



ALEX NEWMAN

## Tracy Hanes:

WRITING GREEN, LIVING GREEN



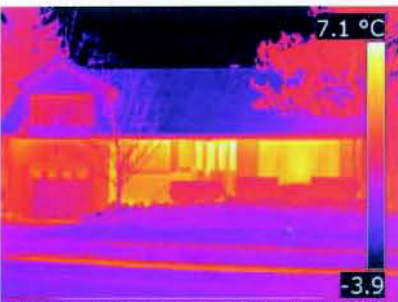
TRACY HANES, JOURNALIST

Journalist Tracy Hanes, who writes for major dailies as well as this magazine, knows her way around green building and sustainable practices. But when sustainable building expert John Godden ([www.clearsphere.ca](http://www.clearsphere.ca)) asked her if she'd like to be a "green guinea pig" and undergo a retrofit on her own 1950s side split, she initially balked. "Yes, the air conditioning unit was 30 years old," Hanes says. "But

the furnace was pretty new, and so were high-end low-e argon windows. And naturally I didn't want to spend a huge amount of money."

Two facts influenced her decision to go for it - that relatively new furnace was only mid-efficiency and the heat distribution in the home was terrible.

The two rooms over the garage - including the home office where she writes about building, development, and land use - were like an icebox in winter and an inferno in summer.



INFRARED THERMOGRAPHY SHOT SHOWING LEAKS

"I couldn't work up there half the year," Hanes says.

Given Hanes' familiarity with building, she knew that installing a more efficient heating and cooling system didn't make any sense on its own without improving the building envelope.

Hanes's partner, who works with infrared thermography in his day job, used his work camera to show them where the leaks were. But they also had an energy audit, complete with blower door test, done by green building consultant/certified energy auditor Peter Reynolds. The results were sobering - their home got an overall EnerGuide rating of 63 with an air leakage rate of 8.53.

Reynolds suggested sealing leaks around electrical boxes, window frames, plumbing and baseboards. But the house still needed more. So with Godden's help, Hanes's partner demolished the garage ceiling, removing the old insulation which had bunched up in spots and was nonexistent in others. They sprayed Icynene foam, which both insulates and seals air leaks. They insulated the floors in the two

bedrooms from below, and then re-drywalled the garage ceiling. The attic, accessible from the rooms above the garage, was beefed up with Roxul laid down over the existing batting. Those upper rooms are now R33.

Once the envelope was taken care of, they replaced the heating and cooling systems with a combination system. A Lifebreath Clean Air furnace uses hot water as the heat source to warm the air before circulating it. This furnace combines space heating, ventilation and air conditioning - a 16 SEER (seasonal energy efficient rating). Heating the hot water in Hanes's home is a 98.4 efficiency FlowMax 120 condensing hot water heater. And with an extra storage tank added to the FlowMax, the system was able to provide radiant heat flooring as well.

Although Hanes sees these latest components regularly in the LEED construction she writes about, they hadn't at that point - a year and a half ago - made it on the government's EcoEnergy grants list so she was unable to pursue funds.

No matter - it's been worthwhile for the long term savings. Their gas consumption is down by 40% - and that measured against a mild winter - and their average monthly heat and hydro bill is less than \$200/month, even with recent rate increases which will only continue to climb. What's more, this was exactly the pre-retrofit savings predicted by Godden and Reynolds.

Given what was being done to the house, Hanes expected to save money. What she didn't expect was the improvement in comfort and air quality. With even heat throughout her home, she can work from her home office year round.

And the air quality is so improved that allergies no longer plague her. Even her mother, a fellow allergy sufferer, noticed the difference when she visited for a few days. "She told me she had the best sleep in a very long time because the air quality was so good," Hanes says.

Although Hanes is familiar with the enticing array of available designer products, she'd rather put her money into comfort. "We still have laminate counters and old hardwood, but the house is such a pleasure to be in we don't care and we know we made good decisions."



THE HANES GARAGE, BEFORE AND AFTER