

Summer 2021 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 31, 2021.

Research project title:

Market analysis and literature review on Refuse Derived Fuel (RDF) from Residual Waste

Project Description

Overview:

In 2018, the City of Vancouver adopted the Zero Waste 2040 Strategic Plan (ZW2040)¹. This strategic plan calls for more diversion, recycling and reuse strategies to reduce waste disposed to landfill and incinerator. ZW2040 provides for Vancouver to become a zero waste community by 2040. To support Vancouver's zero waste goal, waste reduction and diversion at source must increase, and opportunities for recovery of materials from Residual Waste after collection need to be considered. The latter consideration includes the use of recovered materials as Refuse Derived Fuel (RDF).

Purpose of Project:

The use of RDF as a heat energy source has been demonstrated in varying degrees around the world. The City would like to better understand RDF products currently in use, RDF products customer segmentation, and local market conditions/dynamics associated with the demand for RDF products. The outcome of this project will highlight various options for City staff to determine the appropriate next steps for reaching Vancouver's zero waste goals and the City's future role in Metro Vancouver's future regional solid waste management plan.

Scope of Work:

This project involves the Scholar completing a literature review and conducting market research on potential local demand for RDF, including developing local market survey questions, a contact list and organizing and conducting interviews. The scope will include:

- Relevant products produced from Residual Waste and their material composition
- End-user segments including but not limited to:
 - regional cement industry
 - regional pulp and paper industry
 - other regional or international customer industries
- Local market conditions/dynamics associated with the demand for RDF products including:
 - saturated vs. underserved

¹ <https://council.vancouver.ca/20180516/documents/pspc2a.p>

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- supplier driven or customer driven
- seasonality
- size and growth conditions
- Key buying criteria dynamics including but not limited to:
 - product composition and quality
 - price
 - heating value
 - contamination
- Barriers to entry into the local (Metro Vancouver) and global RDF market
 - literature review to identify barriers to entry to global RDF market
 - identify which global barriers apply to current Metro Vancouver market
 - identify any local barriers which are unique to Metro Vancouver (and not global) based on local contact interviews
- Any highlighted anticipated future RDF market trends in academic and/or business literature:
 - short-term, midterm and long-term
 - regulatory and technological changes

Deliverables:

Key deliverables the scholar will deliver include:

- Local market contact list for interviews (City staff will identify up to 4 contacts and schedule interviews)
- Conducting interviews of local contacts including:
 - Developing a list of questions to ask local contacts
 - Preparing and presenting a PowerPoint presentation which includes a brief summary of the project and the list of questions
 - Preparing notes from the interviews including responses to questions
- First draft of literature review and market assessment report
- Final literature review and market assessment report
- Final report or executive summary for the online Scholars Project Library

Time commitment:

- This project will take 250 hours to complete
- This project must be completed between May 3rd and August 13th, 2020
- The scholar is to complete hours between 9am - 5pm, Monday to Friday, approximately 20 hours per week

Required/preferred skills and background

- Excellent research and technical writing skills
- Demonstrated interest in Solid Waste Management / Alternative Energy / Sustainability
- Familiarity with research methodologies and survey techniques
- Strong presentation and public speaking skills

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- Strong analytical skills
- Ability to work independently
- Demonstrated time management skills
- Deadline oriented
- Project management and organizational skills
- Expertise with Microsoft Word and Microsoft Excel
- Familiarity with qualitative research methodologies and implementation
- Familiarity with quantitative research methodologies and implementation
- Familiarity preparing literature reviews & market assessment studies
- Writing sample required (please provide at time of interview)

Additional information:

Waste Stream Glossary for reference:

“Municipal Solid Waste” or **“MSW”** means refuse that originates from residential, commercial, institutional, demolition, land clearing or construction sources;

“Recyclable Material” means a product or substance no longer usable in its current state that can be diverted or recovered from MSW and used in the processing or manufacture of a new product;

“Residual Waste” means MSW but excludes Source Separated Organics, Source Separated Recyclable Material, and Source Separated Construction and Demolition waste.

“Source Separated Construction and Demolition Waste” or **“C&D”** means refuse that originates from construction or demolition sources, collected separate from other MSW;

“Source Separated Organics” or **“SSO”** means food, food soiled paper, clean wood, paper tissue, paper napkins and towels, yard trimmings or any combination thereof, collected separate from MSW from residential, commercial or institutional sources for the purpose of processing for beneficial use.

“Source Separated Recyclable Material” means Recyclable Material collected separate from MSW from residential, commercial or institutional sources, for the purpose of recycling.

Applications close **midnight Sunday January 31, 2021**

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>