THOMPSON RIVERS UNIVERSITY

# 2024 PSO Climate Change Accountability Report

Thompson Rivers University | May 2025

## DECLARATION STATEMENT

This PSO Climate Change Accountability Report for the period January 1, 2024 to December 31, 2024 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2024 to minimize our GHG emissions, and our plans to continue reducing emissions in 2025 and beyond.

## TERRITORIAL ACKNOWLEDGEMENT

Thompson Rivers University campuses are on the traditional lands of the Tk'emlúps te Secwépemc (Kamloops campus) and the T’exelc (Williams Lake campus) within Secwepemcúl’ecw, the traditional and unceded territory of the Secwépemc. The region TRU serves also extends into the territories of the St’át’imc, Nlaka’pamux, Nuxalk, Tŝilhqot'in, Dakelh, and Syilx peoples.

# EMISSIONS REDUCTIONS: 2024 ACTIONS & FUTURE PLANS

**Zero carbon by 2030!** That's the goal and TRU remains on track in achieving this goal. Doing so will make TRU one of the first universities in North America to hit zero carbon.

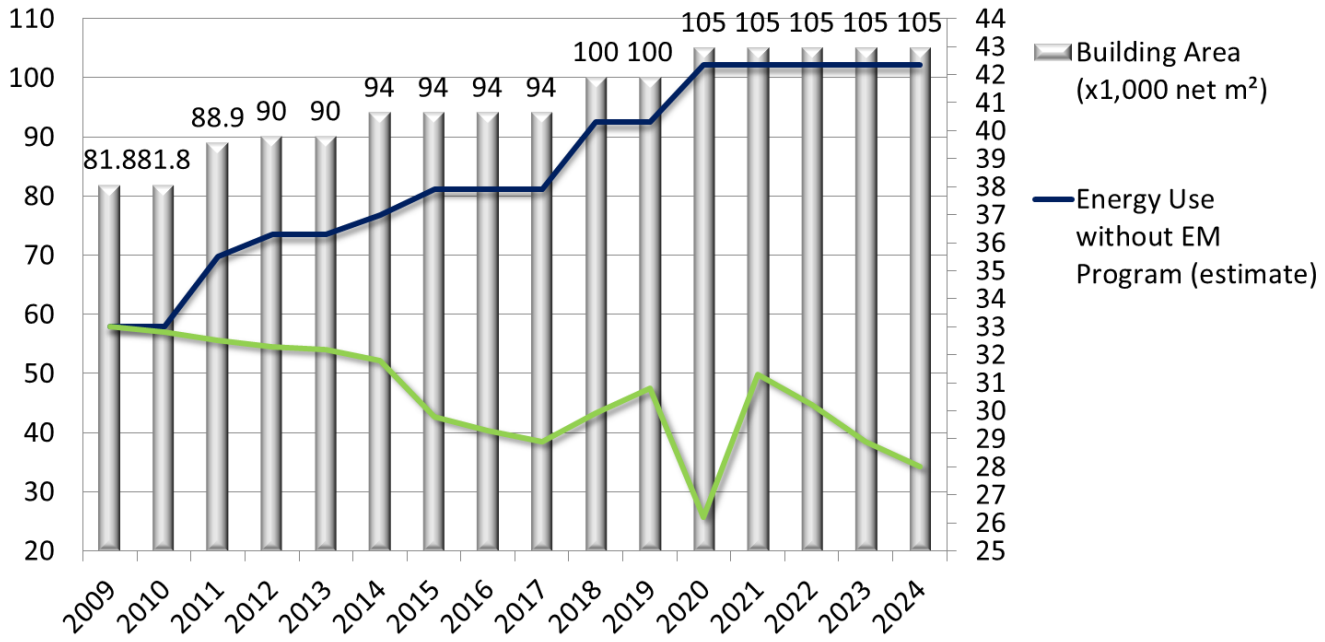
Highlighted below are the actions TRU has taken throughout the 2024 calendar year to minimize emissions from stationary sources, mobile sources and paper consumption as well as plans for reducing emissions in the future. Also included is a summary of campus community engagement initiatives, many of which are either ongoing or offered annually.

## A. Stationary Sources (e.g., buildings, power generation)

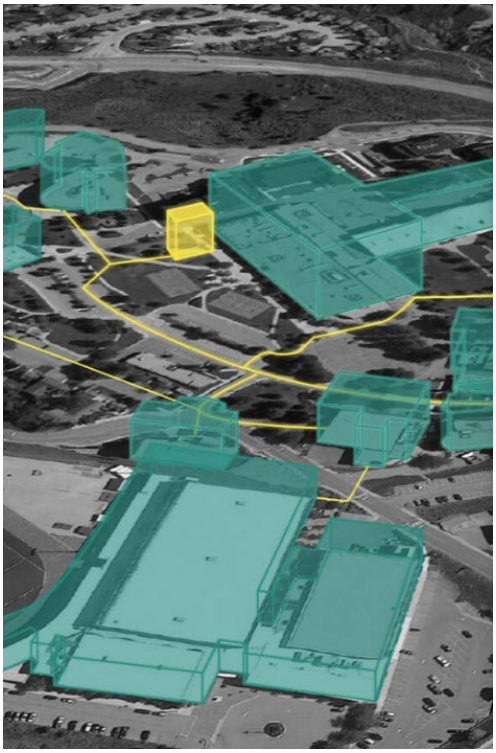
### Energy Reduction Projects and Initiatives

Since 2010, TRU has had an ongoing goal to reduce energy consumption by 3% every year. In 2024, TRU successfully maintained this direction by achieving a 48% reduction compared to 45% in 2023. Technical changes, TRU's continued involvement in the Energy Wise Network Program, and support from the TRU Environmental Sustainability Advisory Committee, have all contributed to an ongoing reduction in our carbon emissions and environmental impact.

The table below illustrates TRU's reductions in the Energy Management program to date relative to the growth of building space.



## Low-Carbon District Energy System (LCDES)



In partnership with Creative Energy which is known for innovative district energy solutions, and BC Hydro, TRU is building a cutting-edge Low-Carbon District Energy System (LCDES) on the Kamloops campus. On August 29, 2024, a ground-breaking ceremony for the new system was held, marking a significant step in TRU's journey toward zero carbon by 2030.

The LCDES is the most ambitious energy project in TRU's history and replaces old natural gas boilers with a sustainable electrical heating source, which will make the campus greener than ever by offsetting over 100,000 tonnes of GHG emissions over the next 30 years – this is like planting a 4,000-acre forest, a space 16 times larger than the TRU campus. Once operational, the LCDES aims to reduce emissions from heating campus buildings by 95% compared to a 2020 baseline.

Full project details and progress reports can be viewed at tru.ca/sustainability/lcdes.html.

## Renewable Natural Gas Purchase

Since 2022 TRU has been purchasing 100% renewable natural gas (RNG) instead of regular natural gas for the Kamloops campus. By switching to RNG, the university has been able to reduce its emissions from heating significantly, contributing to its overall goal of carbon zero by 2030. This investment demonstrates the university's commitment to sustainability and its proactive approach toward mitigating the impacts of climate change.

## New Clean BC Study

TRU in collaboration with CleanBC and BC Hydro, has been actively working to modernize its heating systems in alignment with sustainability goals. A recent study was conducted to assess the feasibility of replacing the aging gas boiler with an air-source heat pump system. The findings highlight a significant opportunity to reduce greenhouse (GHG) emissions by approximately 54 tonnes of $CO_2$ equivalent annually. TRU is currently exploring potential government funding opportunities to support the implementation of this initiative.

## Campus Solarization Project – Phase 1 (Three Rooftops)

As part of TRU's commitment to expanding renewable energy generation on campus, the first phase of the Campus Solarization project which started in 2024 is now nearing completion. After successfully navigating BC Hydro's interconnection program, TRU received approval to install up to 1 megawatt of grid-tied solar capacity on the Kamloops campus. The first phase includes the installation of approximately 400 KW DC of solar photovoltaic panels across the roof tops of the Arts & Education Building, Industrial Training & Technology Centre, and the Campus Activity Centre. The system is expected to be commissioned in 2025 to offset electricity demand. Once operational, it will contribute to reducing the university's reliance on grid electricity, lowering greenhouse gas emissions, and supporting TRU's long-term sustainability and carbon reduction goals.

## Lighting Retrofit – Trades & Technology Centre, Old Main, and International Building

Based on the results of a comprehensive lighting study completed in 2023, TRU implemented a lighting retrofit project in 2024 across the Trades & Technology Centre, Old Main, and International Building to enhance energy efficiency. The upgrades included the installation of tubular LED lamps and LED luminaires and retrofit kits. These measures are expected to result in annual energy savings of approximately 67,000 kWh, contributing to TRU's ongoing efforts to reduce electricity consumption and lower greenhouse gas emissions.

## Continuous Optimization Program – Round 2

In 2024, TRU completed Round 2 of BC Hydro's Continuous Optimization Program at the Ken Lepin Science Building. All Round 1 measures have been reviewed and based on the changes

in occupancy, building use and the building's systems, new recommendations were suggested and implemented to ensure each building is performing optimally. We anticipate a total of 42,818 kWh will be saved annually.

Looking ahead, BC Hyrdo approved another two buildings (Trades & Technology Centre and the Campus Activity Centre) to go through Round 2 of the Continuous Optimization Program, and to be recommissioned again. All Round 1 measures will be reviewed and based on the changes in occupancy, building use and the buildings systems, new recommendations will be made to ensure each building is performing optimally.

## Custom Efficiency Program – Gymnasium and the BCCOL

Based on a previously completed energy study funded by the Fortis Custom Design program, three Direct Digital Control (DDC) optimization measures recommended in the study were implemented in 2024 within the Gymnasium and the BC Centre for Open Learning (BCCOL) building. This included adding people counters at the doors to the gyms, implementing an occupancy control strategy that uses people counter data rather than occupancy sensors, and installing occupancy sensors or counters in the spaces that are intermittently occupied throughout the day to setback space temperatures and flow setpoints when insufficient occupancy is detected. These measures are expected to achieve 561 GJ and 50,500 kWh of savings annually.

## ISO 50001 – NRCan Funded Project

TRU launched its ISO 50001-aligned Energy Management System (EnMS) in May of 2024, demonstrating its commitment to continuous energy performance improvement. The system provides a structured framework for monitoring, managing, and optimizing energy use across campus. Following this comprehensive implementation process, NRCan approved the final report and released the associated funding, recognizing TRU's efforts in enhancing energy efficiency and reducing greenhouse gas emissions.

**Continuous Improvement**

As part of TRU's commitment to continuous improvement under its ISO 50001-aligned EnMS, the university will continue to enhance energy performance through ongoing monitoring, data analysis, and targeted efficiency measures. The first annual EnMS performance report is currently in progress, evaluating the effectiveness of implemented strategies and identifying opportunities for further optimization. Moving forward, TRU will continuously refine its processes, engage stakeholders, and integrate new energy-saving initiatives to ensure sustained reductions in energy consumption and greenhouse gas emissions.

# B. Mobile Sources (e.g., fleet vehicles, portable equipment)

## Bicycling Program

TRU is committed to promoting cycling as a means of commuting among its students, faculty and staff. The Bicycling Program aims to better support existing cyclists and encourage those who don't currently cycle to TRU to do so. Key components of the program include:

**E-bike Purchase Discount Program** – TRU offers a $300 discount on the purchase of an e-bike to help staff and faculty get an electric bike and in turn get more employees commuting to campus by bicycle.

**Infrastructure Improvements** – Survey results obtained in the Fall of 2022 have shown that many potential commuters have expressed concern over the safety of cycling to campus due to poor cycling infrastructure throughout the city. While TRU cannot directly control public infrastructure, the TRU Sustainability Office is working closely with the City of Kamloops to address these concerns. TRU and the City of Kamloops have secured a federal infrastructure grant to build an overpass over Summit Road, connecting the TRU campus to the closest residential neighborhood, allowing commuters to reach campus without having to cross one of the busiest intersections in the city.

**Advocacy** – A staff member of the TRU Sustainability Office sits on the City of Kamloops' Active Transportation Engagement Group which meets quarterly. The group is administered by the City of Kamloops Transportation Division and includes representatives from organizations across the city who are interested in improving infrastructure and safety for those choosing active means of transportation.

**E-scooter and E-bike Demonstration Program** – To help members of the TRU community experience what it's like to ride an e-scooter or an e-bike, the TRU Sustainability Office offers an ongoing program whereby campus members can sign up for a free 30-minute demonstration of an e-scooter or e-bike. All they need to do is submit a request online, sign a waiver and bring their own helmet.

**BC Go By Bike Week** - TRU has participated in this long-standing provincial event for over 10 years. The event encourages people to ride bicycles as much as possible during the entire week, which is both good for physical and mental wellness and often means people are leaving their cars at home. TRU promotes all three events - fall, winter and spring - and offers a variety of programs during the week to increase engagement.

**Secure Bicycle Storage** – TRU offers secure, reliable, and convenient bicycle storage for all employees and students. This includes a central bicycle shelter that includes 24-hour surveillance and can accommodate about 30 bikes, as well as 10 under-stair bicycle cages

throughout campus which can accommodate about 4 bikes each. These facilities are offered for free upon completion of a simple registration form. There is also a new 5-space Bikeep station which charges a nominal fee and is designed for those who are occasional bike riders or visitors to the campus. Standard outdoor bicycle racks are also offered throughout the campus near entrances to most major buildings.

**$40 Student Bike Purchase Program**

TRU plans to expand on the Bicycling Program offerings listed above by launching a $40 Student Bike Purchase Program. This new program will allow TRU students who don't own a bicycle to put their name into a draw for a chance to purchase one of eight used bicycles for only $40. The bikes were acquired for free from the City of Kamloops. They were confiscated by the RCMP after being stolen but couldn't be reunited with their rightful owners. A bike mechanic was hired in 2024 to repair the bikes using new or used parts with a plan to launch the program to students in the Spring or Summer of 2025.

## Short-term Rentals of Electric Bikes and Scooters

TRU has been actively involved in encouraging the City of Kamloops to allow a third-party electric scooter and electric bike rental company to operate in Kamloops. If this were to happen it is very likely that members of the TRU community could take advantage of the program. The city is currently involved in a provincial electric kick scooter pilot project. If the pilot project ends successfully, the City of Kamloops will likely go ahead and hire a third-party to run a program. Whether this happens in 2025 or after is still to be determined.

## Carpool Program

In 2025 the Sustainability Office plans on finding an app or other means, such as a third-party supplier, that will facilitate the introduction of a safe, reliable and affordable carpool program to operate and serve all TRU community members.

### Car Share Program

Any staff or faculty member who is engaged in TRU business (conferences, meetings, etc.) can reserve a vehicle online at any time to use for their business trip just as one would reserve a meeting room. The program vehicles include a full electric, a plug-in hybrid, and a regular hybrid. Any gas costs are borne by the employee's department and charging costs are borne by the TRU Sustainability Office, which also organizes and pays for all vehicles' maintenance. Students are occasionally allowed to reserve a vehicle with a faculty member's approval and supervision. A new plug-in hybrid vehicle will be purchased in 2025 to replace the existing regular hybrid vehicle, and the program will continue to be offered as described.

### Electric Vehicle Conversion Project

TRU's Electric Vehicle Conversion Project started in 2023 but stalled for much of 2024 due to staffing shortages. The project restarted in early 2025 and is scheduled to wrap up by year's end. Instructors and students from the TRU Trades & Technology Department, with help from the TRU Sustainability Office, are converting a 1999 gas-powered TRU fleet vehicle to be fully electric. The goals of the project are primarily three-fold: convert an older model gas vehicle with rising maintenance costs to fully electric, significantly reducing emissions once it reenters the fleet as a regular service vehicle; add to the educational knowledge base of those doing the conversion; and promote electric vehicles use as a powerful choice to reduce emissions. As a side benefit, key stages of the project will be documented and made publicly available as a general guide for anyone wanting to undertake a similar project. If the project is successful, TRU may convert other older model service vehicles.

## C. Paper Consumption

### Using FSC and SFI Certified Paper

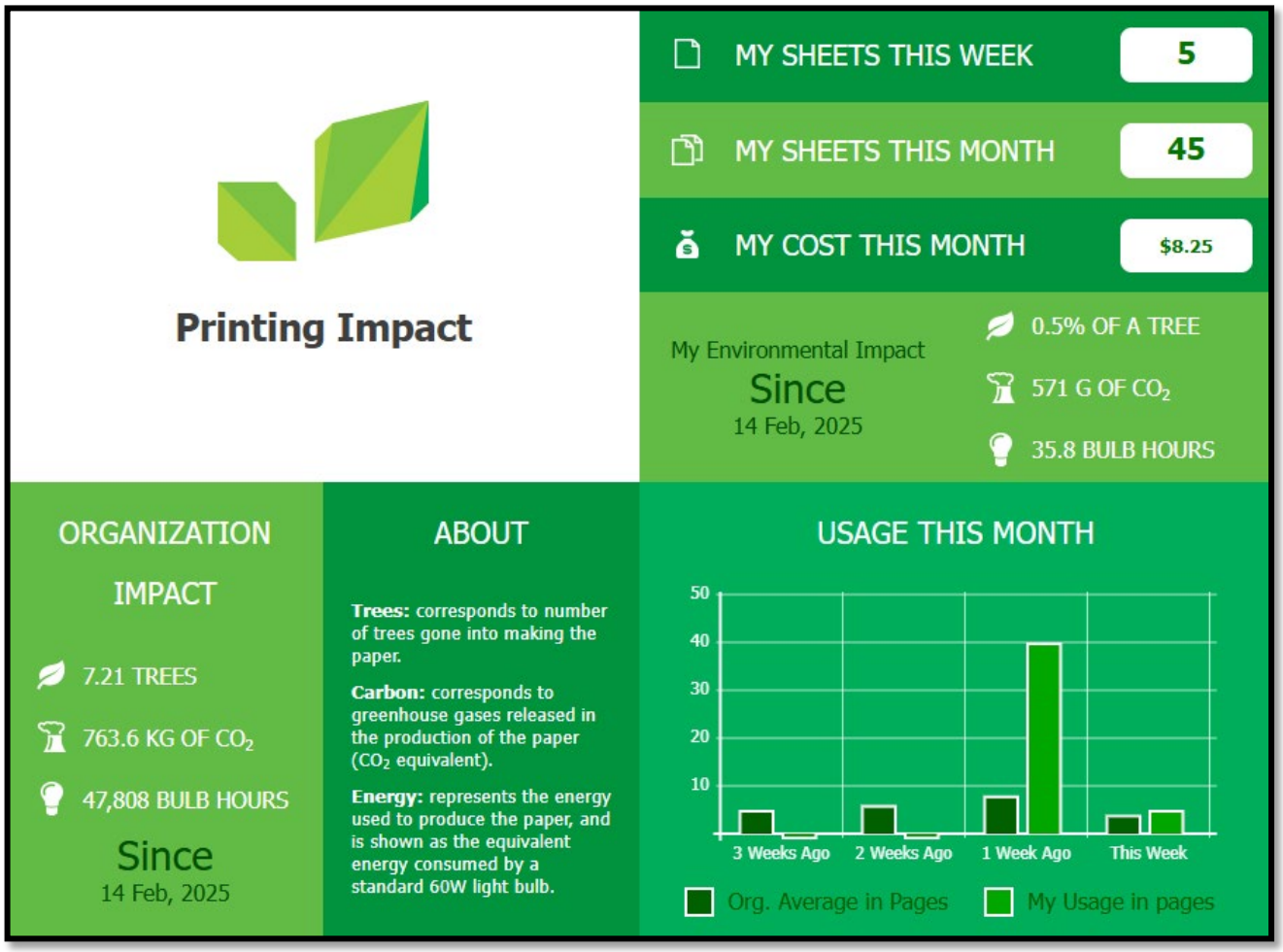
TRU Print Services most frequently uses 8.5 x 11 inches size paper. By default, this paper size is 30% postconsumer recycled paper, certified by the Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI), made with Elemental Chlorine Free (ECF) virgin fiber content, and manufactured under alkaline (acid-free) conditions. The least frequently used 11 x 14 inches sized copy paper is FSC Certified.

TRU Print Services continues to seek out and try new paper options, such as Sugar Sheet and Wheat Sheet, to test less emission-intensive papers and see if they can effectively support the institution's printing needs without compromising overall efficiency and ease of use in operations.

## Update to Printer Fleet and Communicating Impact

Between April and June 2025, TRU's printer fleet will be replaced with new more efficient models or consolidated, reducing our fleet from 140 devices to 95, as our printing volume has decreased almost 65% since the Covid pandemic. During this fleet revision, a new queuing system is being implemented that allows users to print on any Ricoh device of their choosing. Once the user is standing in front of the device, they log in and select their print job(s) from their queue and print only what they require thereby reducing the amount of faulty and forgotten print jobs which saves paper while also increasing privacy for sensitive documents.

Since use of printers requires a PaperCut account, users can log in to view their individual printing costs and impact as well as TRU's. Environmental impact is shown as the number of trees that went into making the paper that was used, the amount of greenhouse gases released in the production of the paper (CO2 equivalent), and the energy used to produce the paper which is shown as the equivalent energy consumed by a standard 60W light bulb.



# ADDITONAL SUSTAINABILITY INITIATIVES

## Sweater Day

In a continued tradition spanning over 10 years, the TRU Sustainability Office organized its annual Sweater Day event to raise awareness on ways to reduce energy consumption during chilly winter days while still staying warm. The main event was February 15, 2024 from Noon to 3 pm in Old Main Student Street and consisted of a photobooth, the famous Blender Bike, hot chocolate, cookies, free mugs and sweaters, and a chance to donate clothing. Students, staff, and faculty were encouraged to wear a sweater while the temperature in most campus buildings was lowered by a maximum of 1 degree Celsius from Thursday, Feb. 15 to Sunday, Feb. 18, 2024 (certain campus buildings were exempt from the changes). Lowering the thermostat by just a few degrees saved approximately 10% in energy consumption. Participation was encouraged at home as well by encouraging TRU community members to keep home thermostats at a reasonable level and wearing a sweater to stay warm.

## TRU Solar Table Design Competition

2024 was the third year of the TRU Solar Table Design Competition. TRU wants solar tables around the campus for the following reasons: to promote renewable energy use; encourage student participation and learning; and have more outdoor places to study and socialize with protection from snow, rain, and direct sun. The competition is only open to students from TRU and they can enter either individually or as part of a student-only team. One winning submission is picked from all submitted designs by a selection committee made up of TRU staff and faculty members, and the winner receives $650. The winning designs are then built by teams led by instructors from the TRU School of Trades & Technology and the students in their classes.

## Efficient Personal Heating Devices Library

To address the many negative issues associated with space heaters including energy inefficiency (typically 1200-1500 watts); potential for causing malfunction of central heating system; and a fire hazard, along with wanting to promote energy efficiency, the TRU Sustainability Office launched the Space Heater Defeater Program. After the success of this program, the Sustainability Office created the Efficient Personal Heating Devices Library. This initiative provides alternative heating solutions that are both effective, safe and sustainable. This program achieves three of TRU's main goals for indoor work environments: comfortable working temperature for everyone; safe; and eco-friendly.

The new Efficient Personal Heating Devices Library introduced in 2024 provides employees the opportunity to try out alternative personal heating devices for their offices during a free two-week trial. These devices have been carefully selected to provide safe and efficient heating while minimizing energy consumption (typically 50-75 watts). The program includes the following devices: seat heaters, heated keyboard pads, electric blankets, heating pads, and ceramic under-desk/feet heaters. After the trial if an employee likes the device, they can either buy one themselves or ask their department to buy one for them. The next step in the program is to create a TRU policy that will essentially ban space heaters unless an exception is made by the Facilities Department.

## Employee Energy Management Online Training Course Campaign

Halfway through 2024 the Sustainability Office launched its Employee Energy Management Online Training Course campaign. The goal was to get 100% of the approximately 2,450 employees to complete a 15-minute course. The essential elements of the course included explaining TRU's overall objectives with its energy management program, the importance of using energy wisely and efficiently on campus but also off campus, and practical things employees can do to conserve energy on a regular basis. By the time the campaign finished on January 31, 2025, 26% of employees completed the course, which was still considered a success. The top prize was an electric bicycle and there were also several smaller prizes throughout the campaign used as incentives for participation.

## BC Energy Wise Network Campaign


Due to unforeseen circumstances, the 2024 Energy Wise Network campaign did not get started until May 2025 and will run till the end of August. The 2025 campaign will start in September and wrap up sometime in early 2026. The 2025 campaign is called 'Lights Out' and is aimed at students to encourage them to turn off lights when they are the last to leave a room. Mini posters were put up near all TRU classroom light switches that encourage students to turn off the lights if they're the last to leave the classroom. They can also scan a QR code from the poster that brings them to a 'Lights Out Pledge'. If they sign the simple pledge, their name automatically goes into a draw and one winner will be picked from all participants once a week to win a $20 TRU Food Services gift card until the end of the campaign on the last Friday in August. The 2025 campaign is yet to be determined at the time of publication.

## Campus Tree Program

Throughout 2024 TRU continued with its Campus Tree Program which started in 2021, building upon TRU's successful tree-planting events and tree care activities. The program planted 55 large trees (6'-12' tall) and 55 small trees (under 6' tall) on the campus, reflecting the age of the TRU institution. Additionally, staff and faculty organizers coordinated several tree care events with student and employee volunteers to provide ongoing maintenance, including the reapplication of mulch to the bases of existing trees. The program strives to enhance the campus environment and promote sustainability.

## 2024 GHG EMISSIONS AND OFFSETS SUMMARY TABLE

| Thompson Rivers University 2024 GHG Emissions and Offsets Summary | |
|---|---|
| **GHG emissions for the period January 1 - December 31, 2024** | |
| Total $BioCO_2$ | 2,349 |
| Total Emissions ($tCO_2e$) | 3,466 |
| Total Offsets ($tCO_2e$) | 1,117 |
| **Adjustments to Offset Required GHG Emissions Reported in Prior Years** | |
| Total Offsets Adjustment ($tCO_2e$) | -2,021 |
| **Grand Total Offsets for the 2024 Reporting Year** | |
| Grand Total Offsets to be Retired for 2024 Reporting Year ($tCO_2e$) | 0<br>(-904 will be applicable towards 2025 RY) |
| Offset Investment ($) | $0 |

## RETIREMENT OF OFFSETS

In accordance with the requirements of the *Climate Change Accountability Act* and the Carbon Neutral Government Regulation, Thompson Rivers University (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2024 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization herby agrees that, in exchange for the Ministry of Energy and Climate Solutions (**the Ministry**) ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to $25 per tonne of offsets retired on its behalf plus GST.

# EXECUTIVE SIGN-OFF

| | |
|---|---|
| | May 30, 2025 |
| **Signature** | **Date** |
| Matt Milovick | VP Administration and Finance |
| **Name** | **Title** |