



THOMPSON RIVERS
UNIVERSITY



2012

Carbon Neutral Action Report



Thompson Rivers University

Thompson Rivers University (TRU) is committed to sustainability. As one of the university's seven founding values, TRU actively seeks to transform the way we teach, research, and operate to exceed our emissions targets and create a truly sustainable campus community. The Office of Environment & Sustainability was established in 2009 to help deliver on our commitments.

This report was produced by Thompson Rivers University's Office of Environment & Sustainability. It supplements the Carbon Neutral Actions for 2012 and provides a high-level overview of our university's efforts to reduce our impact.

Learn more about our work at www.tru.ca/sustain



Photographs: Bart Cummins

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I.0 Executive Summary



Environmental Sustainability is embedded in Thompson Rivers University's Strategic Plan as one of our seven founding values and one of four major themes in the institutional Academic Plan. That commitment to sustainability is expanded on within the Campus Sustainability Action Plan (CSAP), a multi-stakeholder document which provides the guiding framework for the university's actions towards greater environmental sustainability. TRU has a strong record of working to meet our carbon neutral commitments, and 2012 was no different.

Two new funds—a Revolving Fund and Grant Fund—were finalized in 2012. These funding sources provide grants to initiate resource conservation projects, student research, innovative design, and engaging behaviour change campaigns on our campuses. These funds enable staff, students, and faculty members to utilize their own expertise and interests in the advancement of TRU's sustainability commitments.

In 2012 TRU was pleased to partner with FortisBC in the creation of the Energy Specialist position, who works alongside the BC Hydro Energy Manager in the identification of energy efficiency opportunities. Energy management followed TRU's Strategic Energy Management Plan (SEMP) goals closely, while adding a stronger focus on behaviour change and occupant engagement. A pilot project with Vancouver-based BuiltSpace Technologies is engaging occupants in four campus buildings using a mixture of social media, QR code technology, and online surveys. The BuiltSpace system enables our community to provide real-time feedback on the conditions in their work spaces and empowers people to take an active role in their building's energy use.

Along with the shorter-term projects on hand, TRU undertook an important long term planning exercise this past year that will continue into 2013 and 2014. The TRU Community Trust (TRUCT) was established to oversee the development of the university endowment lands over the next 10, 20 and 50 years. All campus stakeholders have the opportunity to give direct input into the future of our university through multiple public consultation sessions. A university village concept similar to "UniverCity" at SFU will provide opportunities to incorporate features such as mixed-use buildings with residential housing, student residences, retail shops, restaurants, offices, and student space to create a more vibrant, denser campus.

TRU's current projects are improving energy efficiency in existing buildings and engaging our staff, students and faculty in sustainability initiatives; while our long-term planning processes are ensuring that Thompson Rivers University maintains our high sustainability standards well into the future.

A handwritten signature in blue ink, appearing to read 'James Gudjonson'.

James Gudjonson, M.A.
Interim Director, Office of Environment & Sustainability

2.0 2012 Greenhouse Gas Emissions



2.1 Offsets Applied to Become Carbon Neutral in 2012

Thompson Rivers University's greenhouse gas emission calculations included emissions from both the Kamloops and Williams Lake campuses along with all in-scope leased or owned regional centres. In 2012, TRU's emissions amounted to 4,111 tCO₂e and total offsets required were 4,104 tCO₂e.

Exclusions

It was estimated that stationary fugitive emissions from cooling comprised less than 0.01% of Thompson Rivers University's total emissions. TRU deemed fugitive emissions out-of-scope as per the 1% Rule listed in the *Methodology for Reporting B.C Public Sector Greenhouse Gas Emissions*, Section 7.3, Table 18d, due to the disproportionately onerous task of measuring those emissions.

Changes to Previous Year's Reporting

An 85 tCO₂e offset underpayment and 7 tCO₂e adjustment for the 2011 reporting cycle increased total offset investment for 2012 by 92 tCO₂e, to 4,196.

Offsets Applied

Reporting period 2012 offsets were 4,196 tCO₂e, for a total offset investment of \$110,145.00

7 tCO₂e from Scope 1 (Fleet) did not require an offset payment. Those emissions (6.79 BioCO₂) were deemed offset exempt or carbon neutral as illustrated in the Totals table.

Totals Calendar Year 2012, Thompson Rivers University

State Calendar Year 2012, Thompson Rivers University

	Measure	Quantity	Greenhouse Gases in Tonnes				
			CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹
Scope 1 (Direct) Emissions							
Mobile Combustion (Fleet)	Litres	80,938.78	188.41	6.79	0.01	0.03	205.50
Stationary Combustion, Estimated ²	GigaJoules	272.23	13.57	0.00	0.00	0.00	13.66
Stationary Combustion, Reported ³	GigaJoules	66,532.02	3,317.29	0.00	0.07	0.06	3,337.25
Scope 2 (Indirect) Emissions							
Purchased Energy, Estimated ²	GigaJoules	220.20	1.52	0.00	0.00	0.00	1.52
Purchased Energy, Reported ³	GigaJoules	58,282.09	402.15	0.00	0.00	0.00	402.15
Scope 3 (Business Travel and Office Paper) Emissions							
Office Paper	Packages	26,150.00	151.06	0.00	0.00	0.00	151.06
Total Emissions, Calendar Year 2012			4,073.99	6.79	0.08	0.09	4,111
Carbon Neutral or Offset Exempt			0.00	6.79	0.00	0.00	7
Total for Offsets ⁴			4,073.99	0.00	0.08	0.09	4,104

1. Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its [global warming potential \(GWP\)](#). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1; methane (CH₄) is 21, and nitrous oxide (N₂O) is 310. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.

4. Report the tCO₂e value from the "Total for Offsets" line, to the Pacific Carbon Trust.

3.0 Actions



Reducing Greenhouse Gas Emissions in 2012

Transportation Alternatives

Electric golf carts encourage staff to avoid the use of vehicles when moving about campus. Although still quite new, a free electric bike loan-out program has been a popular alternative used by staff to commute to and from work, in some cases as far as 20 kilometres away. Through Plug-in BC, TRU was approved for funding for eight electric vehicle charging stations. Installation of those stations at both the Kamloops and Williams Lake campuses is now complete.

Innovative Technology

Ninety percent of the Kamloops campus buildings now have the Pulse Energy Management Information System installed. Working with a European company called WEMS, TRU installed a Wireless Energy Management System in the Culinary Arts and Main Library buildings. This innovative technology uses wireless sensors to communicate with building automation systems and is the first of its kind in North America.

Simple retrofits have resulted in significant operational improvements - demand ventilation controls in the Culinary Arts and Campus Activity Center buildings have reduced heating and cooling loads from kitchen exhaust hoods by using sensors to match exhaust volumes with actual demand.

The Office of Environment & Sustainability has developed a pilot project with BuiltSpace to increase the awareness and involvement of building occupants in energy efficiency measures. Through QR codes and social media platforms, building occupants can communicate with each other about conservation. The tool also allows occupants to inform TRU on what is working well or what isn't working well during sustainability initiatives and events. The pilot project is also being integrated into other ongoing campus initiatives including the LEED building education program in the House of Learning.

Recognizing Student Leaders

A new Leadership in Environmental Sustainability Certificate was approved in 2012 and will be managed by the Centre for Student Engagement & Learning Innovation. The certificate is a one-credit credential that recognizes students who are committed to environmental sustainability through their education and extra-curricular work. The certificate allows students to earn formal recognition for their knowledge, skills, values, and attitudes that contribute to environmental sustainability- from volunteer work, to research, design, or coursework. The credential is included on each graduating student's transcript.

4.0 Moving Forward



Continued Reductions for 2013 Onward

Reworking Procurement

A campus-wide beverage container review commenced in January 2013. This review was launched in recognition of a TRU Student Union campaign to ban the sale of all plastic beverage containers at TRU. The review examines possible drink container solutions including an analysis for each the following: environmental and sustainability impact, economic and financial impact, choice, health and safety and contractual limitations and implications. The process is transparent and open to all members of the TRU community including students, faculty, staff and suppliers. The final review report is expected to be submitted to the Board of Governors in May 2013.

An innovative cleaning pilot using the Lotus Cleaning system will be monitored and if effective, expanded throughout the campus. This ozone cleaning system is a powerful sanitizer that deodorizes, disinfects, and destroys fungi, mold, and bacteria yet is harmless to people and is safe for the environment, converting back into oxygen after use.

Crowd-Sourced Sustainability

The focus for 2013 will involve using the interests and expertise of the TRU community to advance campus sustainability. The newly-created Revolving and Sustainability Grant Funds will select the first successful projects in 2013. These funds are open to applications from staff, students, faculty, and in some cases community members. The transparent participatory process for fund selection will provide for broader 'ownership' of TRU's operational improvements and provide opportunity for those with ideas to move them from the brainstorming stages to implementation.

A new space for the Office of Environment & Sustainability will make the office more accessible to students and staff. The office will create a focal-point for sustainability at TRU and provide additional meeting space for those working on sustainability projects.

Exceeding Energy Targets

Over the past 3 years TRU has reduced energy use, related costs and greenhouse gas emissions by approximately 11 %. In addition to freeing up \$150,000 in annual savings, our energy saving projects have avoided significant maintenance costs by replacing \$500,000 worth of ballasts and lamps and decreasing run times on motors. Moving forward, the energy management plan is on track to see a further 9% reduction and achieve a 20% overall reduction from the 2010 baseline by 2015.

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	Reminders of anti-idling in place online http://www.toronto.ca/sustain/initiatives/Transportation.html#Idle-Free .	Revise and adopt idling policy and create anti-idling awareness campaign.	2010	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Facilities Services staff travel to work sites in shared vehicles whenever possible.	Use the Sustainability Grant Fund to accept proposals that encourage carpooling within campus.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress	One electric bicycle, one three-wheeled utility bike, and three electric golf carts are available for transportation throughout campus. Sidewalks are well maintained on campus.	The TRU Community Trust University Village model which is currently undergoing public consultation will ensure that campus space is maximized and alternative transportation options are improved, including encouraging pedestrian traffic on campus, improving campus walkability, bike infrastructure, and transit access. Students, staff, and faculty will also be able to use the Sustainability Grant Fund to propose projects that encourage alternate transportation within campus.	2008	No End Date (Continuous)
Other Mobile Fuel Combustion Actions					
Reduce number of single occupancy vehicles coming to campus.	Ongoing/In Progress	Carpooling program was expanded due to increased student and staff demand. Parking prices were raised to encourage alternative transportation modes into campus. A portion of the additional parking fee proceeds went to create a Sustainability Grant Fund which supports sustainability initiatives on campus.	Continue to expand carpooling program as needed. Parking prices will increase an additional \$1/day and more funds will be available through the Sustainability Grant Fund.	2010	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Fuel efficiency was considered, along with capital costs, maintenance, and reliability in the purchase or lease of new vehicles. Three electric golf carts were purchased to replace the use of gas vehicles when people are travelling throughout the campus. One electric bike and one three-wheeled bike are available for free use.	As existing vehicles are retired they will be replaced with fuel efficient and/or hybrid models whenever possible.	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	Three electric powered golf carts purchased to replace the use of larger gas vehicles whenever possible.	As existing vehicles are retired they will be evaluated with right-sizing principles and replaced as appropriate.	2008	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	All vehicles are regularly maintained for fuel efficiency according to manufacturer specifications.	Continue regular maintenance of entire fleet.	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress	Smart Power bars were distributed to staff which turn off nonessential electronics automatically when not in use. All new staff received workstation tips at New Employee Orientation seminars.	Continue to provide power bars to staff and include tips in Employee Orientation seminars.	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Tips like these are provided throughout the year during various departmental events and also provided during the New Employee Orientations held multiple times throughout the year.	Continue to inform staff during orientations and also through emails, web, newsletters, and individual meetings.	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Tips like these are provided throughout the year during various departmental events and also provided during the New Employee Orientations held multiple times throughout the year.	Continue to inform staff during orientations and also through emails, web, newsletters, and individual meetings.	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Tip was included in new staff orientations.	Continue to provide this and other helpful tips to staff through orientations, email, newsletters, posters, and other means.	2011	No End Date (Continuous)

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
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	Tip was included in some new staff orientations.	Continue to provide this and other helpful tips to staff through orientations, email, newsletters, posters, and other means.	2011	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	Staff that typically work after hours in Campus Activity Center and other buildings were trained on how to override the automated heating/cooling cycles. Events staff were trained on how to optimize heating for special events during the weekend.	Continue to provide training to staff members as needed.	2009	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	Tip provided to staff through orientations, email, newsletters, posters, and other means.	Continue to provide this and other helpful tips to staff through orientations, email, newsletters, posters, and other means.	2011	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	Light switch stickers were created by two digital media students and placed throughout campus buildings and handed out at campus public events. Reminders sent for events such as Earth Hour & Sweater Day.	Continue to provide tips and stickers.	2010	No End Date (Continuous)
Promote hot water conservation	In Development	Water conservation was encouraged through Residence Challenge and low flow water fixtures in use throughout campus were advertised.	Promote hot water conservation as part of Green Team program. Post signage.	2012	No End Date (Continuous)
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	Power management software was installed in all new computers in labs on campus.	All new computers will have power management software installed.	2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	Continued to virtualize servers as opportunities arise.	Continue to virtualize servers.	2008	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	All new computer monitors were installed with auto-sleep settings.	All new computer monitors will have auto-sleep settings enabled.	2010	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	Ongoing/In Progress	Placed priority on installing multi-function devices whenever possible over stand alone printers or copiers.	Evaluate program and remove stand-alone printers, copiers and fax machines where multi-function devices are available.	2009	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Ongoing/In Progress	All new printers, copiers, and multi-function devices were equipped with auto-sleep settings.	Equip new printers, copiers, and multi-function devices with auto-sleep settings.	2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All centrally purchased existing and new computers are ENERGY STAR rated.	All new computers to be ENERGY STAR rated.	2009	No End Date (Continuous)
Leased buildings					
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)
Ow ned buildings					
Establish energy performance baseline for owned buildings	Completed (in Previous Year)				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	Ongoing/In Progress	Submitted documentation to formally certify House of Learning Building as LEED Gold.	All new buildings will be constructed to at least LEED Gold Standards.	2010	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	TRU has a full-time Energy Manager who works with BC Hydro and Fortis BC to retrofit and improve energy efficiency of all campus buildings. Eight campus buildings are in some phase of the BC Hydro Continuous Optimization Program. The BC Center for Open Learning went through the Implementation phase in 2012. House of Learning began the investigative phase in 2012.	Continuous Optimization Program will continue: Investigative phases for Campus Activity Centre, Arts & Education, Science, International Building, and Trades & Technology are due to start in April 2013. House of Learning Investigative phase and will continue through 2013. An Energy Specialist will be hired in partnership with FortisBC.	2010	No End Date (Continuous)

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
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	Ongoing/In Progress	Space utilization analysis conducted and completed by Institutional Planning and Analysis.	Implement recommendations of the space utilization analysis. This includes altering class schedules to enable more efficient use of campus buildings.	2012	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	Pulse Energy Management Information System was installed in 6 more campus buildings - 90% of campus building space is now metered. Installed WEMS Wireless Energy Management System in Old Library and Culinary Arts Building which allows remote sensors to communicate with building automation systems.	All newly constructed buildings will be connected and other buildings will be connected to the energy management system whenever possible.	2010	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Mechanical system upgraded where necessary in all retrofits as part of BC Hydro Continuous Optimization program.	The addition project on Old Main will include a major HVAC retrofit.	2010	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	Lighting Systems upgraded in retrofits as part of the BC Hydro Continuous Optimization program. Most retrofits included replacing old systems with more efficient models and installing motion sensors.	Continue to upgrade lighting systems as campus buildings move through the BC Hydro Continuous Optimization program phases.	2011	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Systems upgraded in retrofits as part of the BC Hydro Continuous Optimization program when recommended.	Continue to adjust or upgrade system when identified and recommended.	2010	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	Included in Old Main retrofit.	Evaluate and retrofit insulation and windows when possible. Work with Fortis BC Energy Specialist and BC Hydro Continuous Optimization program to determine priority areas for retrofit.	2010	No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Training provided on the job as needed.	Continue to provide staff training as needed and requested.	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	All executive meetings are paperless and all Agendas and Minutes for the standing committees of senate are available online at the Senate web page.	Continue to encourage and provide resources for all meetings to go paperless.	2010	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Collaborative software are available for free on request.	Work with IT Services to install software on staff workstations as requested and promote service.	2008	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	Shared computer drive accessible to all staff and separate drives are accessible to individual departments. All finance, administration, and purchasing forms are available online.	Shared network drives will continue to be accessible to staff within departments to share files.	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress	Nearly all staff, student workers, and faculty on electronic payroll system.	Continue electronic payroll system.	2008	No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	95% of all paper purchased in 2012 contained at least 30% recycled content or was FSC certified.	Continue priority purchasing for FSC certified and recycled content paper.	2008	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Ongoing/In Progress	Recycled content was considered in all paper purchases.	Revise and review purchasing policy to emphasize the purchase of the most recycled content possible and FSC certified.	2008	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	Recycled content was considered in all paper purchases.	Revise and review purchasing policy to emphasize the purchase of the most recycled/FSC certified content possible.	2008	No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	All networked multi-function devices are set to default duplex settings.	Ensure MFD's, printers, and copiers remain default duplex and launch faculty campaigns to encourage default duplexing for academic assignments.	2009	No End Date (Continuous)

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.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Staff were trained in web conferencing as needed and requested.	Continue to make training available.	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	Staff who request the virtual attendance option were assisted.	Develop information to educate staff about this option.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	4-passenger golf cart purchased for staff use when needed to travel to meetings on campus as an alternative to using cars.	Promote carpooling at employee orientations.	2009	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Electric bike available for free use by staff, faculty and students. 3 electric golf carts purchased for staff use.	Continue to implement Transportation Demand Management Study recommendations.	2010	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.)	Ongoing/In Progress	Web conferencing software is available to all staff members on request.	Continue to make available to staff.	2008	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	Available to all staff members on request.	Continue to make available to staff.	2009	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	Most new meeting rooms have video-conferencing capability. All staff members have access to rooms with video-conferencing capability on request.	Continue to ensure video conferencing is available.	2010	No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	Environmental Achievement Award, an award that recognizes staff and faculty members who are committed to sustainability is awarded each year. This award also includes a bursary awarded to a student.	Continue the Environmental Achievement Award.	2009	No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	The Office of Environment & Sustainability has funds set aside for staff or students wishing to take green team training or attend relevant conferences.	Continue to offer funding to interested staff and students.	2009	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	Ongoing/In Progress	Environmental Seminar Series is held regularly through the Faculty of Science. The Office of Environment & Sustainability collaborates with community groups to bring in various speakers throughout the year.	Continue speakers series.	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	Website and monthly Office emails provide green tips, current articles, and upcoming events to staff, students, and the general public. BuiltSpace pilot project provides building occupants with energy information specific to the building they work in.	Website and monthly Office emails provide green tips, current articles, and upcoming events to staff, students, and the general public.	2009	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	Website and monthly Office emails provide green tips, current articles, and upcoming events to staff, students, and the general public.	Website and monthly Office emails provide green tips, current articles, and upcoming events to staff, students, and the general public.	2009	No End Date (Continuous)

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.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Provide sustainability education during new staff orientation	Ongoing/In Progress	Sustainability has a separate presentation at every new employee orientation session. Usually about 4 times each year.	Continue presentations at employee orientation.	2009	No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	Green Team program promoted through Environmental Advisory Committee. Currently there are Green Teams in the School of Nursing and School of Business and Economics.	Green Teams are planned for the Faculty of Tourism and Faculty of Arts.	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	Resources were provided to staff and students by the Environmental Programs Coordinator on request.	Continue to provide support through the Office of Environment & Sustainability.	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress	Training and talks provided to teams on request and resources are available on the Office of Environment & Sustainability blog and web page.	Create formal training package and sessions for green team members.	2009	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.	Not Yet Evaluated				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	In Development	There is no specific policy, however Facilities staff go to significant effort to re-use materials during renovations, retrofits, and moves. The recently completed Sustainability Office used a significant amount of repurposed material and furniture. All discarded furniture that can no longer be used is sold before being sent to landfill or incineration.	Facilities staff will continue to reuse material whenever possible.	2008	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	Ongoing/In Progress	Staff have the option to work on a compressed time off (CTO) schedule.	Continue program.	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Carpool program available for staff and students which includes a discounted parking rate and prime spot locations. A free electric bike loan-out program is offered and a ProPass program provides significant discounts to staff who use public transit. A new bike shelter was installed Fall 2012.	Continue existing programs, add more carpool spots as demand warrants, and utilize the Sustainability Grant Fund to raise capital for more projects. Install new bike repair station.	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress	Bike facility built in Fall 2012. Showers and lockers are available to everyone.	Continue to provide these facilities and look for expansion opportunities.	2008	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	Secured storage is available on the east side of campus in a locked shelter area.	Continue to make the locked storage available for bicyclists.	2008	No End Date (Continuous)

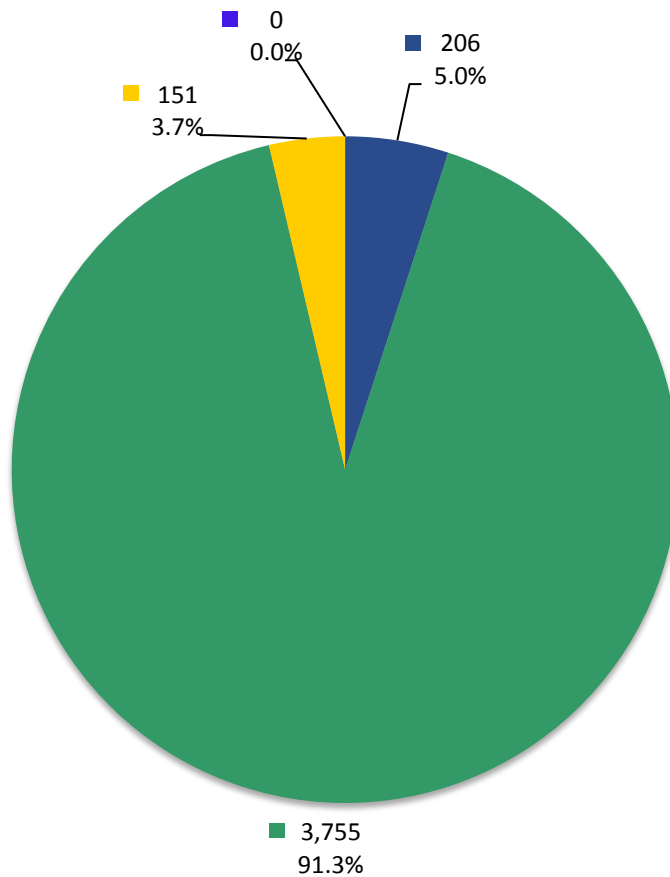
Actions to Reduce Provincial Emissions and Improve Sustainability



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.

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	In Development	AI cleaning products used on campus are Green Seal certified. Began investigating installing lotusPro oxygenated water cleaning system. Installed one system as pilot. Paper towel is made from post-consumer recycled materials.	Monitor efficacy of lotusPro cleaning system and purchase more units as needed.	2010	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	Full mixed recycling program on campus.	Review of banning plastic bottles on campus.	2010	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Completed (In Previous Year)	Hazardous waste disposal program already implemented through Occupational Health & Safety.		2008	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	Facilities Services staff uses low flow water fixtures whenever possible and when economically viable. All fixtures in new House of Learning building are low flow. Waterless urinals were installed in some washrooms as part of a pilot project.	Continue policy and examine the results from the waterless urinal project.	2009	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	Ongoing/In Progress	Waterless urinals were installed in 2 buildings and 2 bathrooms began a pilot project to convert regular urinals to waterless.	All new bathrooms to have double flush options in toilets wherever possible.	2008	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development	House of Learning was built with a specific Stormwater Management plan in place as per LEED Gold requirements.	All new buildings on campus will be designed with Stormwater Management in mind as per LEED Gold requirements. Campus Master Plan consultation and development is expected to examine stormwater management options.	2010	No End Date (Continuous)

Thompson Rivers University Greenhouse Gas Emissions by Source for the 2012 Calendar Year (tCO₂e*)



Total Emissions: 4,111

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

Offsets Applied to Become Carbon Neutral in 2012 (Generated May 27, 2013 11:49 AM)

Total offsets required: **4,104**. Total offset investment: **\$102,600**. Emissions which do not require offsets: **7** **

*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.