

Canadian Office and Professional Employees
(COPE)

Union Local 378 Operations

2007 Greenhouse Gas Emissions Inventory

Data Report and Recommendations

Prepared for
The COPE 378 Human Rights Committee

By
Alf Leake, P.Eng.

On behalf of
The Climate Change Working Group

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1.0 Executive Summary

The Canadian Office and Professional Employees Union Local 378 is assessed for greenhouse gas (GHG) emissions – a.k.a. *carbon footprint* – for its Union operations. In 2007, the Administration Office is estimated to have released 346 tonnes CO₂ and the Office Employees Building Ltd 27 tonnes CO₂. The main sources of GHG releases are: Union travel (49%), paper (30%) and heating and cooling (14%).

Recommendations for offsetting and reducing GHG emissions are provided, including video conferencing, and coordination of meetings to reduce the GHG emissions from Union travel and changes to communication methods and switching to paper with a higher recycled content. To improve future reporting, it is also recommended that expenses for GHG emitting activities are accounted for in financial records (e.g. mileage and gas, paper, airplane and ferry travel, courier, and heating/cooling and electricity).

In conclusion, it is recommended that COPE378:

- develop and initiate its own “carbon neutral” strategy to reduce its carbon footprint, and to better position itself to meet future regulatory requirements; and
- set up a “carbon trust” to fund future carbon reduction initiatives and/or purchase carbon offsets.

2.0 Background

The Canadian Office and Professional Employees Union Local 378 (COPE378) represents over 10,000 employees across British Columbia. It’s operations are based out of Burnaby, BC, where 41 people are employed to administrate Union activities.

Greenhouse gases (GHGs) are molecules (including most notably, carbon dioxide and methane) released to the atmosphere through both natural and anthropogenic (human caused) processes.

However, increases in GHG concentrations recorded in recent years have been shown both to be wholly due to human activity, and most

importantly, resulted in changes to the earth's climate (see the [2001–2004 IPCC Synthesis Reports](#) for example: http://www.grida.no/climate/ipcc_tar/vol4/english/index.htm).

The Union has recently struck a Climate Change Working Group (CCWG) to develop a plan to both evaluate the Union's greenhouse gas (GHG) emissions (aka carbon footprint), and develop a strategy to reduce its footprint. The BC Government has introduced several programs to encourage British Columbians to reduce their greenhouse gas emissions and become "carbon neutral", including requirements under the [BC Greenhouse Gas Reduction Targets Act](#) ("the Act", http://www.leg.bc.ca/38th3rd/1st_read/gov44-1.htm) that public sector organization (PSO) operations be carbon neutral by 2010, and that their travel be carbon neutral until then.

3.0 Objectives

The following objectives have been identified by the CCWG:

- to identify an approach to assessing the carbon footprint of Union operations
- to provide a preliminary assessment of the carbon footprint of Union operations for 2007
- to identify opportunities for improving GHG accounting for the Union; and
- to recommend alternatives to GHG reductions and/or offsets for future implementation.

4.0 Approach

At the time of this report, the BC Government has not yet released its standards for quantifying and reporting GHG emissions for BC organizations and households. However, in its Climate Action website (<http://www.climateactionsecretariat.gov.bc.ca>), the government has endorsed the World Resources Institute's (WRI's) GHG Protocol Corporate Standard for conducting a GHG inventory for businesses (<http://www.ghgprotocol.org/standards/corporate-standard>).

The Standard divides GHG emissions for businesses into 3 groups:

- Scope 1 emissions – are direct business-generated emissions such as those from company owned natural gas heaters, and company owned cars;
- Scope 2 emissions – are emissions by generation facilities from electricity purchased by the business; and
- Scope 3 emissions – are emissions created to make products consumed by businesses (e.g. office supplies) and emissions created while doing business but not owned by the business (e.g. employee commuting in non-company vehicles and natural gas heaters not owned by the company)

For the purpose of this GHG footprint analysis, the Union operations were divided into three categories:

- COPE378 Administration Office – 2nd Floor 4595 Canada Way, Burnaby, BC. The office is leased through Touchstone Property Management, and in general is responsible for emissions of the Scope 2 and 3 variety;
- Office Employees Building Ltd – This building is owned by COPE378 and is generally responsible for Scope 1 and Scope 2 emissions; and
- COPE378 investments – as there are no standards currently in place to capture this aspect of the Union's carbon footprint, Union investments into various holdings were not assessed in this inventory.

The GHG footprint audit was conducted the week of 25 February 2008 by COPE378 Administrative staff and by Alf Leake on behalf of the CCWG.

5.0 COPE378's 2007 GHG Footprint

The following tables summarize the results of the 2007 audit based on records retrieved from COPE378 files.

Table 1: Summary of COPE378 Administration Office 2007 GHG Footprint. Highlighted areas were estimated due to a lack of available information at the time of the audit. These values will be reconciled in future audits to ensure comparability.

	Activity		CO2 Equivalent	
	Aspect	Type	kg CO2	tonnes CO2
Scope 1	Union Car Travel	All except VP/EC	79646.8 kg CO2	
		VP's-President	4712.0 kg CO2	
		EC Travel	28500.0 kg CO2	
	TOTAL		112858.8 kg CO2	112.9 tonnes CO2
Scope 2	Electricity	BC Hydro	599.9 kg CO2	
		TOTAL	599.9 kg CO2	0.6 tonnes CO2
Scope 3	Heating and Cooling	Terasen	26418.3 kg CO2	
		Paper		
	Travel	Local Voice	62914.3 kg CO2	
		Copy Paper	60397.7 kg CO2	
		Print Jobs	8572.1 kg CO2	
		Recycling	-18093.1 kg CO2	
	Employee Commuting	Air Travel (all)	70000.0 kg CO2	
		BC Ferries	206.7 kg CO2	
	Courier (Outbound)	2WD (medium)	19754.7 kg CO2	
		Bus	2243.8 kg CO2	
Ground Courier		286.1 kg CO2		
	Air Courier	9.2 kg CO2		
TOTAL		232709.8 kg CO2	232.7 tonnes CO2	
COPE378 Administration Office GHG Footprint - GRAND TOTAL			346.2 tonnes CO2	

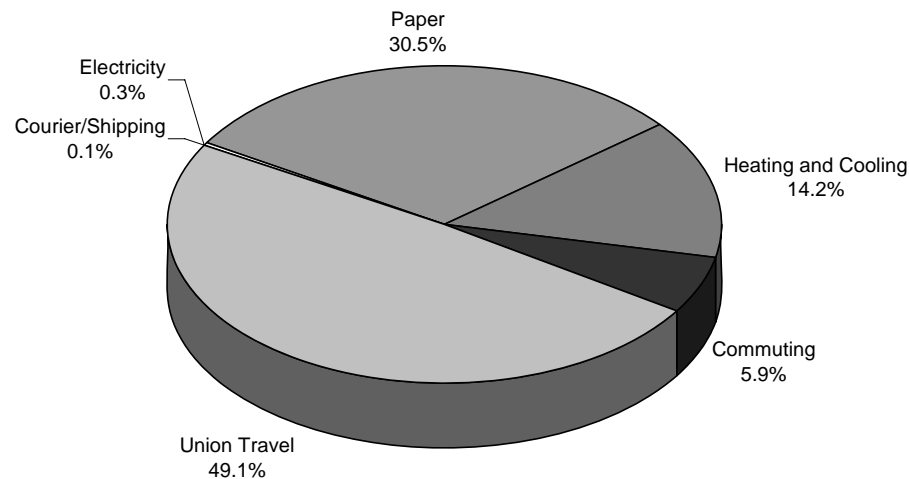
estimated

Table 2: Summary of Office Employees Building Ltd 2007 GHG Footprint

	Activity		CO2 Equivalent	
	Aspect	Type	kg CO2	tonnes CO2
Scope 1	Heating and Cooling	Terasen	26418.32 kg CO2	
		TOTAL	26418.32 kg CO2	26.4 tonnes CO2
Scope 2	Electricity	BC Hydro	599.8626 kg CO2	
		TOTAL	599.8626 kg CO2	0.6 tonnes CO2
Scope 3	None			
		TOTAL	0 kg CO2	0.0 tonnes CO2
Office Employees Building Ltd GHG Footprint - GRAND TOTAL			27.0 tonnes CO2	

The total GHG footprint for COPE378's 2007 local operations is estimated at 373.2 tonnes CO₂. For context, the average U.S. household with four people emits about 100 tonnes CO₂ per year. As demonstrated in the following chart, Union travel has the largest footprint, followed by paper consumption and heating and cooling emissions.

GHG Emissions by Activity for Combined COPE378 Operations



6.0 Recommendations for further analysis

At the time of this report, there were several outstanding items from the audit (highlighted in pink in Table 1) that are listed here in priority of emissions potential for further review:

- Heating and cooling costs for the COPE378 Administration office were not provided for 2007. The OE Building Ltd amounts were used as a proxy, resulting in calculated GHG releases that are most likely higher than actual.
- Travel by Executive Councillors and President/Vice-President members was assumed based on duties and scheduled meetings:
- Executive Councillors: Annually 5 meetings with 75 members in attendance on average driving a return trip of 400km
- President/Vice-presidents: Annually 4 members with monthly scheduled meetings plus ~50 mixed events each at an average round trip of 100km.

- Air travel was assumed as 100 short-haul flights per year (1000km round trip), plus 50 long-haul flights (10,000km round trip)
- BC Ferries travel was assumed to have the same impact per person-km as an airplane;
- Courier emissions were assumed according to air/vehicle emissions per kilometre where emissions intensities were divided between number of parcels for each mode: 1000 parcels for flights, 50 parcels for vehicles.

This is not an exhaustive list, and when government standards are in place, a retrospective analysis will be completed to ensure comparability between years. The following steps are recommended to improve reporting in future years:

- Separately define expense types in each account that are GHG emitting activities: mileage and gas, paper, airplane and ferry travel, courier, and heating/cooling and electricity should be flagged as GHG activities to ease auditing processes in the future.
- Include this review in resourcing annual office planning. March 31st is a logical end date for annual reporting to coincide with financial requirements that have similar data needs.
- Provide a link to this report on the external COPE378 website.

7.0 GHG Reduction Recommendations

There are two end objectives that, in consideration of both cost and resources, will dictate which options COPE378 will choose to employ in the coming months and years:

- To work towards meeting/exceeding future requirements to be set by the BC Government for non-Public Sector Organizations (PSOs) as laid out in the Act; and/or
- To meet or exceed existing standards set out in the Act for Public Sector Organizations to be carbon neutral.

7.1 Towards Meeting Future Requirements (non-PSOs)

Standards that apply to non-PSOs like COPE378 are not expected until later this year, which will outline targets to be reached by 2012 and 2016. Overall the Act dictates that BC will reduce its 2007 greenhouse gas footprint 33% and 80% by the years 2020 and 2050 respectively.

As this audit has shown, there are three activities that are significantly contributing to COPE378's carbon footprint: Union travel, Paper use and Heating and Cooling. Because heating and cooling emissions reductions are contingent on significant capital costs and lease negotiations, Union travel and paper use provide the best opportunities to reduce GHG emissions for this organization.

- Paper Use: paper use at COPE378 is driven by 3 primary information needs: public information (campaigns), specific member information (updates and bulletins) and general member information (Local Voice). Three options are recommended to reduce the need for paper to meet our information requirements:
 - Give members the option to receive general information by email/internet links. The Local Voice magazine is responsible for 30–50% of paper consumption at the Union, and this initiative could reduce printing fees and emissions to zero if everyone agreed to this option.
 - Use recycled paper for all office and communication needs. Although there is a carbon footprint associated with any paper use, these emissions are reduced significantly with any level of recycled content:

Type of paper	kg CO2 per kg paper
Virgin paper 0% post-consumer recycled	3.24
33% post-consumer recycled	2.75
50% post-consumer recycled	2.50
66% post-consumer recycled	2.35
100% post-consumer recycled	1.76

- Work to develop agreements with employers/employees to ensure Union information can be sent to members workplaces via email/internet. It is unclear to what level this is already supported at workplaces.
- Union Travel: it is understood that several meetings require personal attendance to deal with either large meetings or those for member representation. However, there appear to be many opportunities to try different alternatives to standard face to face meetings, including:
 - Video-calling through internet services (such as Skype™),
 - Organizing several meetings at one location (e.g. BC Hydro meetings in one day/ICBC the next)
 - Review the need to meet – discuss alternatives or relay information over the internet.
- Policy changes: changing corporate policy is the best tool for small and large organizations to influence change in the office. However, they must consider the appropriate costs and resource requirements to implement, and they should be monitored to ensure the benefits are seen, as well as ensuring that core business needs are being met.
- Promote Employee Conservation: employee conservation programs are also effective not only in promoting office GHG reductions, but in influencing employees to adopt a climate-friendly lifestyle:
 - Review “Working 9–5 on Climate Change – An Office Guide” available on the WRI website:
<http://www.ghgprotocol.org/downloads/calcs/working9-5.pdf>
 - Encourage conservation through employee driven incentive programs (e.g. rewarding conservation through small gifts, coupons, etc.)

- Work with vendors to ensure they are working to reduce their GHG footprint, or change to vendors that demonstrate climate-friendly business practices

7.2 To Meet Current Requirements (PSOs)

There are two requirements that apply to PSOs in the short term:

- (a) that PSOs be carbon neutral by 2010; and
- (b) that they are developing carbon neutral strategies through 2008–2009

Because many bargaining units within COPE378 are public sector organizations, the CCWG recommended that COPE378 develop and initiate its own carbon neutral strategy. This approach will demonstrate to our membership that COPE378 is a leader in action on climate change.

The recommendations include:

- *Develop a COPE378 GHG Reductions Strategy.* this strategy would commit the Union to real GHG reduction goals on an annual basis in consideration of future requirements, and develop plans to invest funds to reduce GHG outputs either at COPE378 or outside of its operations; and
- *Develop a COPE378 Carbon Trust.* the trust will receive annual contributions from general revenue of similar value to that which would be required to purchase offsets for COPE378's carbon footprint, in consideration of the measures taken in the reduction strategy below.

8.0 Next Steps

The CCWG proposes that this document serve as the template for annual GHG footprint analyses. The CCWG will present the report and recommendations to the Executive Council and Executive Board for implementation of a reduction strategy by Fall 2008.