

2012 Carbon Neutral Action Report

Plans and actions taken to reduce
greenhouse gas emissions at the
University of the Fraser Valley

Driving sustainability forward

The University of the Fraser Valley is pleased to submit the 2012 Carbon Neutral Action Report and Executive Summary in compliance with the Greenhouse Gas Reduction Targets Act. This annual report summarizes important sustainability actions over the past year, and provides an accounting of our carbon footprint in accordance with the provincial "SMARTTool" and protocol. The University remains committed to, and on track, in its *Strategic Direction* "to be a leader of social, cultural, economic and environmentally responsible development in the Fraser Valley." We are driving all areas of sustainability forward wherever economic and feasible, by design, retrofit, awareness, and behavioural change, with initiatives and leadership in our activities inclusive of campus planning and operations, curriculum, and the engagement of our students and employees, and the greater community.



Sustainability by design and retrofit:

A number of sustainability actions requiring significant capital investment were completed in 2012, and each will contribute significantly to a long-term reduction in UFV's energy consumption and carbon footprint. The Canada Education Park "Phase 2" building was completed and populated in May 2012. Designed as a **LEED Gold** project, this facility substantially replaces the facilities at the former Chilliwack North (Yale Road) campus. The new facility, itself a retrofit of the former CFB Military Engineering building, is an architectural showcase of modern and sustainable design, including an open loop geo-exchange heating system. Overall, it is expected that this new facility will reduce our energy consumption and carbon footprint by about 60% in comparison to the former Chilliwack North campus.

A major retrofit of the heating and hot water systems was also completed on the Abbotsford campus, buildings A West and B, which constitute 12,520 m² of built space. These newly installed Viessmann near-condensing gas-fired boilers are estimated to save 1400 GJ of natural gas per year, representing a direct savings of \$13,000 per year in fuel cost (at current prices), and yielding a reduction in 70 tCO₂e annually (approximately \$1750 in offset payments to the Pacific Carbon Trust).



More recently, our Aerospace Training Centre building located at the Abbotsford Airport underwent re-lamping from older 400 watt metal halide fixtures to energy efficient 330 watt LED lighting. Daylight and occupancy motion sensors were strategically installed in high-use corridors and common study spaces on the Abbotsford campus to reduce operational lighting levels when natural light levels are deemed sufficient. These measures alone are estimated to yield a reduction in electrical use of 8,500 kWh/year, saving \$800/year.



Throughout 2012, UFV updated its 5-year Strategic Energy Management Plan (SEMP), continuing its energy management agreement with BC Hydro, and the employment of an energy manager. Our energy manager has been integral in identifying and costing energy-saving technological improvements for UFV, and in coordinating awareness and behavioural change initiatives for our students and employees. Inclusive of the projects described above, focus was also directed towards low-cost improvements to

building control system configurations, with multiple improvements being made to existing schedules and procedures such as programming changes to improve fan system run times at night and weekends, static pressure resets, and improving supply air temperature controls in the library. The availability of new technologies has provided forward momentum for the upgrading and retro-fitting of existing building mechanical systems, with implementation at UFV governed by available funding and projected net savings.

To bring awareness and stimulate behavioural change to energy use and conservation, UFV is an active participant in the Workplace Conservation and Awareness (WCA) Program sponsored by BC Hydro. Students and employees have participated in several campaigns over the past year, including information kiosks at the annual Welcome Back BBQ events, "Turn It Off" weeks, a "Get Caught Green Handed" campaign, and a competition for soliciting energy-saving "bright" ideas. In total, over 500 employees and 3,000 students were engaged in these activities over the course of 2012.



Based on our 2009/2010 base levels, UFV's energy management actions up to 2012 have reduced our energy consumption and carbon footprint by 5%, helping us move closer towards our target goal of a 10% reduction in energy use by 2014/15.

Energy management actions for the Abbotsford campus alone in 2012 have resulted in a reduction in electricity use of 386,000 kWh and gas consumption of 2,500 GJ constituting a reduction in emissions of 135 tCO₂e per year.

Student Engagement in Sustainability



UFV continues to benefit from a growing culture of sustainability among students and employees, and sustainability issues are increasingly the subject of student and faculty research. UFV values the trust of our communities, not just to educate, but to inspire and foster leadership in environmental awareness. 2012 marked our fourth year with the student sustainability internship position in our Facilities department. This one-year position offers the opportunity for a student near to graduation, demonstrating

active engagement in sustainability issues, to develop and implement projects that contribute to a culture of sustainability on campus and within the broader community. The sustainability legacy of the students' work continues to grow: there is now a general awareness by students to conserve energy on campus (and home), and growing reliance on public transit to get to UFV. Water fill stations and waste recycling are heavily used, widely practiced, and indeed, expected by the students and employees at UFV. This year the focus of the sustainability coordinator has been to promote the use of public transit to, and among our campuses.

Centre for Sustainability:

The Centre for Sustainability integrates a number of environmental initiatives at UFV engaging students, faculty, staff and the broader community, promoting research, information exchange, awareness and action in all matters of sustainability. The Centre coordinates the "greenSPEAK" public seminar series, which, in 2012 included a variety of sustainability topics presented from a range of disciplinary perspectives. The Centre collaborates with the volunteer campus Students for Sustainability, the Facilities



Department and the campus food services in operational initiatives such as waste reduction and composting, and with the Energy Manager and the "greenTeam" in energy conservation initiatives. The profile and work of the Centre continues to grow within the broader community served by the University.

2012 Greenhouse Gas Emissions

The carbon footprint for the University of the Fraser Valley registered at 3,269 tCO₂e in accordance with the SMARTTool recording and reporting protocols for 2012; that value was slightly larger than the 2011 recorded value of 3,236 tCO₂e. In relation to the University's activity as measured by full time equivalent (FTE) student enrolment, the 2012 carbon footprint also rose marginally over the previous year from a value of 0.397 tCO₂e/FTE to a value of 0.400 tCO₂e/FTE.

The "in scope" carbon footprint for the University includes Scope 1 (combustion), Scope 2 (purchased, principally electricity), and Scope 3 (office paper) components. For the reporting year 2012, Scope 1 fleet combustions decreased by 1.62 tonnes of greenhouse gas, but stationary combustion increased by 24.45



tonnes as compared to 2011. Scope 2 reported purchased energy rose by 17.54 tonnes of GHG in contrast to last year, whereas Scope 3 saw a reduction on office paper consumption of 387 packages resulting in a reduction of 7.12 tonnes of GHG. The marginal reduction in fleet and procurement from 2012, as compared to 2011, is an indicator of behavioural changes starting to take effect at UFV through our commitments to the Strategic Energy Management Program and Workplace Conservation and Awareness

programs on campus. In contrast, the marginal increase in electricity and gas consumption for 2012 can be attributed to the continued operation of the energy inefficient buildings located on the Chilliwack north campus. The University hopes to truly benefit from the energy savings building design of the new Canada Education Park facility when the relocation from the Chilliwack North campus can be finalized with the sale of the property and a halt to all services to that site in 2013/2014.

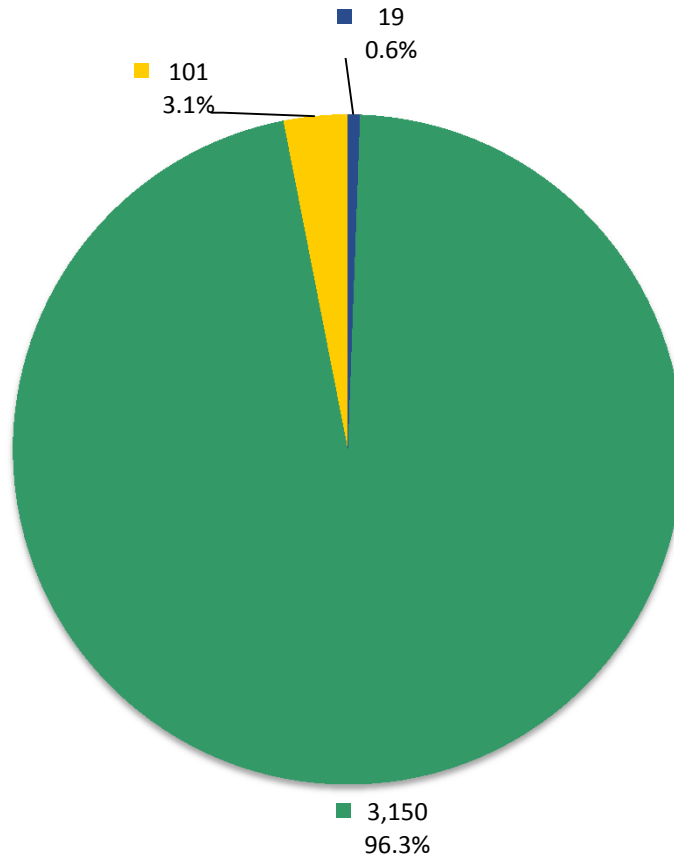
Offsets Purchased to become Carbon Neutral in 2012

In 2012, the University purchased offsets for 3269 tCO₂e from the Pacific Carbon Trust valued at \$81,725 net of HST, up from \$80,975 paid in the previous year.

A handwritten signature in black ink, appearing to read "J. Hogan".

Jackie Hogan
Chief Financial Officer
University of the Fraser Valley

University of The Fraser Valley Greenhouse Gas Emissions by Source for the 2012 Calendar Year (tCO₂e*)



Total Emissions: 3,270

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2012 (Generated March 21, 2013 9:51 AM)

Total offsets required: **3,269**. Total offset investment: **\$81,725**. Emissions which do not require offsets: **1** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

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Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.

| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|---|---------------------|---|--|------------|--------------------------|
| Mobile Fuel Combustion (Fleet and other) | | | | | |
| Behaviour change program | | | | | |
| Provide fleet driver training to reduce fuel use | Not Yet Evaluated | | | | No End Date (Continuous) |
| Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages) | Ongoing/In Progress | It is standard practice that vehicles are not left idling or unattended with keys in the ignition. New signs ordered for installation at newly constructed Canada Education Park campus. | Fleet operations will be addressed by the institution with the departments having access to fleet vehicles. Additional anti-idling signage to be installed at main campuses. An awareness program will be developed to deter idling practices. | 2011 | No End Date (Continuous) |
| Encourage carpooling in fleet vehicles | Not Yet Evaluated | | | | No End Date (Continuous) |
| Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Vehicle fuel efficiency | | | | | |
| Replace vehicles with more fuel-efficient models | Not Yet Evaluated | | | | No End Date (Continuous) |
| Replace larger vehicles with smaller models according to fleet "right-sizing" principles | Not Yet Evaluated | | | | No End Date (Continuous) |
| Perform regular fleet maintenance to improve fuel-efficiency | Ongoing/In Progress | Vehicles are scheduled for regular 5,000 km interval maintenance services through applicable automotive dealership. | Fleet vehicle maintenance will be addressed by the institution with the departments having access to fleet vehicles. Preventative maintenance schedules will be created to ensure vehicles receive the regular servicing as per the manufacturer's suggested guidelines. | 2011 | No End Date (Continuous) |
| Stationary Fuel Combustion, Electricity | | | | | |
| Behaviour change program | | | | | |
| Help staff reduce personal energy use through ""workstation tune-ups"" | Not Yet Evaluated | | | | No End Date (Continuous) |
| Ask staff to unplug electrical equipment or switch off power bars when not in use | Ongoing/In Progress | The last week of March 2012 was Turn It Off Week on campus. The week was a success, with our "Caught Green Handed Campaign", "Green Cupcake" event, media communication, and a surprise tour of the campus by none other than our furry mascot, Sasq'ets to spark awareness. In August & September of 2012, employees were invited to again join the "green pledge" @ http://ufv.ca/janitorial/sustainability/get-involved/green-pledge/ which promotes reduction in energy, waste, transportation, and other ways to re-think, re-use & recycle and encourage others to do the same. | Further development of behavioural change programs to drive energy reduction, including the items listed to the left, as part of the Workplace Conservation and Awareness (WCA) program. | 2010 | No End Date (Continuous) |
| Ask staff to unplug electrical equipment or switch off power bars when not in use | Ongoing/In Progress | The last week of March 2012 was Turn It Off Week on campus. The week was a success, with our "Caught Green Handed Campaign", "Green Cupcake" event, media communication, and a surprise tour of the campus by none other than our furry mascot, Sasq'ets to spark awareness. In August & September of 2012, employees were invited to again join the "green pledge" @ http://ufv.ca/janitorial/sustainability/get-involved/green-pledge/ which promotes reduction in energy, waste, | Further development of behavioural change programs to drive energy reduction, including the items listed to the left, as part of the Workplace Conservation and Awareness (WCA) program. | 2010 | No End Date (Continuous) |

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|---|------------------------------|---|--|------------|--------------------------|
| | | transportation, and other ways to re-think, re-use & recycle and encourage others to do the same. | | | |
| Ask staff to close blinds at end of work day to reduce heating/cooling demands | Ongoing/In Progress | Sam Thomas, Energy Manager, and Green Team members attended three welcome back events in August and September. Sasq'ets, UFV's mascot, joined them in handing out cookies, promoting the green pledge and reminding everyone to turn it off! In August & September of 2012, employees were invited to again join the "green pledge" @ http://ufv.ca/janitorial/sustainability/get-involved/green-pledge/ which promotes reduction in energy, waste, transportation, and other ways to re-think, re-use & recycle and encourage others to do the same. | Further development of behavioural change programs to drive energy reduction, including the items listed to the left, as part of the Workplace Conservation and Awareness (WCA) program. | 2010 | No End Date (Continuous) |
| Encourage staff to use air dry setting on dishwashers | Not Yet Evaluated | | | | No End Date (Continuous) |
| Provide tips to staff on saving energy in the office while working outside of regular business hours | Not Yet Evaluated | | | | No End Date (Continuous) |
| Encourage use of stairs instead of elevators | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Provide reminders for turning off lights (e.g., signs, stickers, messages) | Ongoing/In Progress | Beginning Sept 2012 and running until Nov 2012, the Energy Manager and the UFV Green Team ran a "Bright Ideas Contest". The goal was to suggest a bright idea for saving energy on campus and you could enter to win soccer tickets, dinner for two and greenUFV swag! In addition, the last week of March 2012 was Turn It Off Week on campus. The week was a success, with our "Caught Green Handed Campaign" (congratulations to prize winners), "Green Cupcake" event, media communication, and a surprise tour of the campus by none other than our furry mascot, Sasq'ets to spark awareness. | Further development of behavioural change programs to drive energy reduction, including the items listed to the left, as part of the Workplace Conservation and Awareness (WCA) program. | 2010 | No End Date (Continuous) |
| Promote hot water conservation | Ongoing/In Progress | Aerators have been installed in existing tap fixtures to reduce hot water consumption. Replacement of boiler plant in Abbotsford Buildings A-West & B with energy efficient boilers. Compliant with FortisBC guidelines. | Replacement of boiler plant in Abbotsford Buildings A-East with energy efficient boilers. Evaluation of additional opportunities. | 2010 | No End Date (Continuous) |
| IT power management | | | | | |
| Install power management software which shuts down computers outside of regular business hours | Not Yet Evaluated | | | | No End Date (Continuous) |
| Implement server virtualization | Ongoing/In Progress | Migrate several file/print services to virtual machines. Expand virtualization to new data center at Chilliwack, Canada Education Park campus. | Continued expansion of virtualization to new data centres for new construction. Upgrading existing servers on a case-by-case basis and need. | 2012 | No End Date (Continuous) |
| Apply auto-sleep settings on computer monitors and CPUs | Not Yet Evaluated | | | | No End Date (Continuous) |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy | Completed (in Previous Year) | | | | No End Date (Continuous) |

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| Apply auto-sleep settings on printers, fax machines, and/or multi-function devices | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Replace computers with ENERGY STAR models during regular computer upgrades | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Leased buildings | | | | | |
| Establish energy performance baseline for leased buildings | Not Yet Evaluated | | | | No End Date (Continuous) |
| Lease space with operations and maintenance performance labelling/certification (e.g., LEED EB:O&M) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Lease space with commercial interiors performance labelling/certification (e.g., LEED CI) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Lease space in buildings with new construction performance labelling/certification (e.g., LEED NC) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations | Not Yet Evaluated | | | | No End Date (Continuous) |
| Owned buildings | | | | | |
| Establish energy performance baseline for owned buildings | Ongoing/In Progress | As part of our Energy Manager program, we have established a performance baseline for all Abbotsford campus buildings, Aerospace Centre, and Trades and Technology Centre (TTC). | Continue to use this baseline to track energy performance against. Extend this exercise to the new Canada Education Park campus (CEP) after the move from the Chilliwack North campus which was completed in the Summer of 2012. | 2010 | No End Date (Continuous) |
| Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Achieve LEED NC Gold certification at a minimum for new construction or major renovations | Completed (in Reporting Year) | Our current capital project in Chilliwack involves reusing 5,300 square metres of an existing facility to build a new 14,000 square metre academic building on the Canada Education Park campus and achieved LEED Gold certification. | | 2012 | 2012 |
| Perform energy retrofits on existing, owned buildings | Ongoing/In Progress | Energy efficient boiler and hot water tank replacement optimization in Abbotsford B-building. | Continue to retrofit buildings/equipment on a case-by-case basis. In progress upgrading of boiler plants in Abbotsford A-East building in spring of 2013 - GHG emission reductions will result. In progress installation of VSDs to HVAC equipment at CEP Bldg T - Trades and Technology Centre. Fan system optimization (DDC control adjustments) to reduce ventilation heating consumption. | 2012 | No End Date (Continuous) |
| Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Planning/management | | | | | |
| Reduce office space (square meters) per employee | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls) | Ongoing/In Progress | As part of our Energy Manager program, we are working towards approval through BC Hydro for additional Continuous Optimization | Work towards approval of additional Continuous Optimization projects at UFV (and subsequent real-time metering). | 2010 | No End Date (Continuous) |

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|--|---------------------|--|--|------------|--------------------------|
| | | <p>projects at UFV Abbotsford Campus and Aerospace Centre. These studies cannot commence until the Workplace Conservation and Awareness (WCA) program is complete however. The WCA program ends in 2013.</p> <p>BC Hydro sponsored Continuous Optimization study at Trades and Technology Centre (TTC) included was the installation of real-time metering and Pulse software. This is now used by Facilities staff as a tool.</p> | Utilize real-time data from upcoming BC Hydro smart meters to feed into monitoring software and online dashboards (eg. PUMA by Prismm or Pulse). | | |
| Retrofit details for owned buildings | | | | | |
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits | Ongoing/In Progress | Upgrade of boiler plant in Abbotsford A-East building in winter of 2012 - GHG emission reductions will result. | Consideration of energy upgrades as part of the planning process for any future building retrofits at UFV. | 2012 | 2013 |
| Upgrade lighting systems during retrofits | Ongoing/In Progress | <p>Lighting retro-fit of main hanger bay lighting at Aerospace Centre in Abbotsford.</p> <p>Abbotsford campus Building B breezeway 3rd floor interior and 2nd floor exterior lighting controls removed from digital timers over to photocell controls.</p> | <p>Re-lamping and retro-fit of lighting for Abbotsford campus North & South gymnasiums from metal halide over to compact fluorescent T5 fixtures.</p> <p>Abbotsford campus Building B Atrium lighting retro-fit from metal halide fixtures to LED fixtures accented with daylight sensors, motion detector occupancy controllers.</p> <p>Abbotsford campus Buildings C & D upgraded with motion detector occupancy sensors.</p> <p>Aerospace Centre classroom and office lighting retro-fit from T12 fixtures to T8 compact fluorescent fixtures.</p> <p>Canada Education Park Bldg T - Trades & Technology Centre upgrading of exterior metal halide light fixtures with LED energy efficient fixtures.</p> | 2012 | 2013 |
| Upgrade/adjust control systems during retrofits | Ongoing/In Progress | HVAC controls upgrading for Abbotsford campus Building D, as well as shared lighting relay controllers for lighting & HVAC equipment better run times and energy savings initiatives. | Include controls upgrades as necessary as part of future retrofit projects. As older HVAC equipment is replaced, pick this up on the newer ESC controls system. | 2012 | 2013 |
| Improve building insulation (including windows) during retrofits | In Development | Initiate research and engineering studies to investigate the building envelope systems at the Abbotsford campus Building A East and Building D for remediation. | Implement building envelope strategies identified in 2012/2013 report from contracted engineering firm. | 2012 | No End Date (Continuous) |
| Supplies (Paper) | | | | | |
| Behaviour change program | | | | | |
| Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Encourage staff to hold paperless meetings or presentations (i.e., no handouts) | In Development | The Registrar is evaluating the move to iPads and laptops in lieu of paper agendas and minutes. | Testing of iPad by Registrar. | 2010 | No End Date (Continuous) |
| Electronic media in place of paper | | | | | |
| Install collaborative software for electronic editing (e.g. SharePoint, | Not Yet | | | | No End Date |

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|---|------------------------------|--|---|------------|--------------------------|
| Groove, etc.) | Evaluated | | | | (Continuous) |
| Use electronic document library for filing common documents | Not Yet Evaluated | | | | No End Date (Continuous) |
| Switch to an electronic payroll notification system in place of paper pay stubs | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Paper Type | | | | | |
| Purchase 30% post-consumer recycled paper | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Purchase 40% post-consumer recycled paper | Not Yet Evaluated | | | | No End Date (Continuous) |
| Purchase 100% post-consumer recycled paper | Not Yet Evaluated | | | | No End Date (Continuous) |
| Printer/document settings | | | | | |
| Switch networked printers and photocopiers to automatic double-sided | Ongoing/In Progress | All MFDs on the faculty & staff side of printing have been pre-programmed for double-sided printing (75%). All student labs and common access MFDs are still single-sided (25%). | Evaluate and research whether or not double-sided printing in the student labs is viable. | 2011 | No End Date (Continuous) |

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Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|---|------------------------------|---|---|------------|--------------------------|
| Business Travel | | | | | |
| Behaviour change program | | | | | |
| Train staff in web-conferencing | Not Yet Evaluated | | | | No End Date (Continuous) |
| Encourage staff to consider virtual attendance/presentation at events where possible | Not Yet Evaluated | | | | No End Date (Continuous) |
| Encourage carpooling to meetings | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Policy and budgeting | | | | | |
| Create a low-carbon travel policy or travel reduction goal | Not Yet Evaluated | | | | No End Date (Continuous) |
| Virtual meeting technology | | | | | |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Make desktop web-cameras available to staff | Not Yet Evaluated | | | | No End Date (Continuous) |
| Install video-conferencing units in meeting rooms or provide mobile video-conferencing units | Not Yet Evaluated | | | | No End Date (Continuous) |
| Education, Awareness, and Engagement | | | | | |
| Awards/Recognition | | | | | |
| Establish a sustainability/green awards or recognition program | Not Yet Evaluated | | | | No End Date (Continuous) |
| Staff Professional Development | | | | | |
| Support green professional development (e.g., workshops, conferences, training) | Ongoing/In Progress | Energy Manager presented a series of training session to senior management during 2012 calendar year to educate and encourage green behaviour. | Energy Coordinator to host additional training seminars where applicable. | 2011 | No End Date (Continuous) |
| Include green options in employee performance measurement system | Not Yet Evaluated | | | | No End Date (Continuous) |
| Staff awareness/education | | | | | |
| Provide education to staff about the science of climate change | Not Yet Evaluated | | | | No End Date (Continuous) |
| Provide education to staff about the conservation of water, energy, and raw materials | Not Yet Evaluated | | | | No End Date (Continuous) |
| Provide green tips on staff website or in newsletters | Ongoing/In Progress | E-newsletter sent to staff. Newspaper article in campus paper. "Green tips" emails started to those who have signed pledge. Energy management website developed, including energy tips and forum for soliciting ideas for energy reduction. Constantly expanding. | Promotion of website across organization and additional marketing. | 2011 | No End Date (Continuous) |
| Provide sustainability education during new staff orientation | Not Yet Evaluated | | | | No End Date (Continuous) |
| Team-building | | | | | |
| Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement | Ongoing/In Progress | Strategic Energy Management Plan finalized in conjunction with BC Hydro. SEMP, in addition to Green Team activities, are endorsed by executive support (CFO). See website below for more info: | Expansion of the UFV Green Team and greater representation from the student population. | 2010 | No End Date (Continuous) |

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| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|---|-------------------------------|---|--|------------|--------------------------|
| | | www.ufv.ca/energy.html | Goal of SEMP is to have a 10% reduction in energy intensity (kWh/m ²) for the Abbotsford campus by 2014/15 fiscal. | | |
| Provide resources and/or dedicated staff to support teams | Ongoing/In Progress | Energy Coordinator and Sustainability Coordinator now act as a supporting role for Green Team. | Further promotion of energy awareness using media as an avenue; increase "Green Team" enrolment through activities on all campuses. | 2010 | No End Date (Continuous) |
| Providing behaviour change education/training to teams (e.g., community-based social marketing) | Ongoing/In Progress | Promotion of "My Green Pledge" at annual Welcome Back BBQs and other events. Pledge also available online. Summer of 2011, joined the Workplace Conservation and Awareness (WCA) program in partnership with BC Hydro with \$5,000.00 funding to promote and implement the "Turn It Off" project. 1st quarter concentrated on lighting, 2nd quarter concentrated on plug loads with continued reinforcement on lighting, ending with the 3rd quarter concentrating on office kitchens with reinforcement on lighting & plug loads introduced in the earlier quarters. Now in the 2nd year of the WCA program, UFV continues to reinforce all messages from 1st year. | Continue to encourage others to sign the pledge and follow through with actions for reducing energy as outlined in the WCA program developed and implemented in partnership with BC Hydro. | 2010 | No End Date (Continuous) |
| Other Sustainability Actions | | | | | |
| Adaptation to Climate Change | | | | | |
| Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas | Not Yet Evaluated | | | | No End Date (Continuous) |
| Integrated considerations of extreme weather events and/or long term changes in climate into the organization's decision making. | Ongoing/In Progress | Extreme weather events are addressed in the university's strategic business continuity plan, administered by senior management. | Updated annually. | 2011 | No End Date (Continuous) |
| Building construction, renovation | | | | | |
| Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities | Not Yet Evaluated | | | | No End Date (Continuous) |
| Incorporate lifecycle costing into new construction or renovations | Not Yet Evaluated | | | | No End Date (Continuous) |
| Commuting to and from home | | | | | |
| Introduce telework/work from home policy | Not Yet Evaluated | | | | No End Date (Continuous) |
| Offer staff a compressed work week | Not Yet Evaluated | | | | No End Date (Continuous) |
| Encourage commuting by foot, bicycle, carpool or public transit | Ongoing/In Progress | Sustainability web site is updated with information encouraging employees and students to consider alternative forms of transportation at the university. http://www.ufv.ca/Facilities/Sustainability/Alternative_Transportation.htm | Updated semesterly. | 2011 | No End Date (Continuous) |
| Provide shower or locker facilities for staff/students who commute by foot or by bicycle | Completed (in Reporting Year) | New Canada Education Park Building A washroom facilities were outfitted with showers and lockers/change rooms for commuters of alternate transportation. | | 2012 | 2012 |
| Provide secure bicycle storage | Completed (in Reporting Year) | Bicycle lockers formerly located at the Chilliwack campus were relocated and installed at the new Canada Education Park campus during the summer of 2012. | | 2012 | 2012 |

University of the Fraser Valley - 2012 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|--|------------------------------|---|---|------------|--------------------------|
| Procurement (non-paper supplies) | | | | | |
| Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.) | Not Yet Evaluated | | | | No End Date (Continuous) |
| Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags | Ongoing/In Progress | Janitorial cleaning supplies purchased for the institution are "green products". Installation of hand dryers to reduce paper towel consumption. | Identifying more locations for the installation of hand dryers. Continued use and research into sustainable and environmentally friendly cleaning products. | 2012 | No End Date (Continuous) |
| Waste reduction/diversion | | | | | |
| Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities | Ongoing/In Progress | All buildings have been supplied with minimum 4 cubic yard waste, cardboard, and paper recycling bins. Departments operate with confidential shredding and paper recycling bins. Central locations with high traffic have been outfitted with battery recycling depots. Operations performs monthly recycling of all CFL bulbs & ballasts. Implementation of new cleaning practices and supplies to promote sustainability on campus. | Minimization in scheduled waste pick-ups; decreasing waste bin sizes or increasing the size and number of recycling bins. Implementation of composting bins in food services area for organic food waste. | 2011 | No End Date (Continuous) |
| Implement a hazardous waste reduction and disposal strategy | Completed (in Previous Year) | | | | No End Date (Continuous) |
| Water conservation | | | | | |
| Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models | Ongoing/In Progress | Existing buildings have been upgraded with low flow toilets, touch-less water faucets, and auto flush fixtures. All taps outfitted with water conserving aerators. | New construction design guidelines to follow LEEDS recommendation on water conservation fixtures and plumbing. | 2010 | No End Date (Continuous) |
| Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features | Not Yet Evaluated | | | | No End Date (Continuous) |
| Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales) | Not Yet Evaluated | | | | No End Date (Continuous) |