

Use the right kind of insulation



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strategies. For walls, the choice of insulation depends on how easy it is to get into the wall, and how much space

It's tempting to dial up the thermostat during a cold snap, but that can get expensive over a long winter.

Properly insulating your home can be one of the most cost-effective ways of reducing your home's energy consumption with the added benefits of increased comfort and reduced risk of mold in the house.

Home insulation works much the same way as the padding in a jacket does, slowing the passage of heat from inside to outside.

As with a jacket, some types of insulation are more effective than others. These are measured in "RSI values" (metric) or "R values" (imperial).

These values vary, a material such as closed-cell polyurethane has about twice the RSI value per unit thickness of mineral wool or fibreglass, but can cost more.

The form of the insulation, and how it is installed, matters too: blown-in cellulose is easy to install in attics, fibreglass and mineral wool batts in walls and rigid insulation boards, such as polystyrene, over the outside of exterior walls.

Spray foam insulation is ideal for difficult locations where batts, board and loose fill insulation are difficult to use.

But anyone who has suited up for a cold winter day knows that padding isn't enough: a jacket has to keep the wind and wet out too.

For that reason, properly insulated walls need air barriers such as the interior drywall or a polyethylene layer on the inside or a continuous wrapping of spunbonded polyolefin on the outside.

Air barriers are only effective if they are well-sealed with no gaps, open seams or holes. The walls must also prevent moisture from moving through, so a vapour retarder such as polyethylene sheeting is also necessary.

Different parts of the home require different insulation

there is inside.

Loose fill and insulating foam can be blown into most wood-frame walls through holes drilled from the inside or outside of the house; the main concern is to ensure that it will not settle, leaving gaps for heat to pass through.

It can also be difficult to ensure the insulation completely fills each stud space.

Solid brick walls don't usually allow space for enough insulation to make much difference, so a renovator usually has to create an interior framed cavity inside the house to hold insulation and to run electrical services.

Attics are very cost-effective places to insulate, usually with loose fill insulation (cellulose, fibreglass, mineral wool) or batts.

Because hot air tends to rise, it is especially important here to look for gaps in the air barrier between the house and the attic.

For example, gaps can be found around ceiling light fixtures, wiring and plumbing that run between the house and attic.

Sealing gaps with caulking or spray foam can help reduce heat loss into the attic and will also help prevent moisture problems. However, the new insula-

tion should not block the attic's vents to the soffit.

The most effective basement insulation is done outside. Exterior insulation can help keep moisture away from the foundation and keep the basement walls warmer.

However, this is not an option for many existing homes unless the foundation has to be excavated to deal with moisture or structural problems. For most homes, interior insulation techniques are often used. However, interior insulation — or basement renovations in general — should never be done on a basement that has moisture problems. If the moisture problems are not solved, the newly installed materials can be damaged, deteriorate and contribute to mould problems.

The savings generated by effective insulation in your home will last for decades. It's important to choose the proper insulation system for your needs and to consult a qualified insulation contractor.

To help you understand your insulation options, Canada Mortgage and Housing Corporation (CMHC) has an About Your House fact sheet called Insulating Your House. Download your free copy at www.cmhc.ca.

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Should you consider a home addition?



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It's a common scenario. The children are growing and your former cozy abode is now feeling cramped and overcrowded. You need to increase your living space, but should you move into a larger home or build an addition to your existing one?

Compare costs of moving versus adding. While adding space to your existing home means avoiding uprooting the entire clan, Bridi warns an addition isn't always a cheaper option. Additions can cost \$150,000 to \$200,000. Plus, you may not be able to live in your home during the renovation. "A lot of times, the homeowners need to vacate the home in order for the addition to be

built," says Bridi.

City restrictions. In addition to a building permit, you may also require a zoning variance from your municipality. Your architect will typically take care of this.

Build up or build out? While building out typically involves less disruption to the existing living space and may mean you can live in the home throughout the renovation, building out means you will have to excavate in the yard and install a new foundation.

"Excavation costs can be about 25 percent of the project," says Bridi. Building out also means losing some of your yard and may require a zoning variance from your municipality.

Building up — into the attic, or above the garage, for example — means avoiding high excavation costs, but will still have you dealing with the city since most municipali-

ties limit the allowable height for houses in particular neighbourhoods.

It's also less likely you can live in the home during the renovation as your contractor will need to add a stairwell and tear apart walls and ceilings in the current living space to beef up structural supports and feed electrical, plumbing and heating lines.

Can you match the existing material of the house? In many cases, you won't be able to match the existing home's exterior. To deal with this issue, Bridi says he will typically use a cladding that is totally different to make the addition a visual feature. For example, "if the home is brick and I can't find the same brick, I will use a complementing stone for the addition," he says.

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