

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: Supporting Metro Vancouver's Fleet Climate Action Strategy

Project Background & Overview:

To align with Corporate Climate Action plans, Metro Vancouver Fleet vehicles and equipment fuels will need to transition to low carbon/emissions sources with the following targets:

- 45% emissions reduction from 2010 levels, by 2030
- Carbon neutral by 2050

Initial progress towards these targets have been made with the adoption of cleaner technologies such as hybrid electric and battery electric vehicles. Current challenges for further electrification of Metro Vancouver's fleet include:

- Limitations to available automotive technology
- Regional travel with long distances between worksites and satellite offices
- Critical assets for emergency response

To support climate emergency mandates, total life cycle processes of projects and service delivery from inception to implementation, construction to operation and maintenance, commissioning and disposal, Metro Vancouver wants to incorporate innovative ideas and actions to reduce our carbon impact. The three following principles guide the approach to managing Metro Vancouver's fleet assets:

- **Green the Fleet.** Fleet assets contribute roughly 40% of all emissions generated corporate wide. Integrating a climate action mindset into all work done by the Region will maximize savings, and reduce GHG emissions and air pollutants.
- **Reduce Fuel Use:** Prioritize replacing fleet assets with zero or low tailpipe emissions technologies with alternatives that reduce or eliminate fuel use.
- **Optimize the Fleet:** Data analytics to optimize fleet asset utilization through technology and driver input.

Further development is needed for Metro Vancouver's Fleet Climate Action Strategy to help identify how the emissions reduction targets will be achieved along with any potential risks and/or challenges.

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Project description

We want to look at a range of aspects that impact fleet emissions including renewable fuels, developing technologies, life cycle impacts and infrastructure challenges. The Scholar and project mentor will work together to choose which aspects to focus on based on current MV priorities, the skills and interest of the Scholar, and the available time.

The range to aspects to be explored further as input for developing the Fleet Climate Action Strategy include:

- Current levels of fleet GHG (Green House Gas) emissions
 - Renewable fuels options
 - Developing technologies
 - Life cycle impacts
- Infrastructure challenges

Project scope

The Scholar will research one or more of the following important elements of relevance to the Metro Vancouver Climate Action Fleet Strategy. The topics will be determined in consultation with the mentor and based on the skills and interest of the Scholar:

- Research and analyze telematics data for fleet energy utilization and duty cycles
- Research and analyze application of renewable fuels to the MV fleet composition, commercial availability, feasibility and economic analysis
- Research developing technologies to improve fuel efficiency or support fleet emissions reduction
- Research and analyze vehicle life cycle impacts for total life cycle emissions
- Research and analyze infrastructure challenges for large scale fleet ZEV (Zero Emission Vehicle) adoption

In general, for each of the aspects chosen from the list above, the Scholar will:

- Review existing Metro Vancouver data and information
- Do external research in the form of a jurisdictional scan and best practices review to inform the development of evaluation and benchmarking frameworks, new technology or options
- Based on the review of existing data and the external research, analyse the opportunities, gaps, or performance of the chosen area -this may involve analysis such as emissions or energy consumption based on duty cycles of a range of fleet asset classes_____
- Make recommendations on areas for improvement or opportunities MV should consider and include in the strategic plan

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](#).

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.

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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
- Statistical analysis
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Familiarity preparing feasibility studies
- Familiarity with or interest in alternative fuel, electric vehicles, etc. an asset
- Experience doing life cycle analysis and benchmarking, an asset

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>