

For energy efficiency (EE): an energy rating for houses

Executive summary
June 2010

The purpose of this study was to evaluate the relevance and feasibility of establishing a mandatory energy-rating system for houses in Canada. Standardized programs of mandatory information on energy efficiency already exist in Canada for certain products (household appliances, cars, etc.), but it is surprising that an energy rating is not mandatory for houses, since home energy bills generally represent a large amount in consumers' budgets. Moreover, such a rating would encourage homeowners to undertake work in order to improve their homes' energy efficiency – particularly rental property owners, who currently have practically no interest in doing so when tenants are the ones paying for energy costs.

Accordingly, we studied the current practices of home rating systems in Europe and the United States. We also surveyed Canadian voluntary energy-rating initiatives, as well as public and private incentives toward good energy performance for new and existing houses. Following our background research, we surveyed the views of various stakeholders interested in home energy ratings.

The main finding is that the Canadian rating system is used only used for granting seals of quality in new construction or for obtaining subsidies following renovation work. This contrasts with European practices, whereby building energy ratings were declared mandatory by Directive 2002/91/EC and established in early 2009. Some American states, such as Oregon, also took this path recently. So this is a major international trend.

In the light of the best practices surveyed abroad and the comments obtained, we conceived a mandatory energy-rating system for houses that would be applicable in Canada. An environmental component was included in home assessments: one of the primary goals of the rating systems studied is to reduce the polluting emissions of houses in the context of global warming. Suggestions for improvements in home energy-efficiency are also included, and could be updated using a dedicated Web tool. The latter would also enable national or provincial energy-efficiency targets, which we would like to see announced so as to induce homeowners to strive toward them.

A cost-benefit analysis demonstrated that the federal government would obtain many benefits from such a home rating system – such as an improvement in Canada's international environmental image, and an increase in tax revenues and monetary gains following reduced CO₂ emissions; we evaluated those gains at \$2.7 billion when CO₂ emissions can be traded on the carbon exchange market.

For consumers, we found that the net discounted value of the energy rating project is positive in many respects regarding future energy prices. Assuming that energy prices rise at a rate of 1.5% above inflation, implying a price of \$130 per barrel of oil by 2030 – a modest projection, we calculated that the project will yield average discounted earnings of \$380 per house, related to

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lower energy bills and increased comfort. Should energy prices explode to \$330 per barrel of oil by 2030, the average value of discounted earnings will rise to \$2,100 per house. Considering that there are over 10 million housing units in Canada, the relevance of undertaking such a project appears evident to us.

The main recommendations we draw from this study are:

- That the federal government establish a mandatory energy-efficiency rating system for houses;
- That proposals to improve the rating system be issued when the energy-efficiency rating report is produced;
- That the federal government announce targets for reduced polluting emissions for houses;
- That the federal government restart the ecoENERGY Retrofit - Homes renovation assistance program;
- That the federal government ensure that all Canadian households can benefit from spin-offs from the mandatory energy-rating system, by reinvesting part of the plus value to launch a pan-Canadian program to improve the home energy efficiency of modest-income households;

Establishing a mandatory energy-rating system for houses will improve the country's economic and ecological well-being, particularly if the fruits and benefits of the policy are equitably shared among consumers.

French version available on our website.

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