



Proposed BC Green Building Code Comments 2008

1. There is much technology (pumps, lights, appliances, solar evacuated tubes, solar hot water combination systems, etc, etc, etc) that are way more energy efficient but are not allowed because they are either not CSA approved or have no CSA policy governing them yet. Many of these have extensive testing and approvals from other countries but are not legal in Canada. The code needs to recognize CSA equivalencies from other countries, and allow these while it comes up to speed with it's very slow approval process.

Technologies change quick... we need allowances in the code for these.

2. Toilets...Composting toilets need to be allowed without having to temporarily install a flush toilet to get an occupancy permit...especially for new construction where no public sewer is available. It is a huge environmental and financial cost to put in a septic system. If land owners wish to recycle this resource it should be encouraged! If the home owner has trouble selling the home in the future or has a reduced property value that is the home owners issue... NOT the building code. A possible solution would be to have a notation on title that the house is not sewered, and has no toilet. If we had to do it again we would ask to do it this way. Septic systems need (under the new regulation) to be inspected on a regular basis... why not require regular inspections for composting toilets too?

3. The building code has an obligation to protect current and future owners of the building/home. For the building code to achieve this it needs to make a judgment call on what the future will be regarding available resources such as water, electricity, and fossil fuels. It could be argued that the building code is NOT doing what it is legally meant to do.

4. Water efficiency: many items...

There needs to be an allowance for smaller water pipes (into and out of a fixture). With smaller water feeds, lower fixture units would allow smaller exit drains... kind of like hardwiring water efficiency.

There needs to be simple and reasonable policy for rain water harvesting. We have not had issue with this, as we are to have our rainwater tested to ensure its potability, and with this we show the inspector. Perhaps a trained individual for inspecting water catchment systems on a regular basis.

There needs to be reasonable policy for re-using grey water... Look to Arizona, New Mexico, and Texas for examples of policy and laws. Perhaps another trained inspector to provide guidance, approve systems, and monitor their function.

5. Change wording in the code regarding 'waste water' to 'resource water'. Our homes should not generate waste. Change the terminology to reflect the reality of water and compostable solids. Alter the plumbing to allow future owners to divert greywater from sewers/septic - meaning that rather than have all drains into the black water inside the building... have them connect outside the building, with pre-installed diverter valve. This allows easy greywater upgrade in the future.



6. All new homes/renovations should incorporate passive solar features to the best of the site potential. (Orientation, windows, roof overhang, natural lighting, natural chimneys). We need more professionals trained in this area. This will do more for energy efficiency over the long term than simply increasing the R-value and air leak requirements.

7. Green building is not always about maximizing energy efficiency. Simply increasing the R-value requirements and reducing air leaks is VERY short sighted. Green building science needs to include U-values as well. ([http://en.wikipedia.org/wiki/R-value_\(insulation\)](http://en.wikipedia.org/wiki/R-value_(insulation))) U-values are used extensively in Germany. U-values take into account the thermal mass of materials (currently used for window ratings) and is very important when trying to maximize solar gain in passive solar designs or heating systems that heat a mass rather than the few air molecules floating around in the home.

8. Green building needs to account not only for the energy used in the operation of the completed home but also the embodied energy in all the materials used in the initial construction. Pushing the code to continually increase the efficiency of a building achieves three undesirable effects: increased cost of homes, increased embodied energy to manufacture the home, and increased chemically laden products in a non breathable home.

9. As far as 'wobble room' goes, the code needs to have a lot more places where solutions that meet the 'intent of the code' are allowed. Currently, there is some allowance in the in the code but most often the building inspectors are not knowledgeable enough on a given 'alternative solution' and therefore require an engineers stamp. This most often means that only expensive, complex, highly engineered designs and products are used. It is often the manufacturer of this technology that pushes the code to accept it's product. This manufacturer then stands to profit from this solution. This is all good, BUT the system discriminates against 'simple solutions' where there is no money to be made.

This whole thing then comes back to who will assume liability IF the 'alternative solution' fails.

Possible solutions... Home owner signs something with the municipality taking responsibility. Building inspectors are given more training and greater flexibility. A "inspector ombudsman" or inspector resource person is available to the public to aid in providing guidance in writing an "alternative solution".

10. The code needs a new section to recognize home construction methods that have been used for centuries. For example constructing climate appropriate homes with locally available materials should be encouraged through the building code; in our climate, a small cob home with passive solar design features will be far more efficient and affordable than a large monster home with lots of insulation, heat exchangers, and geo thermal. Need to have a new way to calculate not just the energy efficiency of the home, but the ecological footprint of the home over it's expected life and death (recycling of the components.) A truly 'Green' home is also affordable!

Some of our simple solutions used at Eco-Sense include: Passive solar design, thermal mass, DC LED lighting, rainwater harvesting, homemade composting toilet (no CSA stamp), reduced water flow at plumbing fixtures, grey water re-use with a very low tech worm biofilter, simple DC computer fans (in composting toilets, in range hoods, in mechanical room for drying cloths and to providing enough air exchange). We are not concerned about recovering the heat lost from the fans because very little of our heat energy is stored in the air. We also will open and close our windows all by ourselves.



Other simple ideas include having new homes pre-plumbed for solar thermal collectors, pre-plumbed for grey water re-use, and specialized inspectors on sustainable technologies (as a resource for inspectors).

Also a general comment: There are more and more rules to become more efficient but nothing about using less and building smaller. The Laws of More.

And finally, think about all the new local jobs created and paid for by the environmental savings, infrastructure savings, disaster relief savings, sewage savings, ground water savings, affordable housing savings, etc, etc, etc...

We hope this makes some sense and is useful in some capacity.

Ann and Gord