

## UBC Vancouver Campus - 2009 GHG Emissions Inventory

Scope	Component [a]	Usage Data	GHG Emissions (tonnes of CO <sub>2</sub> e/year)
Scope 1 – Direct	Core Buildings		
	Natural Gas for Steam	761,060 GJ	38,000
	Natural Gas direct use	58,310 GJ	2,910
	Heating Oil for steam	16,820 GJ	1,230
	Ancillary Buildings [b]		
	Natural Gas for Steam	152,870 GJ	7,630
	Natural Gas direct use	88,670 GJ	4,430
	Heating Oil for steam	3,310 GJ	240
	TRIUMF – Natural Gas direct use (1/11 share) [c]	2,580 GJ	130
	Fleet		
	Gasoline	351,930 L	840
	Biodiesel	109,210 L	240
Scope 2 – Indirect	Core Buildings – Electricity	134,574,660 kWh	2,980
	Ancillary Buildings [b] – Electricity	52,817,280 kWh	1,160
	TRIUMF – Electricity (1/11 share) [c]	5,826,000 kWh	130
Scope 3 – Optional	Paper		660
	Staff and Faculty Travel [d]		13,600
	Solid Waste [e]		1,600
	Commuting [e]		30,500
	Building Lifecycle [e]		10,200
<b>Total Emissions Eligible to be Offset under Bill 44 (Scope 1, 2, and Paper) [f]</b>			<b>60,580</b>



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Notes:

[a] Other components have been identified but methodologies are not yet in place. These include: fugitive emissions (Scope 1, refrigerants and research gases; required by GHGRTA to be inventoried for 2010), and Food and Procurement (Scope 3, these emissions will require research into the Life Cycle impacts of the procurement chain).

[b] Ancillary buildings include student housing, conference and athletics facilities.

[c] TRIUMF is 1/11 owned by UBC. This inventory includes 1/11 of the facility's estimated emissions.

[d] Figure taken from 2006 inventory. Staff and faculty travel was not measured in the 2009 inventory due to the large margin of error in the methodology.

[e] These emissions have been estimated from published conversion factors. Improvements to systems and methodologies may allow for other components to be included in future inventories. International student travel, food, and procurement systems have been identified as desired scope 3 emissions to include in future inventories.

[f] Values may not sum precisely due to rounding. This is a demonstrative value from the 2009 inventory. The actual requirement for offsets for each year will be determined based on the actual year's inventory starting in 2010.



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