Supporting neighbourhood interest in energy-efficient homes

Most buildings that will be consuming energy in future decades have already been constructed. The District of West Vancouver is interested in increasing the energy efficiency of existing homes in order to meet its community-wide conservation goals. Building on utility and advocacy programs, the scholar will support the District in defining a new approach to energy conservation in the community. This work will identify barriers to consumer behaviour and recommend how neighbourhood and social structures can be engaged to increase participation. Lessons learned and strategies identified are applicable to West Vancouver as well as to other communities across British Columbia and Canada.

Goal and Objectives

Reduce energy use in single-family homes Council Priorities: Natural Environment & Climate Action Community Energy & Emissions Plan (CEE Plan): Housing & Land Use strategies

Scope of Work, Organizational Value and Implementation

The District of West Vancouver is committed to community energy conservation and the reduction of related GHG emissions. The pursuit of these objectives is directed by the District's 2016 CEE Plan and is supported by local citizen groups and societies.

Increasing the number of West Vancouver owners that undertake energy efficiency improvements and/or increasing the extent of improvements made is critical for the District to meet its conservation goals. Local governments are unable to compel renovation to improve energy efficiency, and there is limited immediate reduction in community-wide energy use that results from improved new construction standards. West Vancouver is interested in more effectively targeting owners to increase the investment in energy efficiency in the community. While utility rebate programs have an impact, citizen groups demonstrate that uptake may be highly localized, specific not only to the municipality but the neighbourhood or block.

The robust market interest in housing development, Council commitment to the natural environment and climate action, and relatively consistent solar aspect of the urban area together create an opportunity for West Vancouver policy that advances energy-efficient housing. The scholar's work will support this consideration, and will serve as a leading model for other local government energy conservation initiatives in British Columbia and beyond.

The scholar will:

- Review the potential to increase owner uptake of single-family energy efficiency incentives utilizing innovative practices from leading jurisdictions;
- Identify housing characteristics and/or neighbourhood organization that correlate with increased likelihood of investment through renovation;
- Identify barriers and opportunities through a review of best practices, consultation with utility program administrators and advocacy groups, and/or public engagement with local residents;
- Determine appropriate steps, including consideration of local government incentives, that the District can take to increase participation;
- Calculate energy savings;
- Consider the effectiveness of different pathways to meet participation targets and provide a professional recommendation for District budgeting and implementation.

Deliverables

The scholar will complete a final report, executive summary for the UBC Sustainability Scholars online project library, and presentation to key stakeholders that includes:

- Overview of innovative practices;
- Profile of housing characteristics and/or neighbourhood organization;
- Summary of potential renovation targets and contribution to District conservation goals;
- Assessment of an effective implementation aligned with utility rebates;
- Identification of barriers and further opportunities.

Time Commitment

The project requires 250 hours to be completed between April 20, 2018, and August 10, 2018. Office hours are Monday through Friday, 7:45am to 4:30pm. An average of two complete work days per week are required to meet the total time commitment. This project allows flexibility in the distribution of hours to the mutual agreement of the District and scholar.

Skill set

Required:

- Familiarity with research methodologies and survey techniques;
- Community engagement experience and outreach skills;
- Comfortable interacting with public to conduct surveys;
- Demonstrated time management skills;
- Project management and organization skills;
- Ability to work independently;
- Excellent research and writing skills.

Preferred:

- GIS training or experience;
- Familiarity with home renovation.