

# **Faronics** **2010 Greenhouse Gas Report**

Presented By



**FARONICS™**  
Intelligent Solutions for **ABSOLUTE** Control

# 1 Executive Summary

This Greenhouse Gas Report presents information collected from a detailed accounting of Faronics' organizational emissions in fiscal year 2010 and is the third year a greenhouse gas report has been prepared by Faronics.

The report follows the accounting and reporting guidelines of *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition* published by World Resources Institute and the World Business Council for Sustainable Development. This Protocol is the international accounting tool most widely used by government and business leaders to understand, quantify, and manage greenhouse gas emissions. A copy of these documents can be downloaded from the GHG Protocol website, [www.ghgprotocol.org](http://www.ghgprotocol.org).

The organizational boundaries of this report include Faronics' operations that are under their operational control. In fiscal year 2010, Faronics' greenhouse gas emissions were 191.25 metric tonnes of carbon dioxide equivalent. The majority of Faronics' total emissions were generated by air travel (62.57%) followed by staff commuting (23.51%), building heating and electricity usage (12.41%), and paper usage (1.51%).

As defined by the GHG Protocol, greenhouse gases from sources under the operational control of Faronics are categorized into the following "scopes":

**Scope 1** – direct emissions from stationary and mobile sources controlled by Faronics, including emissions from natural gas burned to heat buildings and fuel burned by vehicles. As Faronics' building heat is provided by steam purchased by their landlord, building heat is included in Scope 2. Faronics has no fleet vehicles, therefore the total emissions defined as Scope 1 are zero.

**Scope 2** – indirect emissions from third-party steam heat and the use of purchased electricity in buildings. Scope 2 emissions were 23.73 tonnes of carbon dioxide equivalent.

**Scope 3** – all other indirect emissions, including emissions from business travel (air transportation), staff commuting and paper usage. Scope 3 emissions were 167.5 metric tonnes of carbon dioxide equivalent.

A detailed breakdown of greenhouse gas emissions by source is shown in **Error! Reference**

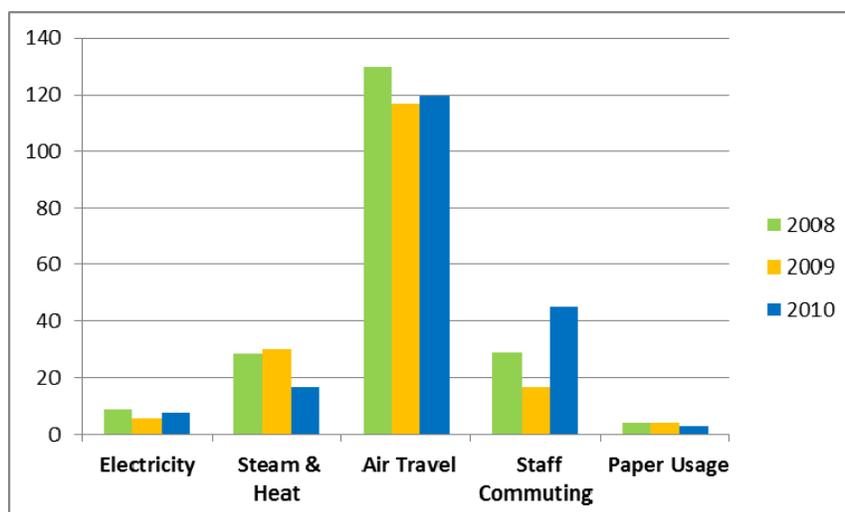


Figure 1 - Emissions by source.

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In 2010, Faronics set a greenhouse gas target for its absolute emissions to align with the Provincial target of reducing the emissions by 33 percent by year 2020, bringing the total emissions to 134.46 tonnes. Faronics is using a range of emissions reduction strategies for the short and long term.

Target	2010 Emissions	2010 Target	2009 Emissions
33% reduction by 2020, in line with the BC Government's greenhouse gas targets = 134.46 tonnes CO <sub>2</sub> e in 2020	191.25 tonnes	189.6 tonnes	172.8 tonnes

**Table 1 - Faronics' greenhouse gas targets**

Faronics has developed a GHG Inventory Quality Management System (QMS) to ensure that inventory methods are the best possible, data is of the highest quality, and that the process and system developed by the company are fully implemented.

A summary version of this report is available online on Faronics' website, [www.faronics.com](http://www.faronics.com). For more information about Faronics' greenhouse gas reduction commitment, please contact Dmitry Shesterin, Vice President, Marketing at (604) 637-8246 or [dshesterin@faronics.com](mailto:dshesterin@faronics.com).

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## 2 Introduction

This Greenhouse Gas Report has been prepared by Faronics to present information collected from a detailed accounting of Faronics' organizational emissions in fiscal year 2010 and is the third year a greenhouse gas report has been prepared by Faronics.

This report is organized as follows:

- Section 3 describes the accounting and reporting procedures used;
  - Section 4 presents the greenhouse gas emission inventory for fiscal year 2010;
  - Section 5 summarizes greenhouse gas management actions for reducing emissions;
  - Section 6 outlines targets for future emissions reductions; and
  - Section 7 discusses carbon credit purchases for fiscal year 2010.
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## 3 Accounting and Reporting Procedures

The report follows the accounting and reporting guidelines of *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition* published by World Resources Institute and the World Business Council for Sustainable Development. A copy of these documents can be downloaded from the GHG Protocol website, [www.ghgprotocol.org](http://www.ghgprotocol.org).

### 3.1 Organizational and Operational Boundaries

**Organizational boundary:** This defines the companies, business units and operations that constitute an organization for the purposes of the greenhouse gas report and the criteria for how the emissions will be reported. For the purposes of reporting, Faronics applies the GHG Protocol's organizational boundary based on the operational control approach. Using this method all operations where Faronics maintains operational control are included.

**Operational boundary:** This identifies and categorizes emissions sources associated with an organization as defined in the organizational boundary. Faronics' inventory includes emissions categorized into the following "scopes" as defined by the GHG Protocol:

- **Scope 1** (direct emissions from sources that are controlled by Faronics)  
Faronics has no natural gas connection and no fleet vehicles and therefore Scope 1 emissions are zero.
- **Scope 2** (indirect emissions from Faronics' use of purchased steam and electricity)  
Faronics has Scope 2 emissions from the provision of steam heat by its landlord, and use of electricity at the leased office location.
- **Scope 3** (all other indirect emissions)  
Faronics has Scope 3 emissions from the following sources:
  1. Staff business travel by air.
  2. Staff commuting to and from work.
  3. Paper usage (photocopy and printer paper)

### 3.2 Inventory Exclusions

Of the emissions applicable to the business of Faronics, the following emissions sources are not currently included in the inventory:

- **Garbage** – Faronics does not currently have access to reliable data about the weight or volume of garbage collected from the building that Faronics leases, the portion of the garbage that Faronics is responsible for, the types of vehicles used, or the routes that the vehicles take to the incinerator or landfill. Therefore, emissions from garbage haulage have been excluded from the inventory until the haulers are able to quantify and report their GHG footprints. The consultants recommend steps to help estimate and include these figures in the future.
  - **Couriers** – Faronics does not currently have access to reliable data about the types of vehicles or the routes that the vehicles take to deliver their packages.
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Therefore, emissions from couriers have been excluded from the inventory until the couriers are able to quantify and report their GHG footprints.

### **3.3 Base year**

A base year is a reference year against which emissions performance can be measured over time. Following the guiding principals of the GHG Protocol, Faronics has selected fiscal year 2008 as its base year due to the availability of accurate and complete data for that year.

### **3.4 Emissions adjustments**

As Faronics' knowledge and experience with inventory calculation grows, it may develop improved methodologies and tools. When this happens, previous years' reported emissions would be adjusted according to the new methodology. Adjustments will also be made when new emission factors are published that more closely reflect actual emissions than those available at the time of the original calculations. These adjustments allow the emissions accounting to be as accurate and consistent from year to year as possible. However, in the case where adjustments are relatively insignificant or do not reflect a change in calculation methodology, recalculations will not be performed for previous years' emissions.

### **3.5 Inventory quality**

To ensure inventory quality, a Faronics staff person external to the Inventory Quality Team has reviewed all calculation spreadsheets for accuracy. Faronics may choose to subject this inventory to verification (audit) by a qualified third party.

## 4 Fiscal year 2010

In fiscal year 2010, Faronics' greenhouse gas emissions were 220.1 metric tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). Consolidated direct emission from stationary and mobile combustion sources (Scope 1) contributed zero metric tonnes; indirect emissions from consumption of purchased steam and electricity (Scope 2) generated 52.54 metric tonnes; and other indirect emissions (Scope 3) accounted for 167.5 metric tonnes of carbon dioxide equivalent. Further details on each scope are provided in the subsequent sections.

		<b>Emissions (tonnes CO<sub>2</sub>e)</b>
<b>Scope 1</b> (Direct)	Stationary	0.0
	Mobile	0.0
	<i>Sub-total Scope 1</i>	0.0
<b>Scope 2</b> (Indirect - Consumption of Purchased Electricity & Steam)	Electricity Consumed	7.31
	Steam Heat Consumed	16.42
	<i>Sub-total Scope 2</i>	23.73
<b>Scope 3</b> (Other Indirect emissions)	Business Air Travel	119.66
	Employee Commuting	44.97
	Paper Usage	2.89
	<i>Sub-total Scope 3</i>	167.50
<b>TOTAL</b>		<b>191.25</b>

*Note: Figures may not add due to rounding.*

**Table 2: Greenhouse gas emissions, fiscal year 2010**

### 4.1 Scope One

In fiscal year 2010, consolidated direct emissions from stationary and mobile combustion sources (Scope 1) generated a total of zero metric tonnes of carbon dioxide equivalent. More details are provided in the following sections.

#### 4.1.1 Stationary Combustion Sources

**Building Natural Gas:** Faronics leases two floors of a building located at 609 Granville Street, Vancouver. This combined 1,752 square metre (18,839 square feet) space is heated by steam, purchased by the landlord. Accordingly these stationary sources are classified as Scope 2.

## 4.1.2 Mobile Combustion Sources

**Vehicle Fleet:** Faronics does not own or lease any vehicles, accordingly mobile combustion sources are zero.

## 4.2 Scope Two

In fiscal year 2010, indirect emissions from consumption of purchased steam heat and electricity (Scope 2) generated 23.73 metric tonnes of carbon dioxide equivalent. The landlord provided utility data for consumption attributed to Faronics.

	Emissions Source	Activity Data	Emission Factor	Emissions (tonnes CO <sub>2</sub> e)
609 Granville, Vancouver	Electricity	430,036 kWh	0.017 kg CO <sub>2</sub> e/kWh	7.31
609 Granville, Vancouver	Steam Heat	275,205 lb	0.05967 kg CO <sub>2</sub> /lb steam	16.42
<b>TOTAL</b>				<b>23.73</b>

*References: Steam heat emissions factor provided in 2009 by Central Heat Distribution Ltd., the steam heat supplier for the office. Electricity emissions factor for National Energy Board (2005 data) as referenced by Dowlatabadi et al Paper "Ground Source Heat Pumps in Canada: Economics and GHG Reductions Potential" Page 10, Table 4, Published May 2007.*

*Figures may not add due to rounding.*

**Table 3: Emissions from steam heat and electricity consumption, fiscal year 2010**

## 4.3 Scope Three

In fiscal year 2010, on a consolidated basis, other indirect emissions (Scope 3) accounted for a total of 167.5 metric tonnes of carbon dioxide equivalent. More detail is provided in the following sections.

### 4.3.1 Air Travel

Faronics employees are often required to fly for business purposes. In fiscal year 2010, employees flew a total of 645,825 kilometres, which generated 116.7 metric tonnes of carbon dioxide.

	Emissions Source	Activity Data (km)	Emission Factor (kg CO <sub>2</sub> /km)	Emissions (tonnes CO <sub>2</sub> )
Faronics	Airplane Fuel	543,606	0.19 Short Haul to 0.23 Long Haul	119.7
<b>TOTAL</b>				<b>119.7</b>

*Emissions factor source: UK 2009 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting*

*Figures may not add due to rounding.*

**Table 4: Emissions from air travel, fiscal year 2008****4.3.2 Employee Commuting**

All Faronics employees were surveyed in November of 2010; 98.15% responded. The responses were used to extrapolate data for the entire staff—employee commuting accounted for 44.97 metric tonnes of carbon dioxide equivalent. Table 9 outlines the results of the survey.

*Emissions factor sources: Automobile emissions factor from CO<sub>2</sub> from the GHG Protocol Mobile Guide, CH<sub>4</sub> and N<sub>2</sub>O from*

	<b>Emissions Source</b>	<b>Activity Data (passenger km)</b>	<b>Emission Factor (gCO<sub>2</sub>e/km)</b>	<b>Emissions (metric tonnes CO<sub>2</sub>e)</b>
All Staff	Automobile	179,224	222.5	39.87
	Transit	836,154	2.4	2.01
	Car Pool	27,779	111.23	3.09
	Walk/Bike	59,628	0	0.00
<b>TOTAL</b>		<b>1,102,784</b>		<b>44.97</b>

*Climate Registry General Reporting Protocol page 95 table 13.4 2005 year.*

*<http://www.theclimateregistry.org/downloads/GRP.pdf>*

*Transit emissions factor from Poudenx, Pascal and Walter Merida, 2007. "Energy Demand and greenhouse gas emissions from urban passenger transportation versus availability of renewable energy: The example of the Canadian Lower Fraser Valley." Energy, 32(1), 1-9. The GHG Protocol Mobile Guide V1.3 (03/21/05). Carpool emissions factor is single automobile divided by 2 passengers.*

*Note: Figures may not add due to rounding.*

**Table 5: Emissions from employee commuting, fiscal year 2010****4.3.3 Paper Usage**

Paper usage represents paper used in the Faronics photocopiers, printers and fax machines. Faronics used 700 reams of paper. In fiscal year 2009, paper usage accounted for 4.2 tonnes of carbon dioxide equivalent.

*Emissions factor source: Environmental Defence Paper Task Force Website [www.papercalculator.org](http://www.papercalculator.org).*

**Table 6: Emissions from paper usage, fiscal year 2009**

<b>Emissions Source</b>	<b>Activity Data (# of reams)</b>	<b>Emission Factor (kg CO<sub>2</sub>e/ream)</b>	<b>Emissions (metric tonnes CO<sub>2</sub>e)</b>
0 % Recycled Paper	380	6.684	2.5
100 % Recycled Paper	60	5.845	0.4
<b>TOTAL</b>	<b>440</b>		<b>2.9</b>

## 5 Management Actions to Reduce Emissions

Faronics is implementing a four-part GHG management action plan, including:

- 1) a GHG Inventory Quality Management System
- 2) an internal reductions plan
- 3) target setting and
- 4) investment in GHG offsets for 2010.

### 5.1 GHG Inventory Quality Management System

Dmitry Shesterin, Faronics Vice President, Marketing, has volunteered to act as the internal GHG champion. Mr. Shesterin will ensure the GHG inventory process is continually maintained. The Faronics GHG Inventory Quality Management System (QMS) ensures that inventory methods are the best possible, data is of the highest quality, and that the process and system developed by the company are fully implemented.

Through this inventory process Faronics has developed a Quality Management Plan including steps to be taken in collecting the data, inputting it into a tracking spreadsheet, and reporting the results annually.

As recommended by the GHG Protocol, in future fiscal years the Inventory Quality Team will ensure that Faronics:

- Performs generic quality checks to ensure that the tracking system continues to remain accurate, and that data is being archived for future verification.
- Reviews final inventory estimates and reports – as a normal part of monthly, quarterly or annual management decision making, management should review and support the greenhouse gas inventory estimates and reports.
- Performs source-specific quality checks from time to time to ensure the continued quality of the data.
- Institutionalizes formal feedback loops so that errors, operational changes or inconsistencies are reflected in the ongoing inventory tracking system.
- Documents activities in its Annual Report and archives all data.

### 5.2 GHG Reductions Plan

During the inventory process in 2009, Offsetters, a leading provider of carbon-management solutions, reviewed the environmental policies of Faronics and recommended a range of greenhouse gas reduction strategies and other environmental policies. These recommendations are provided in the tables below. Several of these strategies were implemented in 2010 to meet Faronics' emissions target.

**Table 7: Strategies to reduce heating, ventilation and air conditioning (HVAC) utility consumption**

	Existing Condition 2009	Recommendations for 2010
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Leased Offices -Steam Heat	<ul style="list-style-type: none"> <li>Personal space heaters banned</li> <li>New, more efficient, temperature set for server room.</li> </ul>	<ul style="list-style-type: none"> <li>Optimize IT infrastructure to minimize emissions and electricity consumption</li> </ul>
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Table 8: Strategies to reduce electricity consumption (**non-HVAC**)

	Existing Condition	Recommendations for 2010
<b>Lighting</b>	<ul style="list-style-type: none"> <li>Lights default by building management to turn off at 10pm</li> <li>Some meeting room lights are still manually operated</li> </ul>	<ul style="list-style-type: none"> <li>Ensure use of compact fluorescent task lights is instead of overhead lights.</li> <li>Replace any incandescent bulbs with compact fluorescents.</li> <li>All manual meeting room lights to be turned off when not in use.</li> </ul>
<b>Computers / Printers</b>	<ul style="list-style-type: none"> <li>Faronics Power Save is being used on all computers to save power.</li> <li>The majority of Faronics' sales force uses laptops, which are set to sleep quickly. Desktop computers are also energy optimized.</li> <li>Printers are all Energy Star rated and set to sleep.</li> <li>Upgraded a number of servers to energy efficient hardware</li> <li>Consolidated and virtualized a number of servers to further reduce the carbon footprint</li> <li>Moved email services to Google Mail to eliminate the local exchange server and thus further reduced emissions</li> </ul>	<ul style="list-style-type: none"> <li>All future computer and printing equipment purchases to be Energy Star rated.</li> <li>All computers are to utilize Faronics Power Save software or are to be set to sleep quickly, and to turn off at night.</li> </ul>

Table 9: Miscellaneous strategies

	Existing Condition	Recommendations for 2010
<b>Air Travel</b>	<ul style="list-style-type: none"> <li>Air travel, Faronics' largest emissions source, is made up largely of trade shows, where the company can efficiently meet many customers at one time. Travel is mostly throughout North America.</li> <li>Attempts are made to hire a local staff person for trade shows, and to combine these shows with client visits.</li> <li>Local client visits are also arranged when visiting other cities, in order to maximize the travel benefit.</li> <li>Use Webex online conferencing for product demonstrations to avoid some travel.</li> </ul>	<ul style="list-style-type: none"> <li>Faronics plans to add more North American partners, which will further reduce travel.</li> <li>Promote video conferencing and collaboration software tools to save on non-critical travel.</li> <li>Once Faronics has reduced flights as much as possible, consider purchasing offsets as a means to neutralize these remaining emissions.</li> </ul>

	<b>Existing Condition</b>	<b>Recommendations for 2010</b>
<b>Staff Commuting</b>	<ul style="list-style-type: none"> <li>Faronics is part of the Translink Employer program, which provides better transit rates for employees and is automatically deducted from paychecks.</li> <li>Bike lockers and showers are available and have been promoted to staff.</li> </ul>	<ul style="list-style-type: none"> <li>Get involved with initiatives like the Bike to Work Week - <a href="http://www.biketowork.ca/">http://www.biketowork.ca/</a> and encourage employee participation.</li> </ul>
<b>Office Paper Usage</b>	<ul style="list-style-type: none"> <li>Customers have the option of downloading software manuals or purchasing hard copies. Hard copies are an extra cost to clients, and they must opt-in to get printed material.</li> </ul>	<ul style="list-style-type: none"> <li>Default all printers and photocopiers to double-sided printing to save one-half of paper used.</li> <li>Stop proactively supplying printed copies of user manuals.</li> <li>Green Workplace (<a href="http://www.greenworkplace.ca/">http://www.greenworkplace.ca/</a>) could assist with paper saving initiatives, if necessary.</li> <li>Purchase 100% recycled paper.</li> </ul>
<b>Garbage</b>		<ul style="list-style-type: none"> <li>Participate in landlord's zero-waste program.</li> </ul>
<b>Courier</b>		<ul style="list-style-type: none"> <li>Consider using carbon neutral courier companies.</li> </ul>

## 6 Greenhouse Gas Target Setting

After reviewing its GHG footprint for fiscal year 2010, Faronics recommitted to its greenhouse gas target set previously, which was as follows:

**TARGET: The BC Provincial Government has set a target of 33% reductions of GHG emissions across the BC economy by 2020.**

Based on the updated emission factors for electricity generated in BC, the emission values for 2008 and 2009 were updated to 200.6 and 172.8 tonnes respectively from 234.6 and 194.4.

In 2010, Faronics' total emissions were 191.25 tonnes of carbon dioxide equivalent, 1.65 tonnes short of the goal of 189.6.

To meet the BC Government reduction target, Faronics would need to reduce its emissions to 134.42 tonnes by 2020.

To stay on track to meet this target, Faronics would need to reduce its total emissions by approximately 5.5 tonnes a year, which equates to a total of 184.1 tonnes for 2011.

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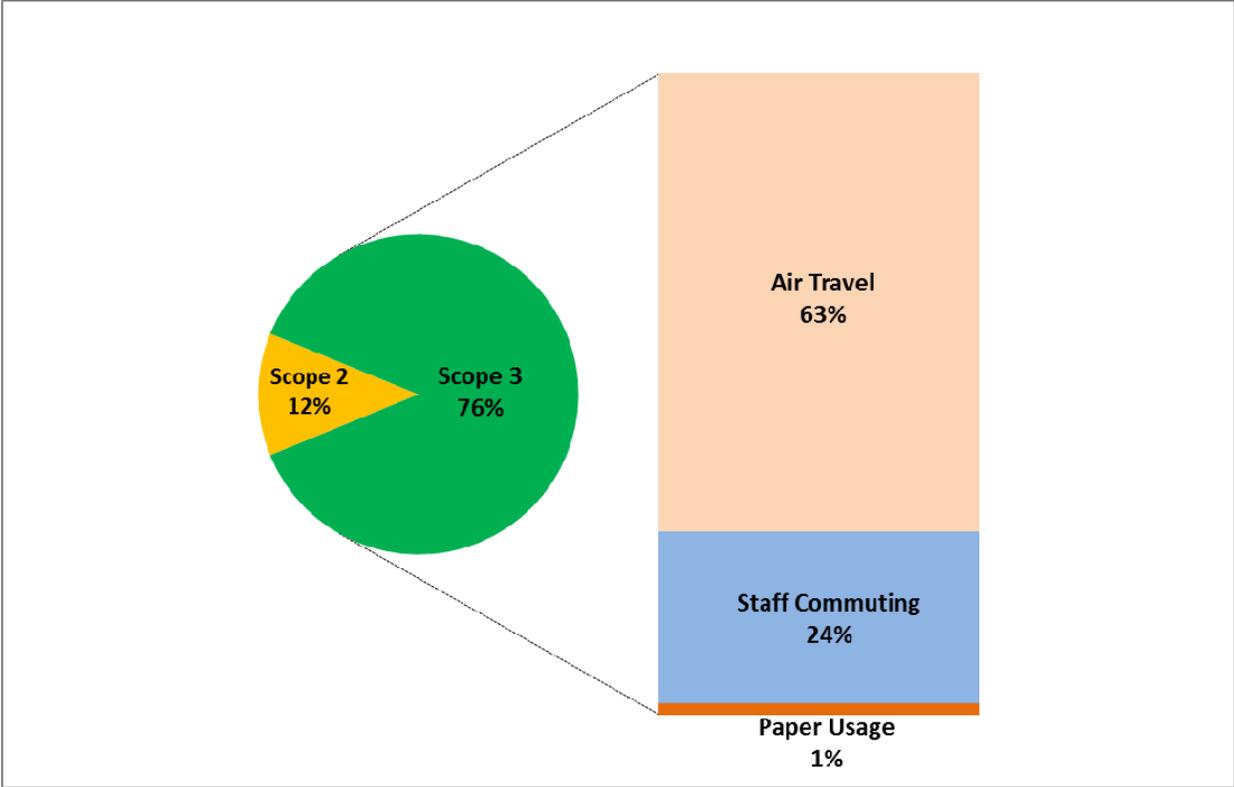
## 7 Purchases of Carbon Credits

After reducing its greenhouse gas emissions as much as possible, Faronics plans to purchase local, high quality, verified carbon credits in fiscal year 2011 in order to cover the GHG emissions from 2010, and reduce its footprint to zero. The Offsetters invests funds received from Faronics and other clients into renewable energy and energy efficiency projects that reduce greenhouse gas emissions and would not take place without its involvement. For more information about this organization, please visit [www.offsetters.ca](http://www.offsetters.ca).

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## **Appendix 1: Scope 2 and 3 Charts**

**Figure 2: 2010 scope 3 greenhouse gas emissions of 167.5 tonnes**



**Figure 3: 2010 scope 2 greenhouse gas emissions of 23.73 tonnes**

