



UBC Vancouver Campus – 2019 Greenhouse Gas Emissions Inventory

Scope	Component [a]	Usage Data [i]	GHG Emissions (tCO ₂ e)
Scope 1 – Direct	Core Buildings [b]		
	Natural gas for district energy	349,368 GJ	17,424
	Natural gas direct use	165,870 GJ	8,727
	Light fuel oil (heating oil) for district energy	15,448 GJ	1,056
	Biomass for district energy [c]	150,326 GJ	338
	Renewable natural gas (RNG) [d]	61,532 GJ	18
	Ancillary Buildings [e]		
	Natural gas for district energy	104,199 GJ	5,197
	Natural gas direct use	80,513 GJ	4,015
	Light fuel oil (heating oil) for district energy	4,381 GJ	300
	Biomass for district energy [c]	30,886 GJ	69
	TRIUMF – Natural gas direct use (UBC share) [f]	669 GJ	33
	Fleet		
	Gasoline	348,218 L	800
	Diesel	11,776 L	32
	Biodiesel	51,118 L	141
Natural gas	2,154 GJ	121	
Propane	- L	-	
Scope 2 – Indirect	Core Buildings – Electricity	138,820,417 kWh	1,499
	Ancillary Buildings – Electricity	66,349,352 kWh	717
	TRIUMF – Electricity (UBC share) [f]	4,519,274 kWh	49
Scope 3 – In Scope	Paper	54,758 Packages	320
Total Campus emissions offset under Climate Change Accountability Act(Scope 1, 2, and Paper) [g]			40,400
Scope 3 – Not required to be offset	Business flights (staff and faculty)		17,694
	Solid waste [h]		1,021
	Commuting [h]		35,114
	Building lifecycle [h]		13,241

[a] Fugitive emissions have been deemed out of scope as they were estimated to comprise less than 1% of campus emissions.

[b] Core buildings comprise of academic and administrative buildings.

[c] UBC is required to offset the non-biogenic (CH₄ and N₂O) portions of biomass combustion. In addition, the Bioenergy Research and Demonstration Facility (BRDF) consumes a small amount of natural gas upon start-up/shutdown.

[d] UBC is required to offset the non-biogenic (CH₄ and N₂O) portions of renewable natural gas.

[e] Ancillary buildings include student housing, conference, athletic and parking facilities.

[f] UBC owns a 1/14th share of TRIUMF. This inventory includes 1/14th of the facility's energy usage and emissions.

[g] Values may not sum precisely due to rounding. This table shows only the Vancouver campus emissions that need to be offset for 2019. An additional 5,979 tCO₂e associated with UBC Properties Trust and off-campus properties are also need to be offset for 2019.

[h] These emissions have been estimated from published conversion factors. Improvements to methodologies may allow for other Scope 3 components to be included in future inventories.

[i] An error occurred in the information upload to the government's new Clean Government Reporting Tool for natural gas for Core district energy system. This table has the corrected information. As the issue has not been fully processed through the government verification process, the results presented are not yet official.