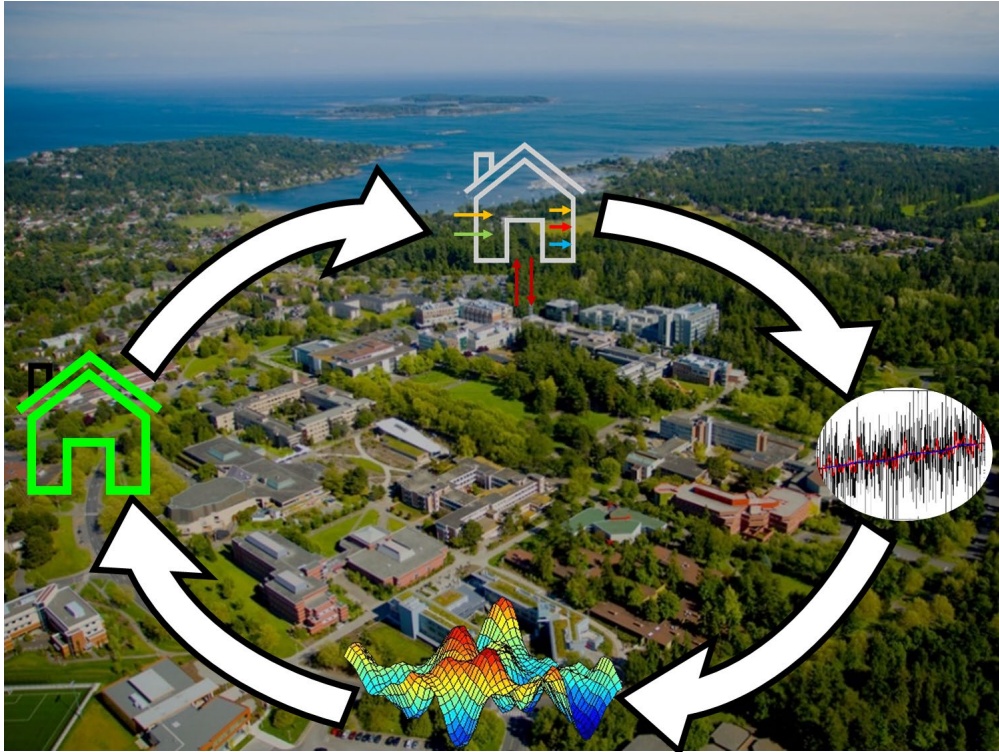


## Two Masters or PhD positions available: Delivering effective climate solutions for municipalities



Municipalities are at the forefront of the fight against climate change, but lack the tools to make effective policy decisions. We will develop simple, flexible software tools for analyzing municipal climate policies that encompass the main sources of carbon emissions (buildings, transport and energy). This will help municipalities identify and prioritise climate solutions that will meet their stringent obligations. The tools will be reusable across other municipalities in the future.

### 1. Archetype-based building stock retrofit analysis and optimization

Building stock data can be combined with archetype modelling to obtain retrofit policies highly targeted to specific building types, evaluated for the building inventory of the city.

Tasks: Identification of building archetypes; Development of building energy models; Calibration to known energy uses; Exploration of retrofit solutions; Integration into climate solutions pathways.

### 2. Urban emissions reduction framework bridging buildings and transportation

There is a need for a framework to allow municipalities to identify and prioritise climate solutions that span the domains of buildings and transportation, to enable the fair comparison of disparate solutions.

Tasks: Development of a municipal-level emissions modelling framework; Integration of building and transportation solutions; Exploration of future scenarios; Integration into climate solutions pathways.

The positions will be supervised by [Dr Ralph Evins](#) in the [Energy in Cities research group](#). The project is funded by the Pacific Institute for Climate Solutions and will be delivered in conjunction with the [City of Victoria](#). The work will be carried out in the stimulating multi-disciplinary environment of the [Institute for Integrated Energy Systems](#) (IESVic) and the new green [Civil Engineering department](#) at the [University of Victoria](#) on Vancouver Island in beautiful British Columbia, Canada.

## How to apply

### General requirements

Experience with at least one of machine learning, building energy simulation and meta-heuristic optimization is highly desirable. A good working knowledge of Python is highly desirable for all positions (for an exceptional candidate an expert level in another programming language could be acceptable). Proficiency in the written and verbal use of English is required.

A start date of September 2020 is preferred, but in these challenging times a later start could be possible. Positions are funded at a level comparable with NSERC scholarships ([Master's](#); [Doctoral](#); [Post-doctoral](#)). Holders of these or similar fellowships are eligible for significant top-up funding.

The Energy in Cities group specifically encourages applications from persons with disabilities, visible minorities, Aboriginal Peoples, people of all sexual orientations and genders, and others who may contribute to the further diversification of the University.

Email [iesvic.admin@uvic.ca](mailto:iesvic.admin@uvic.ca) with subject [Evins PICS + title of position](#), attaching the following:

- a **1 page cover letter** explaining your [fit for the position](#) and describing [programming expertise](#) and previous [research experience](#), and stating your preferred [start date](#).
- a **detailed curriculum vitae**, including grades and English test score if applicable
- names and contact information for at least **two professional or academic references**.

Review of applicants will begin soon, but applications are welcomed until this advert is removed from [here](#).

*If you have previously applied for a position, do not reapply.*

*Only apply for one position - you will be considered for all open positions.*