

Green building investments bring long term benefits

By Julie Raefield-Gobbo, Hood River News
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Have an older home with cold drafts and costly heating bills? What about a newer home that wasn't designed with energy savings in mind? Or maybe you are starting fresh with a new construction that plans for energy-efficiency and sustainable building practices from the start.

Tom Reid and Steven Todorov of Green Home Construction in Hood River work with homeowners from every situation who are turning their attention to long-term sustainability and energy cost reduction.

"Sustainability," defines Reid, "means meeting the needs of today without compromising the ability of future generations to meet their own needs." That goal guides Reid and Todorov in their building principles.

In practice, that means using available green technologies and materials in every project, whether that is a new straw-bale construction or weatherization of previously built homes.

Reid and Todorov propose that green and efficient weatherization technologies can be used in remodeling or new construction projects to meet long-term return-on-investment strategies for homeowners.

"Like the Department of Energy, we look at home construction or remodeling as people entering a 30-year energy contract," said Reid, who is the primary partner working on weatherization projects.

That is the reason behind GHC's focus on all aspects of energy use and management within a home — particularly because of projected cost increases in all energy supplies.

Efficient building technologies at GHC include the use of passive solar designs, super insulation, duct sealing, air leak detection and remediation, advanced framing techniques, recycled building materials, rainwater collection systems, super-insulated

windows, energy-efficient lighting, Forest Stewardship Council-certified lumber and geothermal heating and cooling systems.

With greater energy efficiencies, the most direct benefit is achieved from reduced energy costs over the life of the home. Sustainable and recycled materials have resource conservation benefits.

With energy prices rising and supplies becoming more precious, using less to heat and cool interior spaces makes real financial sense. Add to that the homeowner's need for comfort, and two of the most important planning issues become the focus for any building or remodeling project.

Todorov, who oversees most new home construction for GHC, says, "We use every possible technology to ensure the right balance between air-sealing a home and adequate ventilation."

Controlling those two factors creates an effective "thermal envelope" for any home, ensuring the most efficient use of energy and prevention of potential problems such as mold or poor indoor air quality.

With building science now much further advanced than even 10 years ago, contractors have many more tools at their disposal to build or remodel with the house "system-as-a-whole" in mind.

Green Home Construction, like many construction firms, uses an arsenal of electronic and computer-based technologies to improve home systems and to radically improve thermal envelope efficiencies.

Sounding a bit like a Star Wars weapons list, GHC employs duct blasters, blower doors, boroscopes, combustion analyzers and thermal image cameras to detect air leakage and poor pre-existing construction areas, where energy is being wasted or hazardous conditions may exist.

Once detected, GHC then provides homeowners with a prioritized list of remedies with a cost-benefit analysis for their budget consideration.

Often the most effective weatherization investments are those targeting attic or wall insulation, HVAC duct sealing and air-leak sealing wherever it occurs.

Luckily there is some help out there for homeowners to undertake energy-saving interventions.

“We are the Energy Star verifier for new construction in the gorge and so are really familiar with incentive programs. We spend a lot of our time working to access the many energy incentive programs that are available through utility providers, sometimes making energy upgrades very affordable,” said Reid.

“We also conduct energy modeling for our clients, which will tell them very quickly how fast a construction project will be paid back through energy savings,” Todorov said.

When providing a comparison of the terms green versus sustainable, Reid notes that “green” generally refers to a product or practice that requires fewer resources and has fewer negative impacts on the environment than its conventional counterpart.

“Sustainable,” says Reid, “is a higher standard than green in that it refers to a product that is forever renewable and has no harmful impacts on the environment, the people that provide it or manufacture it.”

GHC, like many savvy builders and contractors, is adjusting its business goals toward the longer-range benefits of green and sustainable building practices.



Dana Scheffler, Green Home Construction weatherization technician, conducts energy audits and indoor air quality assessments with the help of computer read-out mechanical technology. Once leaks are located, remedies may include duct sealing and insulation. When tightened up and properly ventilated, an effective thermal envelope of a home can reduce energy waste considerably and increase owner comfort within the home.