ORGANIZATION:

BC Housing

CLIENT CONTACT INFO:

NAME:Bill MacKinnon

E-MAIL: bmackinnon@bchousing.org

TELEPHONE: 778-452-6421

BEST TIME TO CALL: Daytime

PROJECT NAME AND BRIEF DESCRIPTION:

Organization Background (mission, vision, community context of work):

BC Housing develops, manages and administers a wide range of subsidized housing options across the province. We partner with public and private housing providers, other levels of government and community agencies to create the best system of housing and supports for those in greatest need.

Project Description:

- **Background** over 40 new buildings targeting LEED Gold Certification have been completed by BC Housing in the past 2-3 years. These projects were required by BC Housing to obtain a minimum of 4 Energy and Atmosphere (EAc3) credits under LEED for New Construction 2.0 , and a maximum 10% overall direct fossil fuel usage as a portion of total energy used. Several of these buildings pursued the LEED Measurement and Verification (M&V) credits and so are being measured against energy targets. Most of the buildings did not pursue M&V and are not being analyzed to ensure that they are performing within expected parameters.
- **Project Expectations** – A minimum expectation would be to compile energy and weather data for the site(s), process the data using available free software such as RETScreen Plus, and confirm if the building or buildings are performing as expected. If not the student would be expected to identify possible causes for excess energy use.
- **Student tasks** –

Research - compile energy and weather data for the site(s), become familiar with building design through as built drawings, operations and maintenance manuals, controls systems, interviews with staff, site visit

Planning – Determine the types of data required, (utility bills, DDC energy use data, trends of particular systems, etc.), prepare for data collection and storage (what software will be used, does everyone know how to use it and have access to it), determine what software the UBC has access to, determine team members strengths abilities and who will be responsible for each aspect of the project , determine if team members have training in the use of energy modeling software, are there free software packages such as RETScreen that will be helpful, are they installed on students computers or UBC computers?

Basic Design – Guided by existing methodology such as the International Performance Measurement and Verification Protocol (IPMVP), create a baseline of energy use in the facilities calibrated for factors such as weather and occupancy, compare performance of existing facilities to the energy use predicted in the model, explain any discrepancies, suggest possible causes and corrective measures.

- **Stakeholders** BC Housing and Non Profit building operators

Other details:

- This is work that would not otherwise be done. There is no particular non profit or BC Housing staff to which this work is assigned, therefore there is no deadline. It could be a snapshot of energy use and an assessment of whether or not a facility is achieving modeled energy usage or an ongoing monitoring and verification project complete with recommendations done over several years by different student teams.
- Bill MacKinnon from BC Housing will supervise student participation and be the main point of contact between students and facility staff