



# University of Victoria

## 2011 Carbon Neutral Action Report



University  
of Victoria



## Executive Summary

The University of Victoria (UVic) continues to advance its carbon neutral commitments and activities within a comprehensive sustainability and institutional framework. Throughout 2011, the campus and broader communities were engaged in a process to review the university's strategic plan, which sets the direction to guide the university into the future. A key objective in the renewed strategic plan A Vision for the Future – Building on Excellence, provides for “demonstrating leadership in sustainability through the continued development and implementation of innovative operational practices and their integration with institutional planning activities.”

The university's Sustainability Action Plan for Campus Operations: 2009-14 continues to provide the guiding framework for the wide range of activities related to sustainability and carbon neutrality that were undertaken on campus in 2011. It contains a detailed series of sustainability goals and actions in operational areas such as waste management, energy conservation, greenhouse gas reduction, sustainable transportation, purchasing, food and green buildings. To highlight the progress the university has made towards achieving the Action Plan goals and targets, and to identify opportunities to improve the university's performance on sustainability issues, a comprehensive progress report was produced in 2011.

A key accomplishment of 2011 was the creation of the Integrated Energy Master Plan, which will assist the university in meeting the Action Plan's stringent energy reduction targets and policy. During the development of the plan, key energy management issues were reviewed and recommendations outlined for future action. Significant attention was also given to a range of ongoing energy retrofitting projects on campus in collaboration with the university's electricity and natural gas energy suppliers.

Another highlight of 2011 was the establishment of the Revolving Sustainability Fund with initial capital funding of \$250,000. The fund gave out its first loans in late 2011 for projects that will help reduce water consumption in chemistry teaching labs and electrical consumption in building operations. Also notable was the opening of the new South Tower student residence building to the Leadership in Energy and Environmental Design (LEED) green building rating system Gold standard. The facility joins five other LEED Gold buildings on campus.

Work on Action Plan implementation is ongoing to address other major campus sustainability challenges related to energy use, waste reduction, water management and other topics. Students, faculty and staff continue to take an active role in assisting with advancing sustainability across campus. We rely on their efforts, enthusiasm and interest to make progress in reducing energy consumption and limiting our greenhouse gas emissions.



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## 2011 Greenhouse Gas Emissions

The total GHG emissions for the University of Victoria are 15,463 tCO<sub>2</sub>e for the 2011 calendar year. A breakdown of 2010 and 2011 emissions is provided in Table 1 below.

Reporting Category	2010 tCO <sub>2</sub> e	2011 tCO <sub>2</sub> e	Percent Change
Main Campus Buildings	13,448.94	13,420.21	-0.21%
Off Campus Buildings	1,607.21	1,572.66	-2.15%
Mobile Combustion/Fleet	268.53	271.3	1.03%
Paper Supplies	192.06	199.13	3.68%
<b>Total</b>	<b>15,517</b>	<b>15,463</b>	<b>-0.35%</b>

Table 1. Greenhouse gas emissions for the University of Victoria.

The primary source of emissions for UVic is from natural gas, which is used as the primary heating fuel for the majority of buildings both on and off campus. Natural gas accounts for over 85% of the emissions associated with the University of Victoria, while electricity accounts for 11%. Vehicle and paper emissions make up the remainder.

## Offsets Applied to Become Carbon Neutral in 2011

The total emissions for the University of Victoria in the year 2011 is 15,463 tCO<sub>2</sub>e.

This total excludes fugitive emissions. It was estimated that stationary fugitive emissions from cooling do not comprise more than 1% of the University of Victoria's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in the University of Victoria's total greenhouse gas emissions profile.

Also, as required by section 5 of the Carbon Neutral Government Regulation, 10 tCO<sub>2</sub>e of emissions resulting from the use of bio-fuels were reported as part of our greenhouse gas emissions profile in 2011. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation. Therefore, the total University of Victoria is required to offset is 15,453 tCO<sub>2</sub>e for the 2011 calendar year.

## Changes to Greenhouse Gas Emissions and Offsets Reporting From 2010

Following the public release of the University of Victoria's 2010 Carbon Neutral Action Report, it was determined that the total emission for the calendar year were over reported by 49.85 tCO<sub>2</sub>e for the 2011 calendar year and offsets required to become carbon neutral in 2010 were similarly over purchased by 49.85 tCO<sub>2</sub>e.

The surplus of offsets purchased in 2010 has been applied again 2011 emissions offset purchase.

## Emission Reduction Activities

UVic's commitment to sustainability and greenhouse gas reduction is comprehensive – we strive to integrate sustainability into our teaching, research, campus operations and community partnerships. This approach allows us to find synergies across disciplines and departments to find solutions to complex issues such as climate change. In 2011, various initiatives were taken to reduce GHG emissions as outlined below.

### Actions Taken to Reduce Greenhouse Gas Emissions in 2011

- Established the \$250,000 University of Victoria Revolving Sustainability Fund. This fund provides resources for energy, greenhouse gas, and water use reduction projects that can demonstrate cost savings to the university. The cost savings are then used to pay back the fund within five years or less. The fund is managed by the Office of Campus Planning and Sustainability with an advisory committee that makes recommendations for project approvals to the Associate Vice-President, Financial Planning and Operations. Project ideas are solicited from the campus community and from within the university's operating units. The first loans from the fund were approved in November 2011.
- Continued to construct new buildings on campus to the LEED Gold building standard. The new South Tower Residence is the first green residence on campus and will be the sixth LEED Gold (awaiting certification) building on campus.
- Implemented phase one of the lighting upgrade project which was the result of audits in 2010 that identified opportunities on campus to convert to lower wattage T8 lamps.
- Reduced water use throughout the summer months with the summer naturalization project. In select areas of campus, irrigation and mowing were discontinued during the summer months to save on water use and maintenance costs, while providing a more natural feel to campus.
- Presented the inaugural Sustainability Champion Award to a staff member whose efforts to make his or her workplace more sustainable had the most "meaningful and enduring contribution towards the sustainability goals of the university".
- Upgraded the waste systems in classrooms and lecture halls across campus. All garbage and blue recycling bins were removed and replaced with 3-bin sorting stations in the hallways (mixed paper, bottles/can/hard plastics & landfill waste). Also in September 2011, a new recycling and composting awareness program was launched in the student residences; garbage chutes were closed in select buildings, and bottles/cans/hard plastics recycling collection bins were added to some floors.
- Piloted the Sustainability Action Team program. Staff and other building users in six campus buildings were encouraged to team up with colleagues to work together to conserve energy, reduce waste and promote sustainable transportation choices as part of the Conservation



Awareness Building Challenge. The initiative was coordinated by the Office of Campus Planning and Sustainability and Facilities Management, with support from BC Hydro's PowerSmart program.

- The University of Victoria's commitment to sustainability in operations is captured in the Sustainability Action Plan for Operations: 2009-2014. In 2011, the Office of Campus Planning and Sustainability produced a report updating the campus community on the progress made on the plan and opportunities for improvement in our journey towards sustainability. The report also provided the framework for the ongoing use of indicators to assess the future progress on important goals.

### **Plans to Continue Reducing Greenhouse Gas Emissions 2012-2014**

The University of Victoria has a strong history in sustainability and is committed to achieve our goals of 20% electricity and GHG emissions reductions by 2015. UVic employs a range of methods to reach these goals which extend from sustainable purchasing policies to continuous optimization programs for energy use.

A priority for the university in 2012-2014 will be to implement the recommendations of the Integrated Energy Master Plan. The plan provides a comprehensive, long term vision for energy use on campus and will be an invaluable tool going forward. The recommendations made in that document will provide a framework in which the university can work to attempt to meet all our GHG emissions reductions goals.

Other greenhouse gas reduction efforts will focus on:

- Continued implementation of a Revolving Sustainability Fund to provide capital for innovative energy reduction projects
- Behavior change initiatives and programs that focus on the main users of the campus such as our Sustainability Action Team program
- Implementation of future phases of the Continuous Optimization Program
- Continued strengthening of our partnerships both on campus and within the broader community

*For additional information on sustainability at the University of Victoria, please see our website at [www.uvic.ca/sustainability](http://www.uvic.ca/sustainability).*

