

UBC SUSTAINABILITY SCHOLARS PROGRAM
Summer 2018

Research project title

Health and Safety Aspects of Residential Electric Water Heaters

Goal or Operations Plan objective

Determine any risks related to operational changes to water heaters

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

Electric water heaters provide domestic hot water to a large number of homes and businesses in British Columbia. BC Hydro is interested in investigating the health and safety aspects of various operational strategies and temperature settings on these appliances. Water heaters can fluctuate in temperature, depending on equipment settings, frequency and duration of water draws, temperature of ground water, and power interruptions, amongst other factors. Variations in these factors can impact risks for scalding, pathogen development and occupant comfort. BC Hydro would like to gain a deeper understanding of how these factors can interact and affect each other.

The project will include, but not necessarily be limited to:

- literature review of existing research in this area
- interviews and discussions with other utilities in North America
- interviews and discussions with other scientists and researchers working in this area of investigation
- written reports and in-person presentation of findings to BC Hydro internal stakeholders
- recommendations for additional research, lab testing or experimentation to address ongoing questions

Deliverables

Note that a final deliverable either a full report or, if the report contains confidential information, an executive summary is required by the end of the program (August 10, 2017). The deliverable will be archived in the online Scholars Project Library and made publicly available.

- Provision of results of literature review and relevant articles
- Interim verbal updates on a regular basis
- A final report, containing a summary of completed work with recommendations, complemented by a final presentation to key stakeholders.
- 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 by August 10.

Skill set/background required/preferred

- X Excellent research and writing skills.
- X Strong writing skills
- X Familiarity with research methodologies and survey techniques
- X Strong presentation and public speaking skills
- X Strong analytical skills
- X Ability to work independently
- X Demonstrated time management skills
- X Deadline oriented
- X Project management and organizational skills
- X Familiarity with quantitative research methodologies and implementation
- X Experience with statistical analysis
- X Background in Life Sciences, Biology, Medicine or Health Sciences
- X Experience reading, interpreting and designing lab-based experimental design and reports
- X Familiarity with risk assessment and mitigation

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