

SUSTAINABILITY SCHOLARS PROGRAM

Summer 2020

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 February 2, 2020.**

Research project title: Developing an Embodied Carbon Primer for B.C. Single and Small Multi-Family Homes

Sustainability Goal or Operations Plan objective

Identify the key make-up of embodied carbon for upper step level / near zero emissions homes and opportunities for mitigation

Long Term Goal: Reduce embodied carbon in homes

Project description

The outcome of this project will identify the primary design and construction attributes that drive embodied carbon in highly insulated, near zero emission homes by quantifying the results of 1 to 3 recently built near zero emissions projects in Vancouver, BC.

Scope of Work:

- Define embodied carbon and communicate its relevance to mitigating climate change in single family homes
- Document the leading and relevant tools, standards and methodologies for embodied carbon
- Perform life cycle assessments on 1 to 3 real case study Passive House projects in Vancouver, BC
- Develop key graphics and data for defining total home carbon by project lifecycle, building elements, and building materials
- Conduct sensitivity analysis on major embodied carbon contributors and potential mitigation strategies
- Compare and analyze relationships between home attributes and embodied carbon
- Identify key drivers of low and high embodied carbon outcomes
- Compare and contrast drivers of low embodied carbon with low operational emissions strategies
- Interview select builders/designers to collect additional information as required
- Consolidate findings into a primer for posting on the zebx.org website to education and inform builders and designers of single and small multi-family homes.

Deliverables

- An embodied carbon primer for single and small multi-family homes
- A final report, containing a summary of completed work with methodology, results, findings and references, (report to also serve as final UBC Project Library report)

Time Commitment

- This project will take **250** hours to complete.
- This project must be completed between May 4 and August 14, 2020
- Scholar schedule is flexible, though it is expected that a minimum of half of the time will be spent in the ZEBx office during normal operating hours (9-5pm)

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Technical writing skills an asset
- Strong analytical skills
- Ability to work independently
- Demonstrated experience in building science
- Comfortable interacting with strangers to conduct public/in person surveys
- Familiarity with performing sensitivity analyses an asset
- Design skills an asset
- Comfortable working with qualitative and quantitative data
- Familiar with Lifecycle Costing Analysis

Applications close **midnight Sunday February 2, 2020.**

Apply here: <http://sustain.ubc.ca/scholarsapply>

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

Useful Resources

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>

The Centre for Student Involvement & Careers will host a resume & cover letter webinar tailored for graduate students on Tuesday, January 21, 2020 from 12:00-1:30. Registration will open approximately two weeks before the webinar, and can be accessed at Careers Online.

