

# **Money Talks, Standards Rock**

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National regulations are needed to get our homes to the highest levels of efficiency.

### **Paul Parker, Mary Jane Patterson, Ian H. Rowlands and Daniel Scott**

The average Canadian household could cut its greenhouse gas emissions by 2.5 tonnes per year. More may now choose to do so. Under an incentive program announced by the federal government in October 2003, an increase in the energy efficiency of your house could earn you around \$620 for your contribution to the climate change cause.

But while the money will make it easier for homeowners to get going on energy- and cost-saving improvements, there's not much chance that Canada will achieve its Kyoto targets if we continue to rely solely upon voluntary action.

A similar voluntary program called the Canadian Home Insulation Program (CHIP) operated in the 1970s and 80s to subsidize expenditures on energy efficiency retrofits. This new program is performance-based. The incentive is based on the measured improvement in a home's energy efficiency and not on the amount spent by the homeowner.

The standard tool for measurement is the federal government's EnerGuide for Houses (EGH) rating program that assigns a value from 0 to 100 for each house. A score of 100 is for a self-sufficient house that requires no net commercial energy. An 80 means that the house equals the energy performance of a house built to the R-2000 standard – a standard developed in the 1980s to encourage the construction of higher efficiency homes, but not yet required by any provincial building code.

The federal Office of Energy Efficiency has contracted a wide range of EGH providers across Canada. In some provinces, private firms conduct the audits, while in others environmental NGOs have been very active.

The Green Communities Association, for example, has a network of community organizations across Ontario and recently expanded nationally to Nova Scotia and BC. Local organizations hire staff to provide assessments and advise homeowners on actions that can be taken to improve energy efficiency and to qualify for the federal incentive. Homeowners are then given 18 months to undertake the work and have a second EGH measurement to show how much their home has improved.

The potential for improvement in residential energy efficiency is substantial. Older homes can often achieve savings equal to the energy needs of an efficient new home.

But the current rate of 10-15,000 EGH evaluations completed across Canada each year represents just 0.1 percent of Canada's 12 million units of housing. The federal government's target is to have 20 percent of all households taking action by 2012.

It is expected that more homeowners will respond to the financial incentives than participated in audits that simply provided information. The federal program works by rewarding homeowners according to the number of EGH points improved. For weather stripping and air sealing, the cost of materials may be covered by the rewards.

However, the installation of high efficiency windows will typically not change the rating of the home enough to qualify for a grant without additional retrofits on the home. Switching from low to high efficiency furnaces is a better investment since the incentive will reduce the cost by hundreds of dollars.

Overall, the EGH evaluation provides a detailed energy plan for the homeowner but the decision to act remains the individual's choice. And that's a problem.

Voluntary initiatives fail to engage as many people as higher standards do. The R-2000 program set new standards for energy efficiency and improved the ability of the construction industry to build more efficient houses. However, less than one percent of new home buyers request that the standard be met and verified.

Similarly, the Model National Building Code has not been adopted by the provinces to set uniform and higher standards. Indeed Ontario moved in the opposite direction in its 1997 Building Code, which reduced insulation requirements in walls and basements. The result is that homeowners will have higher heating bills each year instead of a modest investment in more insulation at the start.

Experience teaches that standards should be mandatory and systematically strengthened. Many innovations have been made in housing construction and advanced homes built today easily exceed the R-2000 standard. Rather than being the target, R-2000 should be the starting point.

Other options to increase residential energy efficiency and to move residential energy supply from less to more sustainable sources include stronger provincial building codes, larger financial incentives (such as green loans or low interest mortgages), mandatory home energy rating systems (in the Australian Capital Territory houses must be rated before they can be sold so that buyers know the energy performance of the house), renewable portfolio standards, solar/renewable pioneers programs, labels disclosing the source(s) of electricity and systems benefits charges.

Adoption of at least some of these policy alternatives will help us avoid the national failure to achieve Kyoto targets that is likely if we continue to rely solely upon voluntary action.

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### **Follow up**

Find out about the EnerGuide for Houses Grants at the Office of Energy Efficiency:  
<http://oee.nrcan.gc.ca/>

To find an EGH auditor near you, see the Green Communities Association:  
[www.homeperformanceexperts.com/](http://www.homeperformanceexperts.com/)