

UBC Sustainability Scholars Program 2019

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 organizational sustainability goals.

For more information about the Sustainability Scholars Program and to apply to work on this project, please visit the [Student Opportunities](#) page.

Please review the application guide (PDF) before applying.

Applications close **midnight Monday February 25, 2019.**

Research Project Title

Development of Net-Zero Energy Ready Residential Buildings Resource Kits

Sustainability Goal or Operation Plan Objective

Goal: Climate leadership through the support for development of Net-Zero Energy-Ready Homes

Long term goal: Eliminate greenhouse gas emissions from new construction buildings

ZEBx is a centre of excellence designed to increase the knowledge, capacity and passion for cost-effective, attractive, and low-energy buildings. The first of its kind in Canada, ZEBx provides innovative, results-oriented programming aimed to amplify the exemplary work of industry leaders, create a community of practice and connect all building professionals with the tools they need to build to the highest standard of building performance.

This Sustainability Scholars project will contribute to the progressive energy targets established by the BC Energy Step Code for the building industry to achieve Net-Zero Energy-Ready (NZER) levels by 2032. To support this rapid transformation, various government, industry and research organizations have been developing key tools and resources. However, a challenge for new adopters is identifying and navigating through the plethora of resources available.

Through literature and best practice review, as well as informal interviews with the topic experts, the Scholar will identify the best available resources for planning, designing, building, and purchasing NZER homes. These resources will include non-partial, validated, action-oriented information, with a focus on recent, local, and relevant content provided by key BC or national organizations. The Scholar will then summarize and organize the resources and create resource kits for each key stakeholder group, including designers, builders, inspectors, homebuyers, and financial institutes. Each kit will include a map showing the relationship between the resources, their level of complexity, and the stage of the project in which the resource is most relevant to.

These resources kits will be presented to the BC Energy Step Code Council or one of its sub-committees (Training and Communications Sub-Committee and/or Technical Sub-Committee), to ensure their accuracy. When the content is approved, ZEBx will develop a graphic and interactive web platform that allows each user group to access the resource kits developed by the Scholar. The platform will include a summary of the resources, the

connection between them, as well as links to the full documents. ZEBx will share the resource packages through its partners' and collaborators' network as well as through events and presentations.

Outline Scope of Project and Why It Is of Value to Your Organization. Describe How and When the Scholar's Work Will Be Actionable.

Project Scope

This project aims to create resource kits to facilitate the industry and its customers' access to relevant resources on how to design, build and purchase NZER homes. This is achieved through the following objectives:

- **Objective 1: identify the resources available**
 - Through literature reviews and informal interviews with industry leaders and representatives, the Scholar will identify the relevant resources. ZEBx will connect the Scholar to key educational and advocacy organizations to ask for their recommended resources.
 - As part of this objective, the gaps in the available resources will be identified. This will allow ZEBx to work with partners to develop resources to fill these gaps. However, the development of new resources is outside the scope of this proposed project.

- **Objective 2: Summarize, organize and develop resource maps**
 - The Scholar will select the best resources for the key audience groups that support their information needs as they pertain to the design, building, financing and purchasing of NZER homes.
 - Develop a one-page summary for resource and an overall summary for each resource kit.
 - Create navigation maps that show the connections between different resources and the stage of the project that each resource is most relevant for.
 - Develop questions for a quick web survey that will be used to direct users to appropriate resource kits quickly.
 - Develop a map for each resource kit to facilitate users' navigation by showing the connection between different resources and the stage of the project each resource is most relevant to.
 - Design a schematic graphical representation of the kit maps to be used by the web designers to incorporate the resource kits in the ZEBx online resource library

Deliverables

Note that a final deliverable (either a full report or, if the report contains confidential information, an executive summary) is required by the end of the program (August 12, 2019). The deliverable will be archived in the online public-facing [Scholars Project Library](#).

- A final report presenting the resource kits. It will include an overview of each kit, a list (with summaries) of each resource along with a resource map for each kit, showing the connection between different resources and the stage of the project at which each resource is most relevant to.
- A final presentation to ZEBx and BC Energy Step Code Council or one of its sub-committees (Training and Communications Sub-Committee and/or Technical Sub-Committee).
- Executive Summary for the UBC Sustainability Scholars online project library.

Time Commitment

Please indicate the total numbers of hours your Scholar will need to complete the project, the completion period (between April 29 and August 12), any critical dates for the project, and the optimal schedule for your Scholar's work.

- This project will take **250** hours to complete.
- The Scholar will be required to attend: several informal interviews with industry leaders and representatives from both governmental and non-governmental organizations; and once-a-week check-in meetings with the ZEBx Executive Director and Research Manager.
- This project must be completed between April 29 and Aug 12, 2019
- The Scholar is to complete hours between 9 AM – 5 PM, and Monday-Friday, approximately 20 hours per week.
- It is preferred that most work hours take place on campus, in the Sustainability Initiative offices and at ZEBx office in Downtown Vancouver. However, arrangements can be made for working offsite for a portion of the hours.

Required/Preferred Skills and Background

- Preferred programs include Civil, Mechanical and Environmental Engineering, Architecture, Masters in Engineering Leadership, or similar
- Knowledge of and interest in the topics related to zero emissions and energy building design and construction
- Ability to understand building documents and drawings and technical reports and guidelines,
- Familiarity with zero emissions and energy building standards such as Passive House
- Some understanding of how to make technical information accessible to a wider audience
- Excellent research and writing skills
- Demonstrated interest in sustainability
- Experience conducting stakeholder interviews is an asset
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Comfortable interacting with strangers to conduct public/in person surveys
- Familiarity with City of Vancouver building codes, urban planning, construction innovation and sustainability a bonus
- Strong analytical skills
- Attention to detail
- Design and layout skills is an asset

Applications close **midnight Monday February 25.**

Apply here:

<https://sustain.ubc.ca/student-opportunities>

To learn more about the program here:

<https://sustain.ubc.ca/ubc-sustainability-scholars-program>

Read the application guidelines to confirm your eligibility to participate in the program here:

<https://sustain.ubc.ca/student-opportunities>

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