

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.

Research project title: Equity Impacts of Energy Submetering & Low Carbon Building Policies

Project Background & Overview:

In Vancouver, 54% of carbon pollution comes from burning natural gas in our buildings for space heat and hot water. As a part of the Climate Emergency Action Plan, Big Move 4 seeks to cut carbon pollution from building operations in half by 2030 (from 2007 levels). Decarbonizing Vancouver's new and existing building stock will in many cases include a transition to low carbon high-efficiency centralized heating systems (i.e. heat pump), whether at the building scale, or the neighbourhood scale (i.e. the City's Neighbourhood Energy Utility).

District energy and or building-scale heat pumps that supply thermal energy to large multi-use or multi-residential buildings typically have one centralized energy meter. The thermal energy bill and the recovery of those costs is dealt with by the building owner or property manager. Increasingly, building owners are turning to third-party sub-metering services that allow them to directly recover the costs associated with suite-level thermal energy consumption by their tenants. Energy sub-metering and suite-level billing are generally understood to be effective tools in reducing energy consumption by allowing the consumer to see their energy usage and associated costs, giving them the ability to modify their behaviour if desired. However, such service providers operate in a largely unregulated space where rate setting and billing practices are often opaque; this may leave some groups of residents vulnerable to unfair business practices for an essential service.

This project will focus on gaining an understanding of the current state and practice of energy sub-metering and suite-level billing, including business model and billing practices, to identify any associated externalities that may be borne by various resident groups. Particular attention will be paid to impacts to dense multi-unit rental and affordable housing buildings.

This work is in direct response to the high priority placed on incorporating an equity lens into the City's Climate Emergency Action Plan work. Council also has a priority on protecting renters which comprise over half of Vancouver households, and ensuring that climate policy is implemented equitably for Vancouver residents.

Project description

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The purpose of the project: To understand current state and practice of thermal energy sub-metering in multi-unit residential buildings in Vancouver, including examination of business models and billing practices, identification of any associated externalities that may be borne by different resident groups, and tools by which the City may have available to mitigate any negative impacts, and encourage best practices through policy, programs, or advocacy.

Why it is valuable: Vancouver is responding to the climate crisis with ambitious building decarbonization policies and is committed to implementing such policies equitably. This research will provide planning and policy teams additional insight to the direct or indirect implications of these policies, particularly if they may have an impact on housing affordability, access low cost clean energy, or inequitable distribution of policy outcomes.

How/when the project will be actionable: This work will: 1) provide critical information for the development of a customer education and outreach program for the City-Owned NEU (to be developed 2022/2023); 2) be incorporated, as deemed appropriate, in future annual NEU rate structure reviews, and/or bylaw or guideline updates; and 3) inform further research needs, actions, or building decarbonization policies (e.g. Green Buildings Policy for Rezoning, VBBL) that may be required to reduce inequitable outcomes.

Project scope

Scope of Research includes:

- Research & literature review including:
 - Energy efficiency & GHG reduction impacts of sub-metering
 - Regulatory environment in which energy sub-metering companies operate in British Columbia
 - How other jurisdictions manage or regulate sub-metering and in-suite billing practices (i.e. Alberta, Ontario, or other in North America/Europe)
- Outreach to NEU customers (and some non-NEU customers, if possible) across different housing tenures to identify billing models used, providers of submetering services, and charges / fees affiliated with submetering services
- Interviews with select building managers/operators, as well as select submetering providers and partners to document submetering business model and customer experience affiliated with submetering services
- Evaluation of impacts and/or benefits of submetering on building operators and individual building tenants / unit owners, including impacts on cost of energy, customer experience, and billing transparency
- 3rd-party research and interviews with internal subject matter experts, district energy utility operators, and energy experts to identify CoV options to address identified impacts as it relates to the NEU, as well as broader City climate policy (i.e. electrification of buildings) and equity
- Recommendations for follow up research or policy changes to reduce inequitable outcomes, if any are identified

Deliverables

- A final report containing a summary of the work completed
- A final report (or executive summary) for the online public-facing [Scholars Project Library](#).
- Transcripts/Notes from all interviews

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Time Commitment

- This project will take 250 hours to complete.
- This project must be completed between May 2, 2022 and August 12, 2022
- The scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Familiarity with research methodologies and survey techniques
- Excellent public speaking and presentation skills
- 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

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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>