

Summer 2022 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the [application guide](#) to confirm your eligibility before applying.

Applications close at midnight on Sunday January 30, 2022.

Project Title: Understanding capacity-building needs for heat pump retailers and installers in the Central Interior of BC

Project Background & Overview:

Research undertaken by the Sustainability Scholar will improve understanding of capacity-building and marketing needs of Kamloops' retailers and installers of heat pumps. In Kamloops, buildings account for 29% of community greenhouse gas (GHG) emissions, primarily from the use of natural gas for space and water heating. Electric heat pumps offer a low carbon solution for space and water heating and will play a key role in meeting community GHG reduction targets of 30% by 2030 and 80% by 2050. However, in Kamloops, there is low uptake of heat pumps, despite generous rebate offers in recent years. Other issues include gaps in the understanding contractors have of the eligibility requirements for rebates that are available to homeowners prepared to install heat pumps as their primary source of home heating, the lack of local Clean BC Program Registered Contractors (PRC), and misinformation around the performance of cold climate heat pumps. In the 2021 UBC Sustainability Scholar report by Andrea Barriga Guerra, having recommended/verified businesses and tradespeople, as well as case studies and testimonials from others were all listed as being potentially helpful to residents looking to improve home energy performance. This research will help to develop these measures for one aspect of home energy performance – heat pumps - in greater detail.

Project description

In Kamloops, industry capacity has been noted as a barrier to the widespread uptake of heat pumps. This project will involve research on capacity gaps and needs of industry stakeholders, primarily focusing on retailers and installers and their associated networks. In addition, developing case studies of successful heat pump installations will allow an assessment of the experience of working with a local retailer/installer from the home or business owners' perspectives. Interviews with local heat pump education providers will also provide information on how community stakeholders can be involved in building capacity.

The City of Kamloops' Community Climate Action Plan (adopted June 29, 2021) includes actions to build capacity with local partners around low-carbon energy systems, such as heat pumps. Heat pumps are seen as key to achieving targets for all new homes and buildings in the community to be net-zero energy ready by 2030 and zero carbon by 2040, as well as retrofitting 2% of existing dwelling units per year to achieve, on average, 50% GHG emissions reductions per unit. Heat pumps provide both heating and cooling, therefore also increase resilience to the impacts of climate change (e.g. heat waves).

SUSTAINABILITY SCHOLARS PROGRAM

Project results will be directly used by the City of Kamloops, Thompson Rivers University, and non-profit BC Sustainable Energy Association (BCSEA) Kamloops Chapter who are collaborating to develop capacity-building measures for local retailers. The research is ideally timed, with the recent development of the Home Performance Contractor Network (HPCN) (to replace the Program Registered Contractors program) and associated training and accreditation opportunities. The City is also considering topping up CleanBC rebates to residents to facilitate the uptake of heat pumps, and the analysis may help to inform this. The scholar will gather information that can assist with the marketing of heat pumps, including developing local case studies, as current Provincial marketing materials are primarily focused on the Lower Mainland, which is in a different climate zone.

Project scope

All activities contribute to a key climate action objective of increasing the uptake of heat pumps in Kamloops, to displace the use of natural gas heating sources in both new and existing buildings.

1. Conduct a brief review of best practices for heat pump capacity-building and training measures for retailers and installers in other jurisdictions, including those in similar climate zones. Include current training and resources available in BC, for example through the Home Performance Contractor Network (HPCN), as well as a brief scan of cold climate heat pump technologies available in B.C.
2. Develop case studies of 5-7 successful heat pump projects in Kamloops, focusing primarily on residential (new and retrofit), but including at least one example of each of commercial and institutional. Case studies would ideally include:
 - motivations of developer/owner/decision-maker to install heat pumps, plus any incentives received
 - observed benefits of heat pumps (comfort/environmental etc.)
 - experiences working with local retailers
 - challenges/barriers encountered in the process and/or after installation and how these were resolved
 - review of performance of the technology
 - photos of heat pumps at the site
 - operating costs and/or reliability / ability to meet local needs

This information may be gathered through various methods, including interviews, phone calls, and site visits, to be determined depending on intern skill set, COVID safety protocols and whether the Scholar is working locally or remotely. Photos may be submitted by the project owner or arranged by the City or community partners if the Scholar is unable to visit the site.

3. Assist with a focus group engagement with local industry stakeholders, such as Thompson Rivers University School of Trades and Technology instructors and the Canadian Home Builders Association – Central Interior representatives, to determine current training on heat pumps available to TRU trades students and local contractors/installers; opportunities to augment training on heat pumps in the community and other measures that would support the local industry. Remote participation will be possible.
4. Provide recommendations for capacity building measures, based on information gathered in tasks 1-3, that would prepare retailers and installers to facilitate increased sales and installations of heat pumps in Kamloops.

SUSTAINABILITY SCHOLARS PROGRAM

Deliverables

- A final report containing a summary of the work completed
- A final report for the online public-facing Scholars Project Library.
- Prepare recommendations that can be shared with relevant stakeholders from the City of Kamloops, BCSEA-Kamloops Chapter, Thompson Rivers University Trades staff, Canadian Home Builders Association – Central Interior.

Time Commitment

- This project will take **250** hours to complete.
- This project must be completed between **May 2 and August 12**.
- The scholar is to complete hours between **8:30 - 4:30 pm, Monday to Friday** approximately **17** hours per week.

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Experience conducting stakeholder engagement events, including facilitation skills, is an asset
- Familiarity with research methodologies and survey techniques
- Community engagement experience
- Familiarity conducting focus group research
- Strong analytical skills
- Ability to work independently
- Comfortable interacting with strangers to conduct public/in person surveys
- Criminal Record Check required [note that the project partner is responsible for reimbursing the successful candidate's reasonable expenses to get a criminal record check done]

The project can be completed remotely, however office space is available in the City of Kamloops Sustainability Services division if a Scholar prefers to be based in Kamloops.

Applications close **midnight Sunday January 30, 2022**

Apply here: [Click here to apply](#)

Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 19. [Click here for details and to register.](#) Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

<https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae>

<https://www.grad.ubc.ca/current-students/graduate-pathways-success>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>