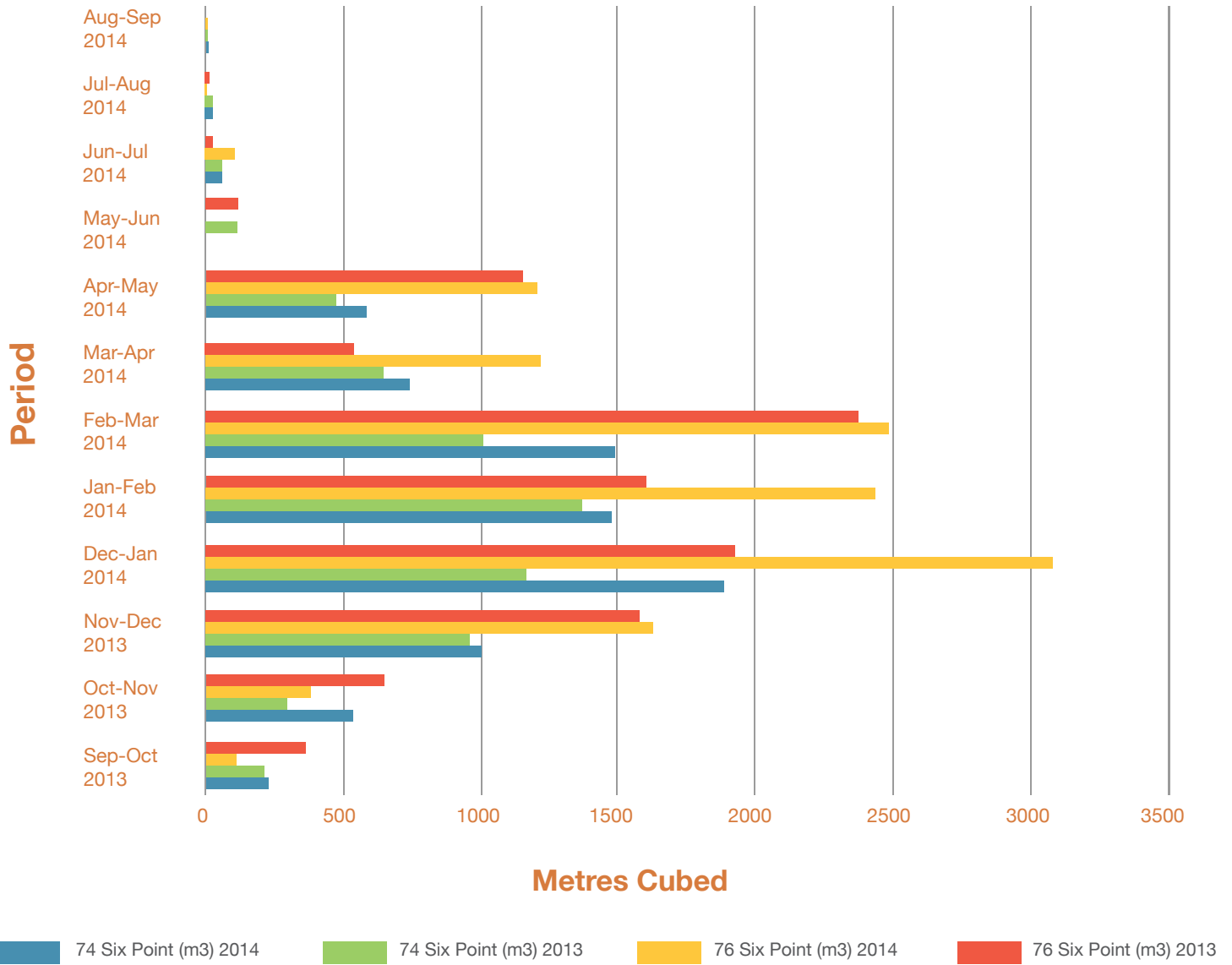
Electricity consumption was highest during the summer when the air conditioning is running and during the winter when staff use personal space heaters. Seasonal variation may have played a factor in the increased energy consumption levels over last year as the 2013/14 winter was a particularly cold one.

Electricity consumption was recorded from the on site electricity use at 74 and 76 Six Point Road. Consumption levels came from monthly Toronto Hydro bills over a 1 year period (August 2013 to August 2014). An emission factor of 0.17 T/MWh, from Natural Resources Canada, was used to measure GreenSaver's electricity carbon footprint.

Natural Gas

Consumption

GreenSaver consumed 20754 m3 of natural gas in the 2014 fiscal year - over 4000 m3 more than last year.



Emissions

GreenSaver emitted 38.99 tonnes of carbon dioxide attributed to natural gas consumption in the 2014 fiscal year - nearly 8 tonnes more than last year.

Assumptions

The reason for the rise in natural gas usage can most likely be attributed to the vast difference in temperature when comparing the winter of 2011-2012 to the winter of 2013-2014. The winter of 2011-2012 was the third- warmest winter since record-keeping began in 1948 with temperatures between December and February averaging -0.4 C - 3.6 C above normal. The average temperature between the same time period over 2013-2014 was -7.0 C - a substantial 6.6 C colder than the year before.

Natural gas consumption was recorded from on site natural gas use at 74 and 76 Six Point Road. Consumption amounts came from monthly Enbridge bills over a 1 year period (September 17, 2013 to September 15, 2014). An emission factor of 1879 g/m3, from Natural Resources Canada, was used to measure GreenSaver's natural gas carbon footprint.

Transportation

Consumption

GreenSaver's transportation related activities come from 3 main sources:

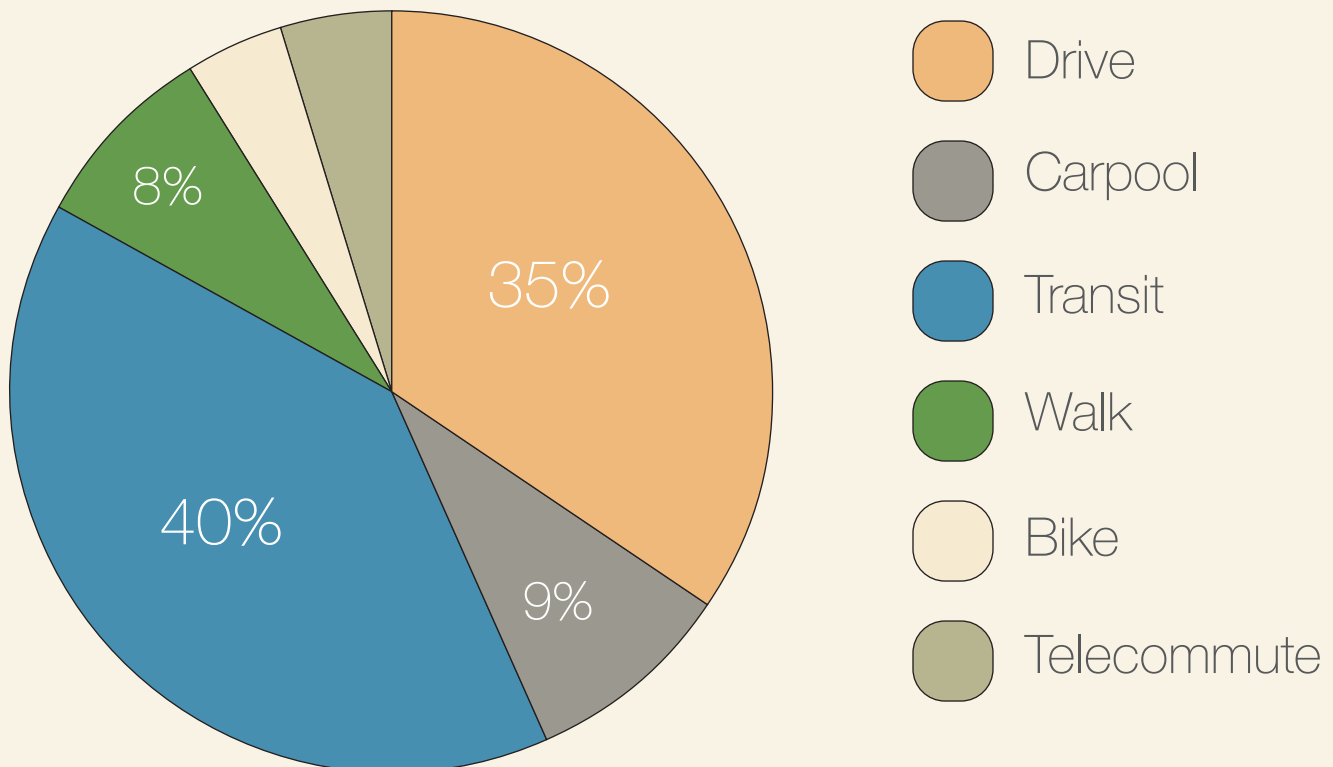
- Company owned vehicles
- Staff air travel
- Employee Commuting

GreenSaver's fleet of trucks and cars consumed 18,209 Litres of fuel (gasoline and diesel) in the 2014 fiscal year - essentially the same amount as the 2013 fiscal year.

On a typical day, GreenSaver staff travel an average of 42km to get to and from work.

A modal split is the percentage of travellers using a particular type of transportation. This is important to know when calculating the environmental impact of different modes of commuter transport used by staff. GreenSaver's typical modal split is:

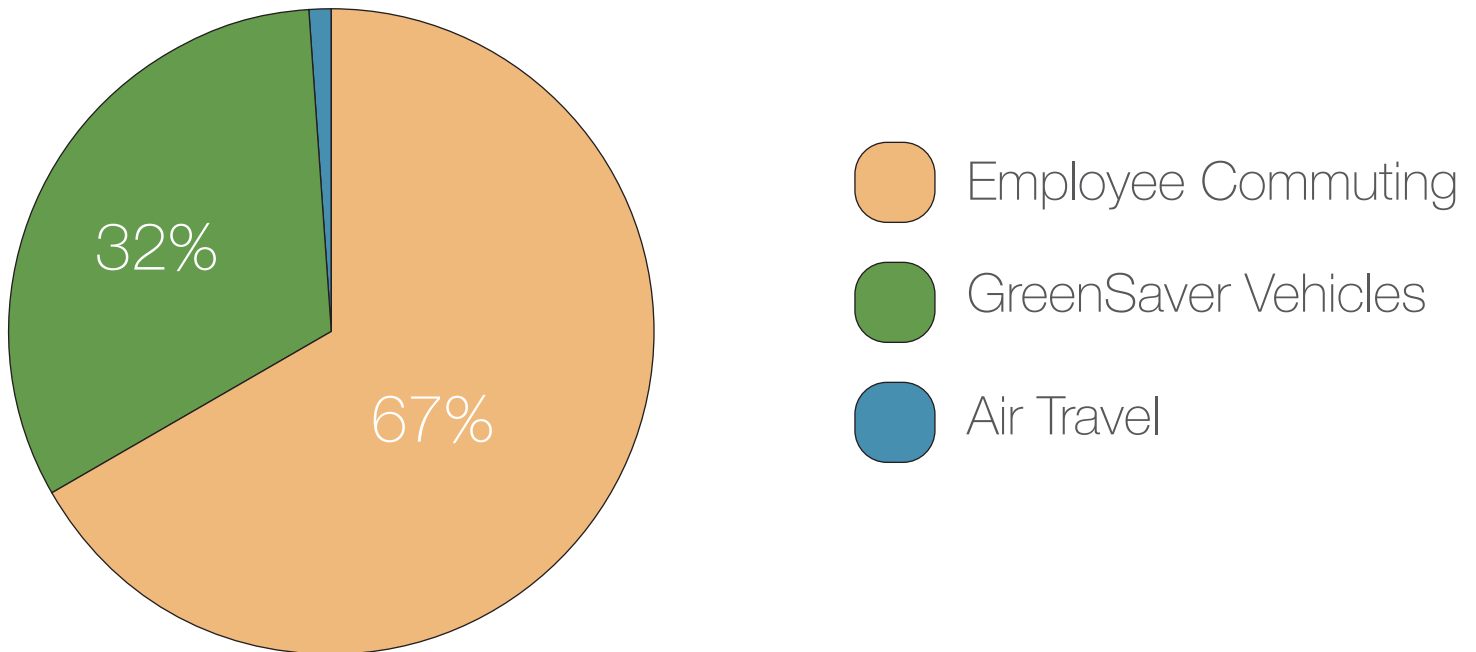
Modal Split



Emissions

On the whole, GreenSaver produced 149.52 tonnes of carbon dioxide through transportation related activities.

Transportation/ Emissions



Assumptions

Transportation data was collected by staff through survey monkey in Fall 2014. GreenSaver also participated in the Commuter Challenge in Summer 2014. Data from both activities were combined to estimate GreenSaver's employee commuting.

Carbon emissions for employee commuting and air travel were obtained using a calculator developed by Carbon Footprint Ltd: <http://calculator.carbonfootprint.com/calculator.aspx?c=Full>.

GreenSaver owned vehicle carbon emissions were calculated using bills from the company account with Imperial Oil. The bills showed gas and diesel consumption amounts which were applied to the following emission factors from Natural Resources Canada:

- 2.7Kg CO₂/L of diesel burned
- 2.4Kg CO₂/L of gasoline burned

Based on the 2013 Christmas party numbers, transportation calculations estimated 60 people work at GreenSaver.

Water

Consumption

GreenSaver consumed 98,540 gallons of water in the 2014 fiscal year - almost 15,000 gallons more than last year.

Period	74 Six Point (gal)	76 Six Point (gal)
Aug 12 2013 - Dec 4 2013	29,000	540
Dec 4 2013 - Apr 10 2014	35,000	3,000
Apr 10 2014 - Aug 15 2014	28,000	3,000
Total	92,000	6,540
GS Total	98,540	

Emissions

GreenSaver emitted 0.12 tonnes of carbon dioxide attributed to water consumption in the 2014 fiscal year.

Assumptions

Water consumption was recorded from the on site water use at 74 Six Point Rd and 76 Six Point Road.

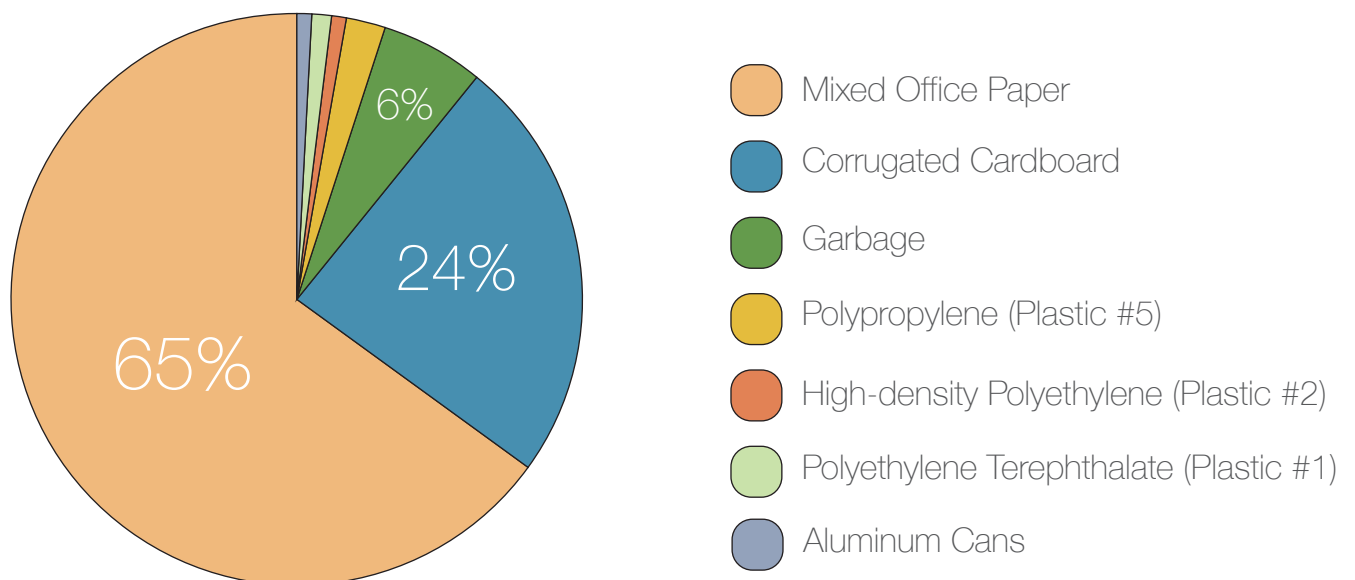
Consumption levels came from bills with Toronto Water and Solid Waste Management Services over a 1 year period (August 2013 to August 2014).

An emission factor of 0.000263 tCO₂/m³ was used.

Waste

Consumption

74 Six Point Office recycling
Composition



Consumption

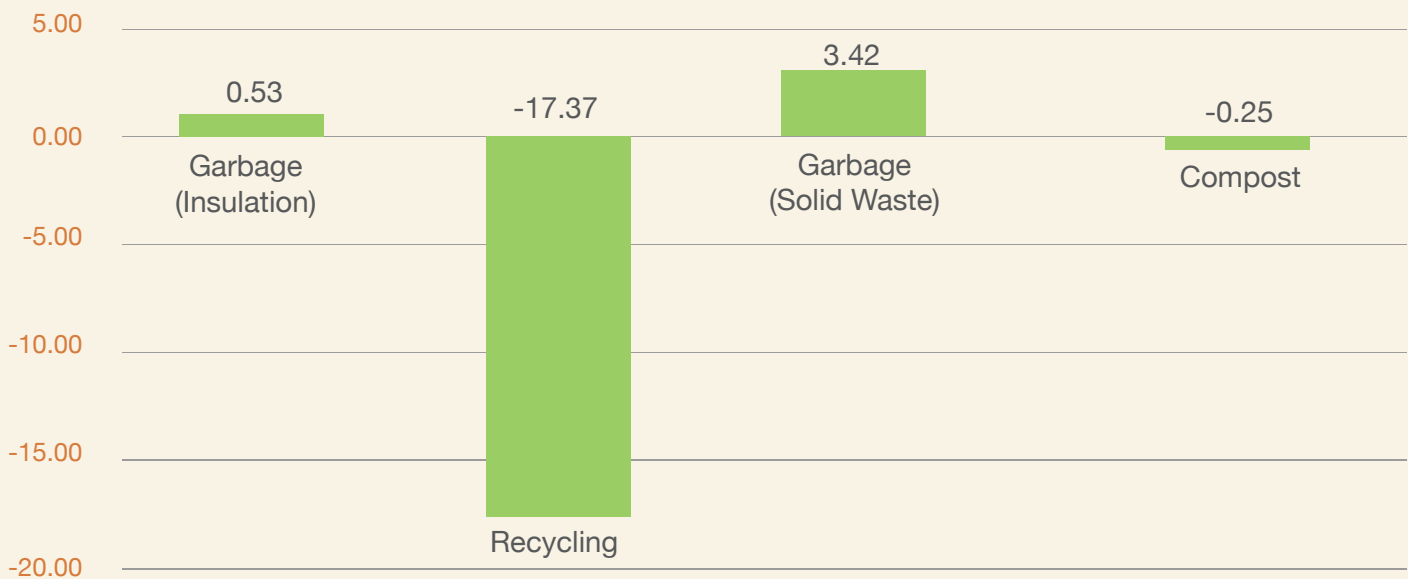
In the 2014 fiscal year, GreenSaver produced approximately 17.85 tonnes of garbage and 5.56 tonnes of recycling, and diverted 0.2 tonnes of organic material from landfill through composting. WASTENOT Worm Farms allows GreenSaver staff to compost food waste. From May to August 2014, GreenSaver's composting efforts resulted in:

- 450lbs of organics recycled
- 27ft cubed of landfill space saved
- 0.25 tonne of CO₂ equivalent saved
- 225L of natural worm poop fertilizer created (replacing synthetic oil-based chemical fertilizer)

Within the office at 74 Six Point alone, a waste audit was conducted to determine the composition of our recycling bins.

Emissions

Carbon Emissions from Waste Generation (Tonnes CO₂e)



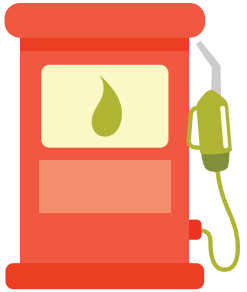
On the whole, GreenSaver prevented 13.67 tonnes of CO₂e from being generated from its waste streams. This is mostly due to the carbon that was saved from recycling.

Assumptions

It was discovered that the vast majority of the recycling was made up of mixed office paper and corrugated cardboard. Two areas with significant paper waste generation are to the washrooms where a lot of paper towel is used and the printing area where printer paper and cardboard boxes are discarded.

Overall Emissions

GreenSaver emitted a total 201.25 tonnes of carbon in the year 2014, this is equivalent to:



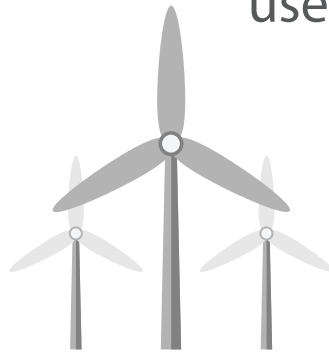
22,642 gallons of gasoline consumed



19.1 homes' energy use for one year



216,160 pounds of coal burned



0.5 wind turbines installed



1283 Incandescent lamps switched to CFL's



On the whole, GreenSaver prevented 13.67 tonnes of CO₂e from being generated from its waste streams. This is mostly due to the carbon that was saved from recycling.

This is equivalent to:



351 tree seedlings grown for 10 years



11.2 acres of U.S. forests in one year

Solutions Implemented



Kitchen Recycling Station

A recycling station with new bins and clear signage was installed in the main kitchen to minimize stream contamination. Stream contamination is when recyclables are placed in the garbage bin or garbage is placed in the recycling bin. A battery recycling bin was also purchased to encourage staff to recycle their office and household batteries.

Green Bins Program

GreenSaver contracted WASTENOT Worm Farms in the spring of 2014 to pick up and compost the office food waste. WASTENOT Worm Farms is an earthworm hatchery near Collingwood, Ontario. They sell Red Wigglers and produce castings (worm manure) as an all-natural substitute for synthetic fertilizers. Their Green Bins Growing office food waste recycling service provides clients with a Zero Waste organics management solution employing the voracious appetites of the earthworms.

In 2013, organic waste accounted for 30% of GreenSaver's office garbage. By composting our food waste, we are diverting organic waste from the landfill which frees up space and extends the lifespan of the landfill. Composting organic material results in fewer greenhouse gas emissions than putting it into the landfill. When you compost food waste, the carbon remains in the organic matter and is used as nutrients to enhance soil and future plant growth. This organic matter becomes a value added resource rather than a carbon source in the landfill.

The Smart Car

The office Smart Car was purchased to reduce the environmental impact of staff travel. The Smart Car is small, compact and light making it incredibly fuel efficient.



Social Pillar

GreenSaver Environment Committee

The GreenSaver Environment Committee (GEC) was formed in September 2013 to address issues around the office environment. At the first meeting, GEC established their mandate to improve energy efficiency, to refine eco-benefits and to engage staff on environmental issues, energy efficiency and the overall workplace environment. The committee meets monthly to work towards this mandate by organizing environmental events for staff, collecting data to track GreenSaver's environmental performance and more.

GEC also acts as an avenue for workplace feedback, questions and complaints. An anonymous suggestion box, located in the office is in place for employees to voice their suggestions and feedback about office happenings. GEC is responsible for reading through these suggestions and determining the appropriate course of action. Employee suggestions are addressed at the beginning of each GEC meeting.



2015 GEC Members

Back Row (left to right): Kaitlin Gates, Sabrina Yacoub, Marjan Zagar, Oliver Smelt

Front Row (left to right): Pamela Porter, Samantha Ventura, Aliya Hollingsworth, Sarah Bradt, Sasha Harris

Absent: Melissa Bula, Shanna Yip

Events

Water Week



During the month of March, office events were held in conjunction with Canada's Water Week. Employees were encouraged to sign a petition to limit their purchase of plastic water bottles and employ reusable bottles. Employees spent their lunches watching documentaries which highlighted some of the current global water issues which are threatening our global water supply. As a result, employees gained a heightened understanding of the importance of Canadian water supply and our surrounding watersheds. To determine the health of the nearby Mimico Creek and Lake Ontario's watershed, several employees participated in a study to measure parameters which may be affecting the community's creek. A brief report was produced to compile their findings. Appendix Mimico Creek will be reassessed during the 2015 Water Week to determine whether any of the results have changed.

Earth Week

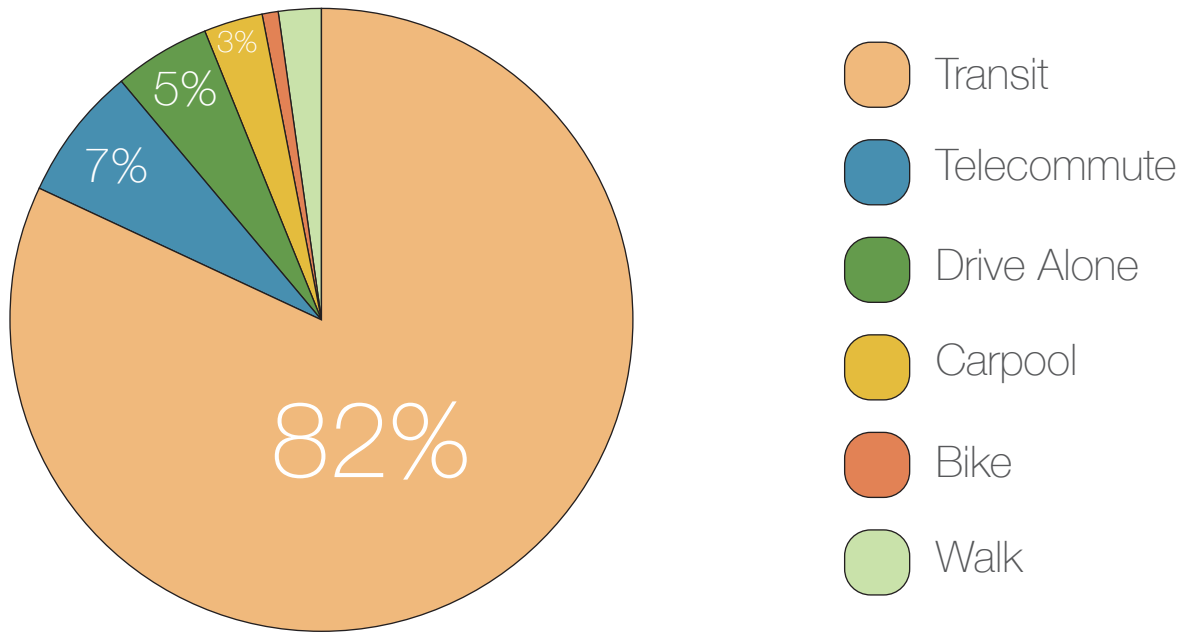
Earth Week events were centered around the coming Spring season and featured time-spent out in the local community. Employees partook in a community-wide clean up around the GreenSaver office and surrounding community, removing multiple bags of garbage from outside nearby buildings, roadways and parks. The week was concluded with a BBQ that featured organic and locally-sourced ingredients. Special effort was made to purchase food from businesses near the office.



Transportation Week

Employees participated in the 2014 Commuter Challenge where they competed against other Canadian workplaces to use active and sustainable means of transportation to commute to and from work. As a result, GreenSaver avoided 263 Kg CO₂ of Greenhouse Gas Emissions, saved 189 L of fuel and burned 2959 calories!!

GreenSaver's 2014 Commuter Challenge Results (Based on km traveled)



E-Waste Week



For e-waste week, employees participated in workshops about consumerism, the idea of the materials economy, and problems surrounding planned and perceived obsolescence. Throughout the week, employees were encouraged to bring in their “E-Waste” which was collected in two separate boxes; “Usable” and “Broken.” While the usable waste was swapped amongst employees and donated appropriately, the broken waste was responsibly recycled and reused to make jewelry, picture frames, and other crafts. As a result, employees helped divert 4 boxes from landfill by responsibly recycling the E-Waste.

Waste Reduction Week

Various events took place during Waste Reduction week which highlighted consumption and waste production both within and outside of the workplace. Employees brought in old clothing, jewelry, and household objects to swap. The remaining items were donated to a local charity. An audit was conducted where participating employees measured the amount of garbage which they personally produced throughout the day. Several suggestions for the continued improvement of GreenSaver’s waste reduction were made as a result of the audit. These suggestions were presented to GEC for review.



Community Engagement

Daily Bread Foodbank

As a result of our partnership with WASTENOT Warm Farms, GreenSaver donated 25L of natural worm casting fertilizer to the Daily Bread Food bank. GreenSaver employees also volunteered to spread the fertilizer on the Daily Bread vegetable gardens and fruit trees.



Habitat for Humanity

Throughout the year, GreenSaver makes various donations to Habitat for Humanity. Habitat for Humanity is a non-profit housing organization that provides affordable housing for low-income families. By promoting home-ownership as a means to breaking the cycle of poverty, families are able to achieve greater stability, and improve their overall health, while building equity for their future.

In 2014, GreenSaver donated 4 fridges and a chest freezer to the Habitat for Humanity GTA ReStore. Habitat ReStores sell new and gently-used donated building and household products. One hundred percent of all administrative and fundraising costs are paid for by the operation of ReStores so that every donated dollar goes directly to home building.



EcoBenefits®

The GreenSaver EcoBenefit® package is a series of incentives, credits and rebates available to all employees who have worked at the company for over 3 months time. The goal of the EcoBenefits package is to generate positive influence on the environment while also positively impact our employees' quality of life. The projected goals of the EcoBenefits program is to have an annual increase in our GHG diversion by 5%.

The EcoBenefit package includes the following financial and non-financial incentives:

- Residential Incentives
- Home Inspections
- Retrofitting Services
- Rebates on Energy and Water Conservation Products
- Rebates and Credits on purchase of EnergyStar Products
- Residence Relocation incentives
- Volunteer Work and Telecommuting Incentives
- Community Engagement Incentive
- Distance-Work Option
- Environmental Education and Professional Development
- Includes Seminars and Workshops in the Environmental Field
- Transportation Rebates
- Transit Allowance
- Low-Emission Transportation Credits
- Carpooling Credits

The EcoBenefit package was developed with GreenSaver's employee base in mind to implement long-term environmental and economic sustainability through positive employee practices. The EcoBenefit package is presented to employee upon their introduction to the company and has the outcome of setting a positive example for the workforce as well as boosting office moral and company loyalty. Employee participation amongst the available incentives and benefits have overall positive outcomes for the company, including the improvement of work efficiency, reduction of Greenhouse Gas emissions and lowering of the company's operational costs.

The EcoBenefits package highlights GreenSaver as an environmentally engaged leader within the energy efficiency sector. As an ecologically-driven company, GreenSaver aims to empower its employees to practice sustainable habits both at work and at home

GreenSaver also donates a percentage of the dollar value spent on energy-efficient products purchased by staff through GreenSaver's internal inventory.

Office Garden Group

The Office Garden Group was started in the spring of 2014 to beautify the patch of earth in front of 74 Six Point Road. The soil had plans to be paved over if not put to good use. The Garden Group came to the collective decision to focus on edible plants to supplement the office summer BBQs as well as our own food consumption at home. By the end of the summer, the garden was plentiful with tomatoes, hot peppers, parsley and mint. Other edible plants included rosemary, chives and green onions. In addition to edible plants, some flowers were planted to add some colour to the garden and to help attract pollinators and fight off pests.



Suggestions for the Future

Monitoring and tracking GreenSaver's consumption levels and carbon dioxide emissions is a great first step to minimizing our impact on the environment. This report can be used as a template to monitor future years as well as to develop reduction targets. There are many ways we can improve the report and minimize our impact on the environment.

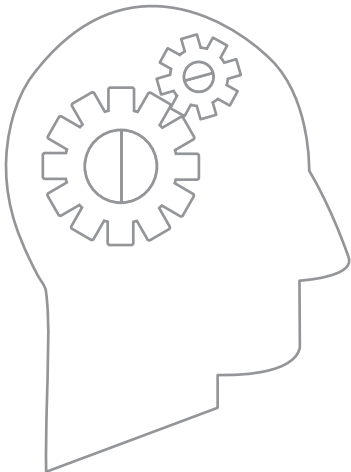
Suggestions for the 2015 Report

The creation of this report has highlighted our company's successes as well as opportunities for improvement in regards to the decrease of carbon emissions. While compiling data, it became clear that there are a majority of ways which, if implemented, will aid in the ease of gathering and comparing data in the subsequent years' reports.

Increased organization in the data collection process approaching the reporting time frame would decrease the amount of assumptions required to draw conclusions from subsequent report.

Below is an outline of possible improvements for the 2015 report that were identified based on the assumptions in this report:

- Collect staff transportation data by obtaining mandatory commuting methods and exact distances travelled on a quarterly basis. Staff often will alter their commuting practices dependent on outdoor temperature.
- Collaborate with GreenSaver's finance department to ensure that the reporting committee has access to all oil and gas receipts outside of the company account with Imperial Oil.
- Ensure that emissions factors and carbon calculators are current and most applicable to GreenSaver's business and location.
- Perform quarterly recycling and waste audit to determine garbage composition and determine where reductions in waste can occur.



Future Office Environmental Goals to Decrease CO₂ emissions

The following suggestions were brainstormed by the GreenSaver Environment Committee to determine methods for furthering our office CO₂ reductions. Any of these suggestions would be beneficial to research for the office and would aid in supplementing future Carbon Reports. GEC held a lunch and learn for all staff where the 2013 carbon report was presented. Staff were encouraged to think of ways to reduce GreenSaver's CO₂ emissions. Here are some of the actions that came out of that meeting:

- Decrease electricity usage in our office by upgrading lighting in the buildings to LEDs and installing a green or white roof.
- Increased insulation for the buildings could also aid in both electricity and natural gas reductions.
- Decrease our transportation CO₂ emissions by looking into an efficient vehicle fleet.
- Work to conserve water by installing aerators and low flow toilets throughout the office and recycle rainwater for the office garden by implementing a rain barrel station.

Several strategies came up to further tackle our office waste. We can look into changing the garbage pick-up agency to a company allowing more recyclables. With this, we can explore better signage and education around recycling. Performing a larger, more accurate waste audit would be beneficial as well. We would hold a "litterless lunch" competition and measure reduction in waste. Also, by checking to ensure that garbage and recycling bins are full upon pickup day, we would improve our overall waste reduction efforts.

GreenSaver will be looking to participate in more wide-ranging community events helping to conserve natural resources, exhibiting our commitment to helping others and further reducing CO₂.



Energy Conservation In Action