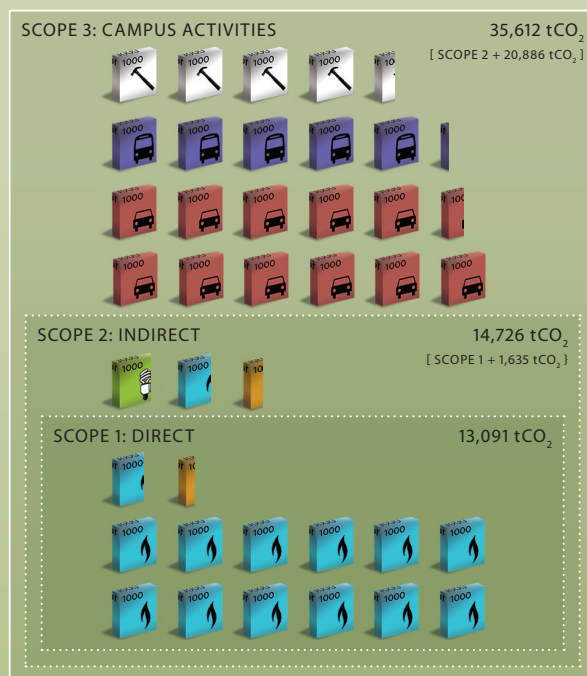


Climate change and UVic

Measuring our baseline

To become *climate-neutral* or *carbon-neutral*, an organization must have no net greenhouse gas (GHG) emissions. This is achieved by first establishing a boundary of GHG responsibility, then reducing GHG emissions within this boundary, and finally offsetting emissions which were not eliminated.

UVic 2006 greenhouse gas (GHG) emissions



TOTAL 2006 EMISSIONS (SCOPE 3)

Category	Natural Gas	UVic fuels	Electricity	Automobile	Transit	Construction
tonnes CO ₂	13,490	320	915	11,462	5,095	4,329

Source: UVic Greenhouse Gas Assessment and Analysis Project preliminary results



= 1,000 tonnes CO₂ emissions

One metric tonne equals 1,000 kg

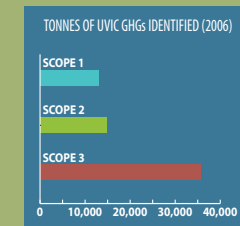
Home-grown knowledge

The outstanding quality and diversity of research conducted at the University of Victoria gives us a cutting-edge understanding of the implications of climate change. Exceptional scientists work at UVic, including six affiliated researchers and faculty who shared a Nobel Peace Prize for their role as lead authors of the 2007 Intergovernmental Panel on Climate Change report. The effects of climate change on a range of issues, such as international relations, marine ecosystems, coastal communities, water resources, the forestry industry, public policy, law and psychological well-being, are studied through a remarkable array of disciplines across campus, making UVic a vital interdisciplinary hub of mitigation and adaptation strategies. As confirmation of our outstanding capacity, UVic was also recently named as lead and host of the Pacific Institute for Climate Solutions (PICS). Building on the strengths of BC's four research-intensive universities, PICS will harness the intellectual resources of BC to develop innovative climate change solutions, seek new opportunities for positive adaptation, and lead the way to a vibrant low-carbon economy.

Measuring emissions

The Institute for Integrated Energy Systems at the University of Victoria (IESVic), who have researched, developed and promoted sustainable energy systems for almost two decades, has just completed a preliminary inventory of UVic's GHG emissions for the year 2006.

Defining the scope of the issue



The first step in any assessment of GHG emissions is defining the *scope*, or the parameters of what is measured. Although some North American universities and other institutions have conducted GHG inventories, their scope and methodology varies considerably.

For example, should the inventory's scope include the GHG emissions released from the production of required textbooks? Or the flights graduate students and faculty take to academic conferences? Clearly, the reported amount of GHG emissions will change depending on what is measured. To reflect the nuances of these complexities, IESVic has employed four levels of scope in their assessment of emissions at UVic.

Scope one: direct emissions

The most basic scope of GHG emissions is the amount of atmospheric carbon dioxide (CO₂) released directly from on-campus institutional activities and facilities: heating buildings and hot water with natural gas; powering backup generators with fuel oil; and University fleet vehicle use. The total emissions in 2006 from these sources were 13,091 metric tonnes of CO₂. (While there are other human-produced GHGs, CO₂ is the most common.)

Scope two: upstream emissions

Greenhouse gas emissions are generated through a complex network of energetic relationships—which means that we often produce GHGs in an indirect manner, away from our actual point of activity. For example, although light bulbs do not produce emissions at their point of use, some GHGs may be produced and released into the atmosphere