

**Ask Jon Eakes**

# **INSULATING WALLS**

Last Updated: Friday, October 15th, 1999, Created: Thursday, October 14th, 1999

A respectable rewinterizing job need not include the addition of insulation into the walls. They are the most difficult (and expensive) parts of the house to re-insulate, and usually have the poorest financial payback of all re-winterizing tasks because:-- Walls are finished on both sides, and it is rarely worth the cost of destroying one of these finished just to add insulation.-- Walls are full of openings-- door and windows. There is often just not much wall.-- Most Canadian walls already have a RSI - 1.7 (R-10) thermal resistance, in counting the entire wall assembly. Calculating energy savings for a "typical" bungalow illustrates the problem. Raising the bungalow walls from RSI - 1.7 (R-10) to RSI - 2.6 (R-15) (about the equivalent of filling the stud space of a standard house with ordinary fiberglass) would save about \$97 a year in heat losses through the south wall, where there are lots of windows and a door. On the north wall, with perhaps three small windows, we would save \$174 in heating. The south wall would be twice as troublesome and expensive to insulate, and save only half as much energy as the north wall -- taking four times as long to justify the effort. (Please note that I am talking about insulation only. The south wall is a prime candidate for weather-stripping and sealing -- in fact, you must do that; and you should study the condition of the windows and doors themselves.) Cases where insulating the walls is a worthwhile project include:-- When the inside or the outside finish must be changed anyway.-- When there is no insulation in the wall at all, leaving an R factor of less than RSI - 0.5 (R-3).-- When a north wall is just too cold to live with.

**Keywords:**

Walls, Sealing, Doors, Windows, Financial, Heating, Insulation

**Article 837**

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