

Partners for Climate Protection

Greenhouse Gas Reduction Initiative of the Month

Kamloops Boiler Upgrades



Municipal Profile

Population: 85,678

PCP Members since 1996

Background

In 2009, the City of Kamloops, B.C. adopted its *Sustainable Kamloops Plan (SKP)* to deal with a number of environmental, financial and social issues. Energy is a key part of the plan, and developing strategies to reduce energy demand in Kamloops is critical to community sustainability. In addition, as a signatory to the B.C. Climate Action Charter, the City must become carbon-neutral in its municipal operations by the end of 2012. Background research into the SKP, which included developing corporate- and community-energy and GHG-emission inventories, showed that Kamloops spent approximately \$6.3 million each year on energy for its buildings, fleet vehicles and equipment, and other infrastructure.

Implementation and Approach

As part of the energy component of the SKP, the City of Kamloops had identified heating-system upgrades as essential in making Kamloops a leading-edge municipality in environmental practices. Replacement of several inefficient boilers with high-efficiency models at a number of City-owned facilities began in 2009, and the work was completed in 2010.

Reducing energy and operations costs was high on the list of motivations for the project. Tony Carlucci, the City's Arena Operations Supervisor, notes however that, "Most of the equipment was also coming to the end of its useful life, so we needed to upgrade the boilers as part of our maintenance."

In all, eight boilers were replaced at five facilities: the Canada Games Aquatic Centre, Interior Savings Centre (pictured at right—photo courtesy of the City of Kamloops); the Westsyde Pool; the Old Courthouse Cultural Centre; and the Memorial Arena.



Replacing the boilers, says Carlucci, was relatively straightforward: the City put out tenders for each facility, and the work was completed without any major obstacles or challenges. The Old Courthouse Cultural Centre, a heritage building constructed in 1911, could have posed a challenge due to its age, but this turned out not to be the case. "We were able to use the existing chimney to house the vent required for the new boilers, and also managed to retain the radiant heaters throughout the facility," says Carlucci.

The new boilers have an estimated lifespan of 15 years. The cost to replace all of the boilers totalled \$500,000, and the City received the bulk of its financing from federal and provincial stimulus funding, as well as rebates of about \$42,000 through FortisBC's Efficient Boiler Program. The remaining funds came from the City's capital budget.

Results

As a result of the boiler upgrades, the City has estimated that it will save approximately \$120,000 in natural gas costs each year, and reduce GHG emissions by about 444 tonnes. The greatest savings come from the Canada Games Aquatic Centre—the largest of the facilities—which stands to save about \$57,000 a year in natural-gas savings and reduce GHG emissions by some 230 tonnes.

Lessons Learned

All of the boiler upgrades were completed on time and on budget. "Everything went relatively smoothly, and I wouldn't do anything differently," says Carlucci. His advice to other communities is that, "they should consider high-efficiency boilers wherever possible. The extra costs are worth it!"

Future Directions

The City of Kamloops continues to look for ways to reduce energy and make its municipal facilities more efficient. "We are currently looking at upgrading the lighting in all of our arenas," says Carlucci. The City also uses about 6,000 litres of cleaning chemicals per year, and has begun to replace these chemicals with alternative products. "We are using ozonated water-cleaning technology to replace many of the chemicals we use, such as bleach and other cleaning products, in our recreational facilities," he says. The technology infuses ozone into tap water, creating liquefied ozone. The liquefied ozone rapidly oxidizes any bacteria with which it comes into contact, and safely converts it back to oxygen.



Pictured at right, the Canada Games Aquatic Centre. Photo courtesy of the City of Kamloops.

Further Information

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Learn more about the *Sustainable Kamloops Plan* at:
<http://www.city.kamloops.bc.ca/sustainable/index.shtml>

The Partners for Climate Protection (PCP) program is a network of Canadian municipal governments that have committed to reducing greenhouse gases and acting on climate change. PCP is the Canadian component of ICLEI's Cities for Climate Protection (CCP) network, which involves more than 1,200 communities worldwide. PCP is a partnership between the Federation of Canadian Municipalities (FCM) and ICLEI—Local Governments for Sustainability. PCP receives financial support from FCM's Green Municipal Fund.



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