Research project title
A review of Community Energy & Emissions Planning and GHG target-setting in BC's fastest growing city

Outline scope of project and why it is of value to your organization. Describe how and when the scholar's work will be actionable.

Surrey's Community Energy & Emissions Plan (CEEP), approved in 2013, contains specific targets to reduce GHG emissions by 47% on a per capita basis by 2040 relative to 2007 levels. Surrey's population has since then expanded and the onset of low-carbon policies and operations are expected to impact energy and emissions. More recent GHG data for Surrey indicates that emissions trends are moving in an opposite direction from what was foreseen in the CEEP, with building emissions falling and transportation emissions rising. Further, many cities around the world have now established renewable energy targets and are providing leadership on emissions reductions and low carbon futures.

This project will look at recent GHG emissions trends in Surrey, as well as broader policy progress and trends, and re-evaluate the CEEP assumptions and targets to determine whether the targets are in need of revision. Included in these considerations will be:

- Adoption of the Energy Step Code bylaw and roadmap to Net-Zero Buildings;
- Expansion of Surrey City Energy's district energy system and fuel-switching to biomass, renewable natural gas, or sewer heat recovery;
- Waste diversion from the community attributed to Surrey's new biofuel facility;
- The impact of a forthcoming EV Strategy for the City; and
- Implementation of Light Rail System and its associated reduction in transportation emissions.

Deliverables

- Progress report that explores research from other cities' GHG plans and 100% renewable energy strategies and targets; new CEEI (Community Energy and Emissions Inventory) data trends for Surrey; incentives available at federal and provincial levels, and; critical policy trends and changes such as BC Energy Step Code and federal and provincial legislation (such as low carbon fuels)
- Marginal Abatement Cost (MAC) curves to illustrate low-carbon policies and technologies for Surrey to reach its emissions reduction target
- A final report, containing a summary of recommendations regarding Surrey's GHG reduction targets and the best path to a low carbon future
- Executive Summary for the UBC Sustainability Scholars online project library.

Time Commitment

- This project will take 250 hours to complete.
- This project must be completed between May 1, 2018 and August 10, 2018
- The scholar is to complete hours between (work hours for your department, and days of week), approximately 20 hours per week.

Skill set/background required/preferred

- ✓ Excellent research and writing skills.
- ✓ Familiarity with research methodologies and survey techniques
- ✓ Strong analytical skills

Submit applications here: http://bit.ly/2DC2jpP

- ✓ Ability to work independently
- ✓ Demonstrated time management skills
- ✓ Project management and organizational skills
- ✓ Familiarity with qualitative research methodologies and implementation
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- ✓ Experience developing energy and GHG inventories and marginal abatement cost curves

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