Summer 2026 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. The pay rate for the summer 2025 program is $31.25/hour or $7,812.50 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 11:59 pm on Sunday February 1, 2026.

Project title: Assessment of Emissions Reporting Methodologies for Hydrogen-Derived Renewable Diesel (HDRD) at Metro Vancouver

Project Background

Metro Vancouver is on its way to meeting its corporate target of reducing energy-related GHG emissions by 45 per cent by 2030 with a 2010 baseline. Metro Vancouver is accomplishing this while managing growth, preparing for the future climate, and ensuring infrastructure is resilient for the long term.

To achieve this goal, Metro Vancouver is investing in cleaner energy, adopting efficient technologies, and continuously improving how energy is used. Renewable fuels are playing a key role in this transition, including renewable diesel.

Hydrogenation-Derived Renewable Diesel (HDRD) is a drop-in fuel that is chemically similar to petroleum diesel, but produced from renewable feedstocks such as waste fats, vegetable oils, and animal fats. Unlike biodiesel (FAME), HDRD is compatible with existing diesel engines and infrastructure, making it a promising transitional fuel for sectors where electrification is currently infeasible. Some Metro Vancouver contractors have been using HDRD in their Operations since 2024, and evaluations are underway for the use of HDRD in other applications within its own Operations.

However, there is a gap in the ability to report on these reduced emissions as there is currently no emission factor for HDRD under the 2024 BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions, which is the standard which MV follows for quantifying its corporate emissions. MV is currently using the emission factor for biodiesel (B100), per guidance from the Ministry of Environment and Climate Change Strategy. Under this standard, emissions factors are specified for types of fuel and the vehicle application, as shown in Table 1.

Table 1. Excerpt from the 2024 Emissions Factor Catalogue, Mobile tab.

Calendar Year	Impact Profile	Jurisdiction	Unit	t CO_2	t CH_4	t N_2O	CH_4 ($t\ CO_2e$)	N_2O (tCO_2e)	Emissions ($t\ CO_2e$)	Bio-Emissions ($t\ bio\text{-}CO_2$)
2024	02 Light-duty Vehicle - Diesel	Canada	L	0.0025733	0.000000051	0.000000220	0.000001428	0.000058300	0.002633008	0.000098888
2024	08 Light-duty Truck - Diesel	Canada	L	0.0025733	0.000000068	0.000000220	0.000001904	0.000058300	0.002633484	0.000098888
2024	14 Heavy Duty - Diesel	Canada	L	0.0025733	0.000000110	0.000000151	0.000003080	0.000040015	0.002616375	0.000098888
2024	19 Off-Road - Diesel	Canada	L	0.0025733	0.000000073	0.000000227	0.000002033	0.000060065	0.002635377	0.000098888
2024	20 Off-Road - Diesel B100	Canada	L	0	0.000000073	0.000000227	0.000002033	0.000060065	6.20974E-05	0.0024722
2024	Heavy Duty - Diesel B100	Canada	L	0	0.000000110	0.000000151	0.000003080	0.000040015	0.000043095	0.0024722
2024	Heavy Duty - Diesel B20	Canada	L	0.0021444	0.000000110	0.000000151	0.000003080	0.000040015	0.002187495	0.00049444
2024	Heavy Duty - Diesel B5	Canada	L	0.0025465	0.000000110	0.000000151	0.000003080	0.000040015	0.00258957	0.00012361
2024	Light-duty Truck - Diesel B100	Canada	L	0	0.000000068	0.000000220	0.000001904	0.000058300	0.000060204	0.0024722
2024	Light-duty Truck - Diesel B20	Canada	L	0.0021444	0.000000068	0.000000220	0.000001904	0.000058300	0.002204604	0.00049444
2024	Light-duty Truck - Diesel B5	Canada	L	0.0025465	0.000000068	0.000000220	0.000001904	0.000058300	0.002606679	0.00012361
2024	Light-duty Vehicle - Diesel B100	Canada	L	0	0.000000051	0.000000220	0.000001428	0.000058300	0.000059728	0.0024722
2024	Light-duty Vehicle - Diesel B20	Canada	L	0.0021444	0.000000051	0.000000220	0.000001428	0.000058300	0.002204128	0.00049444
2024	Light-duty Vehicle - Diesel B5	Canada	L	0.0025465	0.000000051	0.000000220	0.000001428	0.000058300	0.002606203	0.00012361
2024	Off-Road - Diesel B20	Canada	L	0.0021444	0.000000073	0.000000227	0.000002033	0.000060065	0.002206497	0.00049444
2024	Off-Road- Diesel B5	Canada	L	0.0025465	0.000000073	0.000000227	0.000002033	0.000060065	0.002608572	0.00012361

This guidance document specifies that organizations should use BC-specific emission factors where the information is available but may use standardized emission factors from national or international data sources where BC specific information is not available. This project will provide Metro Vancouver with a technical and strategic foundation to report the reduced emissions from using HDRD.

Project description

The project will conduct a technical analysis of HDRD reporting methodology. Key objectives include:

- A literature review and jurisdictional scan of relevant emissions factors under different reporting frameworks for HDRD.
- Stakeholder interviews with regional organizations to understand current reporting frameworks for HDRD use in operations.
- A comparative analysis of carbon intensity values and lifecycle assessment methodologies (e.g., GREET, GHGenius, ICPP).
- An assessment of current HDRD applications and resulting emissions using both the most applicable emission factor and lifecycle values.

The outcome will be a set of actionable recommendations to support accurate and consistent HDRD emission reporting and inform future fuel transition strategies.

Project scope

Project Scope

1. Literature Review and Jurisdictional Scan of relevant emissions factors and emissions reporting frameworks for HDRD
   - Document emission factors for HDRD from literature and 3 to 5 other jurisdictions. Include applications for different vehicles, if available (light duty, heavy duty, off road, etc.).
   - Prepare a summary, including a comparison matrix, of the emissions factors to inform a recommendation of emission factors for Metro Vancouver Operations.
2. Interviews with 3 to 5 organizations in the Lower Mainland.

- Stakeholder Interviews: Engage with 3 to 5 organizations in the Lower Mainland (e.g., BC Ferries, City of Vancouver) to understand how renewable diesel is employed in operations and how emissions are being reported under frameworks such as the Greenhouse Gas Industrial Reporting and Control Act (GGIRCA).
- Compare findings to the results from the literature review, adding results to the comparison matrix to inform a recommendation of emission factor for Metro Vancouver Operations

3. Comparative Analysis of Resulting Emissions
   - Internal Stakeholder Engagement: Interview members of Metro Vancouver's Corporate Climate Action Services group to establish an understanding of current and planned applications of HDRD.
   - Comparative analysis of resulting emissions using the emission factors vs the CI and LCA methodology to help inform Metro Vancouver's future emissions calculation methodology.
4. Time permitting: Carbon Intensity & Lifecycle Analysis
   - Methodology Review: Prepare a high-level comparison of LCA frameworks (e.g., GHGenius, the Government of Canada's Fuel LCA Model) for calculating well-to-wheel emissions of HDRD. The purpose of this step is to outline some of the reasons for carbon intensities to differ across models (e.g. different assumptions for distance, feedstock, land-use change assumptions, etc.)
   - Carbon Intensity Inventory: Compile CI values for HDRD products sold in BC, referencing BC Low Carbon Fuel Standard (LCFS) credit generation data and Federal Clean Fuel Regulation (CFR) compliance pathways. The carbon intensities for the BC LCFS and CFR are publicly available.

Deliverables

- A detailed report containing a summary of the work completed
- A summary for the online public-facing Scholars Project Library.
- A final presentation to the project team and other internal stakeholders
- A final 5-minute (high-level) presentation to Corporate Climate and Energy Management System Steering Committee outlining recommendations for an emissions reporting strategy, including GHG reduction estimates and methodology considerations

Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 14, 2026
- The Scholars is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.
- Ideally, the scholar will be available to attend meetings including a kick-off meeting at the beginning of the project, bi-weekly progress meetings, and during the final presentation in August. These may take place in person or online via Microsoft Teams.

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 with benchmarking methods and tools
☒ Comfortable interacting with strangers to conduct public/in person surveys
☒ Experience or familiarity with lifecycle costing analysis and related methodologies, an asset
☒ Interest in or familiarity with renewable fuels

Applications close **at 11:59 pm Sunday February 1, 2026**
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, 2026. Click here for details and to register.

Below are some links to useful resources to help you with your resume, cover letter and preparing for an interview (there are many more online).

https://students.ubc.ca/career/career-resources/
https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services