

Summer 2024 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. These opportunities are paid. The pay rate for the summer 2024 program is \$27.50/hour or \$6,875 for a 250-hour project.

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

Applications close at midnight on Sunday January 28, 2024.

Project title: Financial Analysis of Transitioning to Battery Electric Fire Service Vehicles

Project Background & Overview:

Vancouver Fire Rescue Services (VFRS) operates a fleet of over 130 vehicles ranging from small ATVs to large 100 ft.+ aerial platforms. As part of the City's climate emergency plan, transitioning these vehicles to electric where feasible is a priority. VFRS will be the first fire department in Canada to operate a battery-powered electric fire engine that is estimated to enter service in early 2024. As part of their commitment to allocate funding responsibly, a comprehensive review of the financial benefits and drawbacks of this electric transition are to be analyzed.

Project description

The purpose of this project is to analyze the financial impact of transitioning to electric vehicles within the VFRS fleet. The focus of the project will be reviewing the lifecycle costs of the electric vehicles already in service as well as the cost & performance of VFRS' new electric fire engine. Quantifying the financial benefits will be an important factor in future decision making for electrifying the VFRS fleet.

Project scope

The primary activities that the Scholar will be undertaking are:

- Reviewing and summarizing capital and operational costs of in-service electric vehicles and the associated infrastructure (~10%).
- Reviewing and summarizing capital and operational costs and performance (call volumes, response times, and vehicle downtime) of current fossil fuel powered vehicles (~30%).
- Analyzing and summarizing the performance and operational costs of the electric fire engine during the first few months of service and comparing the data to conventional engines (~30%).
- Researching electric vehicles deployed in other fire services globally and provide recommendations on how to optimize the VFRS fleet for electric vehicles. If available, focus

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will be on the following metrics; capital, maintenance, and infrastructure costs, fuel / electricity use, vehicle downtime, emergency response times, and injury statistics. (~30%)

Deliverables

- A final report containing a summary of the work completed
- A final report for the online public-facing [Scholars Project Library](#).
- A presentation summarizing the project's findings and areas for improvement.
- Recommendations for the future state of VFRS electric vehicles.

Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15, 2024
- The Scholar is to complete hours between 8 am and 4 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
- Statistical analysis
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Experience with financial modelling and analysis

Applications close **midnight Sunday January 28, 2024**

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 23, 2024. [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>