

## UBC Sustainability Scholars Program 2019

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 organizational sustainability goals.

For more information about the Sustainability Scholars Program and to apply to work on this project, please visit the [Student Opportunities](#) page.

Please review the application guide (PDF) before applying.

Applications close **midnight Monday February 25, 2019.**

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**Research project title:** Modeling Public-Private Partnerships for Electric Vehicle Charging Stations

**Research supports the following City of Vancouver policies -**

- Greenest City Action Plan. Specific goal area (s):
  - Climate and Renewables Target 1:** Reduce community-based greenhouse gas emissions by 33% from 2007 levels.
  - Green Economy Target 2:** Double the number of companies that are actively engaged in greening their operations over 2011 levels.
- Healthy City Strategy. Specific goal area (s): \_\_\_\_\_
- Renewable City Action Plan.
- Green Operations
- Other: **Transportation 2040**
  - M 5.1.** Provide charging infrastructure to support electric vehicles

**Outline scope of project and why it is of value to the City of Vancouver and describe how and when the scholar's work will be actionable**

The Greenest City Action Plan, Renewable City Action Plan, and Transportation 2040 all call for increased Electric Vehicle (EV) infrastructure to support the transition of public and private vehicles to electric models. The City has achieved a high rate of implementation of EV Charging Stations (EVCS) on public property and therefore publicly accessible. With new EVCS coming on line at the National Works Yard, more of the City's fleet of heavier duty vehicles will transition to electric; the EVCS at the National Works Yard will also be accessible for public use. It is anticipated that many of the industrial businesses in The Flats will take advantage of the new EVCS for their commercial vehicles. The City of Vancouver's ongoing need to install more EVCS

distributed across the city can potentially be met, in part, by considering installing City-owned EVCS on private commercial property.

The proposed project seeks to develop a business model for installing City-owned EVCS on privately-held commercial property to increase charging options for larger fleets and larger vehicles operated by private sector companies, City vehicles, and the general public.

In 2015, the VEC commissioned a study of commercial fleets located in The Flats and found that many business owners were interested in converting their fleets to lower-emission vehicles. Without suitable infrastructure such as EVCS located in good proximity to the business, the current conversion rate is virtually nil. The City of Vancouver can play an important role in accelerating the transition to EVs in the private sector by installing EVCSs that suit the needs and locations of commercial vehicles. In addition to proximity, the following criteria factor into the business case for converting fleet vehicles to electric: financial model of installation and ongoing charging, projected cost savings, maintenance plan, accessibility of charging infrastructure, space needs for EVCS and charging, security. The GCS project will take into consideration all of these factors, consult with select businesses, combine inputs with City goals, concerns, and financial needs, and develop a feasible business model for public-private partnership for EVCS on private commercial property.

This project is not designed to recommend specific private commercial locations for City-owned EVCS, however several known locations where businesses have expressed interest in EVs will be used as case studies to develop and test the business model. Equitable distribution of EVCS and inclusive access to EVCS will also inform site selection for case study properties.

#### **Deliverables**

- Summary of proposed and/or current business model for the EVCS at National Works Yard including analysis of any data produced to date (usership, etc.)
- Summary of business engagement to identify and prioritize their needs
- 3 to 5 case studies of commercial locations that could host EVCS and associated business models
- Proposed general model for public-private partnerships for EVCS on private commercial property
- A public facing final report (or executive summary) for the UBC Sustainability Initiative website

#### **Time Commitment**

- This project will take **250** hours to complete.
  - This project must be completed between April 29<sup>th</sup> and August 12<sup>th</sup>, 2019
  - The scholar is to complete hours between **9am and 5pm, Monday through Friday**, approximately **15 to 20** hours per week.
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GREENEST CITY / HEALTHY CITY SCHOLARS PROGRAM 2019  
CALL FOR PROPOSALS

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**Skill set/background required/preferred**

- Excellent research and writing skills.
- Demonstrated interest in electric vehicles.
- Strong technical writing skills
- Strong analytical skills
- Ability to work independently
- Demonstrated time management skills
- Deadline oriented
- Project management and organizational skills
- Strong technical and drafting skills
- Demonstrated experience in financial modeling and partnership development
- Familiarity with qualitative research methodologies and implementation
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- Familiarity preparing feasibility studies
- Other: Strong business acumen & entrepreneurial spirit

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Apply here:

<https://sustain.ubc.ca/student-opportunities>

To learn more about the program here:

<https://sustain.ubc.ca/ubc-sustainability-scholars-program>

Read the application guidelines to confirm your eligibility to participate in the program here:

<https://sustain.ubc.ca/student-opportunities>

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca) if you have questions.

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