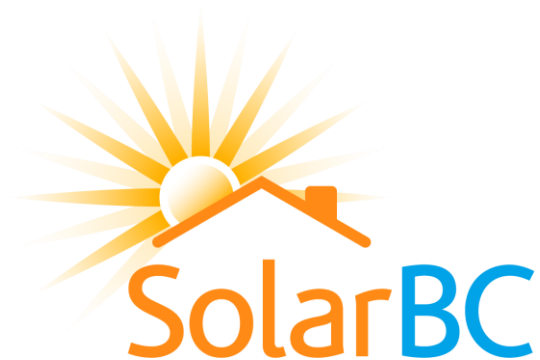




Tap into the Sun



West Coast Jazz

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Clarification of 2006 BC Building Code Regulations pertaining to Backflow Prevention for Solar Domestic Hot Water Systems

July 28, 2009

- Solar Domestic Hot Water Systems (SDHWS) required to conform to CSA-F379 and installed in conformance with CSA-F383. BC Building Code (BCBC) does not require certification with these standards.
- CSA F379 allows use of both single and double-wall heat exchangers.
- Systems with single-wall heat exchanger (drainback and closed-loop) require stainless steel heat exchanger and non-toxic heat-transfer fluid or potable water in heat-transfer loop at time of installation.
- **Backflow preventer in accordance with CSA-B64.3 (Dual-Check valve with Atmospheric Port, DCAP) required at inlet to solar hot water system.**



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- Other safeguards such as a pressure gauge, pressure relief valve and maximum working pressure as specified in CSA-F379 are required.

BC Building Code Requirements: The current BCBC does not require any additional safeguards for SDHWS beyond those required by the CSA standards, unless a make-up water connection is made directly to the solar heat transfer loop.

If a direct connection is made to provide make-up water to a solar heat transfer loop that contains anything other than potable water, this direct connection should be protected in accordance with Section 7.6.2 of the BCBC.

BC Requirements

- Some communities allow Systems with DWHX or systems with SWHX and testable RPs with annual testing
- Other communities allow both DW and SW heat exchangers without testable RPS

BC Requirements

City of Kelowna

- Allow only systems with DWHXs and leak detection and a dual check valve with atm port
- DWHX is a requirement of the water purveyors
- The BCBC and the Code are far apart regarding backflow prevention



Certification Requirements

If ecoEnergy grants require certified systems, we need:

- More systems with DWHXs certified quickly or in the certification queue so that all communities have a choice of systems
- Issues with small companies having the upfront \$s for certification

Solar Ready

- City of Vancouver has mandated Solar Ready
- Province is moving towards including Solar Ready in the Green Building Code