

Community Energy Leadership Program (CELP)

Stories of Success

Capital Regional District:

KINGS BOILER PROJECT

Total Project Cost: \$70,700.46

Total CELP funding support: \$21,780

Energy savings: 299 GJ/year

GHG reductions: 14.88 tonnes Co2-e,

Summary of Project: *Through support of the Province of BC Community Energy Leadership Program (BCCELP), the Capital Region Housing Corporation (CRHC), a wholly owned subsidiary of the Capital Regional District, has replaced two original boilers (1997) providing domestic hot water heating and in-floor space heating at 1070 Kings Road with 399,000 BTU hi-efficiency condensing gas boilers.*

Partners:

Province of BC - CELP offered percentage financing which allowed this project to be completed with hi-efficiency equipment rather than an equivalent replacement.

Fortis BC – provided rebates through two programs, tied to the equipment choices that were made. Making the energy efficient upgrades more affordable.

Contractors:

Mac's Heating Ltd: This qualified Victoria-based contractor provided multiple options to achieve the energy efficiencies that we sought in this project. As the successful bidders they executed the contract and installed equipment to full function within two months of the notice to proceed.

Background: 1070 Kings Road is a 35 unit multiunit residential building offering a mix of subsidized/low end of market family housing, with an apartment/townhouse mix. On full occupancy the building houses approx. 85 people within a vibrant, well established residential neighbourhood. The current energy options for this community are natural gas & hydro. The boiler system showed signs of failure in July 2014. The capital expense project is part of CRHC's board approved 5 year capital replacement work. Replacement estimates

were received which contained an energy efficient option. We set a goal for 2015 to work with energy grants and funders to see if the higher efficiency option could be achieved, as the cost was beyond our estimated expense.



Exterior of Kings Place – 1070 Kings Road

“The CRHC/CRD is committed to choosing energy efficient options for capital improvements that include savings for our tenants whose resources are limited and align with our organization’s continued commitment to reducing greenhouse gas emissions.”

The CRHC staff completed the CELP funding proposal and submitted it for the July 2015 review. The CRD Board signed a resolution for the project & grant request. Housing staff developed, administrated & ran the Request for Proposal through the CRD website. The anticipated costs were expected to be over the

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departments signing authority therefore the CRHC Board of Directors selected the preferred proposal and contractor for the project. The contractor submitted paperwork to Fortis BC for grant rebates on behalf of the CRHC.

Innovation:

By working with the Community Energy Leadership Program, CRHC was able to replace an end of life system with a higher efficiency option than would have otherwise been possible. The use of high efficiency equipment reduces operating costs for the owner & tenants within this low income complex, creating better housing affordability within the Capital Region. The project also served as a 'demonstration case' for the CRD, which is pursuing energy efficiency retrofits in order to meet Climate Action Charter commitments and reduce operational GHG emissions by 33%.

Outcomes: This project will result in an estimated annual gas savings of 299 gigajoules and annual GHG savings of 14.88 tonnes Co2-e, annually per year, over the lifetime of the boilers. The hi-efficiency boilers have an anticipated 20% efficiency gain over the original system. These savings will help the CRD meet climate action charter commitments and reduce GHG emissions within CRHC- owned facilities. Natural gas savings were calculated by reviewing historical consumption levels for the facility (provided by Fortis BC), and comparing the boiler efficiencies of the old, and new systems. GHG savings were calculated with the GHG savings calculator provided by CELP, by providing the provincial GHG emissions factor for natural gas to the anticipated natural gas savings. This project provided an estimated 180 hours of employment for the Victoria-based Contractor (Mac's Heating), a two year warranty servicing contract and annually servicing work for the life expectancy of the system. The improved efficiency in the system will create a more comfortable living

environment for the tenants that live at this building.

Project Reflections: Our project was fairly straightforward & very successful. If done again, we could have gained some benefit and efficiencies by updating our 2014 quote prior to starting the CELP funding request. (Maximum amount of funding is set at approval by the Ministry CELP designates). The 2015 tender came in higher than expected due a drop in Canadian dollar when dealing with equipment from American manufacturers. This opened the potential to not benefit from the whole 33% funding offer. Additionally, the timing of the project could have been improved if we had plotted our pre-set dates for approval, at each stage, which would have resulted in some time efficiency and prevented delays at various stages. i.e. the CELP approval came at the end of July, the RFP closed at end of August however our Board did not meet again until end of September. This meant the project began in cooler weather conditions and could have added difficulties to the project in terms of tenant management and heat interruptions.

Hi-efficiency boilers



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