

Partners for Climate Protection

Greenhouse Gas Reduction Initiative of the Month

Banff's Municipal Sustainable Building Policy



Municipal Profiles

Population: 8,244

PCP Member since: 1999

Background

Banff's Municipal Sustainable Building Policy requires all new municipal buildings with an area 500 m² or greater to meet or exceed the LEED (Leadership in Energy and Environmental Design) Silver Level certification. Renovations, new buildings smaller than 500 m², or other projects in which the LEED standard may not apply, must also be designed and built to reflect triple-bottom-line principles.

An earlier GHG Reduction Initiative of the Month ([December 2011](#)) showed how Banff's building policy had been applied to a new transit storage facility. This article reviews the policy in more depth, and shows how it has been applied to new projects.

Implementation and Approach

In 2007, Banff's Town Council approved a policy requiring that all new municipal buildings meet or exceed LEED (Leadership in Energy and Environmental Design) Silver Level certification. Staff argued that, since high-performance buildings generally use less energy and other resources than traditional buildings, such a policy would not only benefit the municipality's future bottom line in terms of reduced operating expenses over the long term, but would also show leadership to local builders, architects and the community. LEED is also the standard for Parks Canada facilities, the Canadian Rockies Public School Board, the Banff Centre, and other institutions in Banff.

Banff's municipal building portfolio is relatively small—about 15 buildings—but Chad Townsend, Banff's Environmental Coordinator, says that as a town within a national park, Banff needed to be considering these kinds of policies. "We host more than three million visitors each year, so we have a unique opportunity to inspire others beyond our own community."

Municipal departments, including engineering, planning, environment and communications, must consider the policy in all new capital projects. "They have to keep it in mind, even though it might be easier in some instances to use less-efficient products," says Townsend. He also notes that residential builders in the community are now required to install Energy Star™ windows and doors and low-flow water fixtures in all new developments. "We're walking the walk, and require it from others."

Since its adoption, the policy has been applied to a transit storage facility, a public washroom renovation (and another being designed), and The Fenlands recreation centre, which received \$4.4 million in loans and grants from FCM's Green Municipal Fund and attained LEED Silver Level Certification.

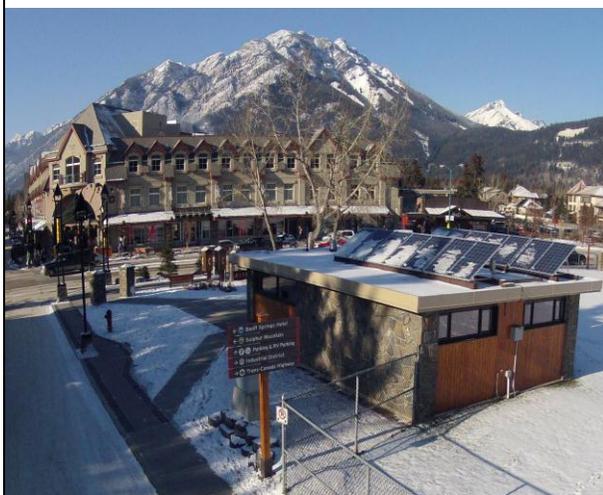
The Fenlands is pictured at right. Photo courtesy of the Town of Banff.



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The Fenlands includes such environmental features as low-flow water fixtures, a chilling system that reuses waste heat, and natural lighting in 90% of the building. "The Fenlands is a source of pride for our residents, and it also showcases our mountain setting," says Townsend. "The curlers have a particularly nice view!"

Renovations to a central public washroom on Wolf Street, although a small building, included the installation of waterless urinals, eco-friendly flooring and low-flow fixtures. The washroom's power consumption is offset by a grid-tied solar array on the roof.

Pictured at left: the Wolf Street public washroom with its rooftop solar panels. Photo courtesy of the Town of Banff.

Results

Townsend cannot report in detail just how much the policy has affected GHG reductions, but says that having more-efficient buildings will naturally lead to lower energy use and, therefore, lower emissions. "The best way to do that would be to compare it against the former building; but the buildings that were replaced [The Fenlands, the Wolf Street public washroom, and the transit storage facility] were different in scale, so it's difficult to measure."

That being said, in the case of Banff's transit storage facility, annual GHG emission reductions from electricity will be about one tonne, and reductions from natural gas use will be about 17 tonnes. Construction of The Fenlands also achieved a waste-diversion rate of more than 90% by reusing building materials and recycling. The building is expected to exceed the energy-performance specifications of the Model National Energy Code for Buildings by 42.5% and save about \$100,000 per year in operating costs. Townsend cautions, however, that since the Code only represents the minimum performance requirements, the final energy and cost savings might change.

Lessons Learned

One of the benefits to having the policy, Townsend says, is that it forces Banff to continually improve its practices. "The policy gets us thinking about a number of different considerations early in the design process, and pushes us in the right direction."

Townsend encourages other municipalities to adopt a similar policy and "stick to it. There's always a temptation not to do it. The devil is in the details—in the actual implementation—and for each new project there will be different lessons learned and cost considerations," he says.

Future Directions

Banff has plans to construct a new pedestrian bridge and utility crossing in 2012. Although this project will not be eligible for LEED certification, it will fall under the Municipal Sustainable Building Policy, so many of the same principles—such as the recyclability of materials, using local sources, etc.—will be applied.

In future, he says that Banff hopes to install a monitor inside the Wolf Street washroom to show people how much electricity is generated by the solar panels.

Further Information

Chad Townsend, Environmental Coordinator
Town of Banff, AB
403-762-1110
chad.townsend@banff.ca

Download a copy of Banff's Municipal Sustainable Building Policy at: <http://www.banff.ca/locals-residents/environment/sustainable-building.htm?PageMode=Print>.

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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