THE MICHIGANDER'S HOME INSULATION GUIDE

Retrofitting existing homes with foam insulation

THE BEST INSULATION
RETROFOAM™
FOR EXISTING HOMES.

OF MICHIGAN INC.

Your home is likely your biggest investment and where you spend a majority of your life.

From the color of your walls to the vanity in your bathroom, you take the time and energy to consider important updates to make your home more comfortable. Insulation is one of the most important potential improvements for an existing home, not only for your family's comfort but for long-term energy (heating and cooling) savings.

After insulating **more than 10,000 homes in Michigan over the past 15 years**, we're pretty familiar with the questions people have when considering to re-insulate their home. In the next few pages you will learn:

✔ Signs You Need an Insulation Upgrade
✔ How Insulation Works
✔ Preventing Air Leakage With Foam Insulation
✔ The Types & Application of Foam Insulation
✔ Hiring a Foam Insulation Contractor
✔ The Cost of Foam Insulation
✔ Financing Energy Efficient Home Improvements

Signs You Need an Insulation Upgrade

Many homes in Michigan are poorly insulated or have no insulation at all. With natural gas and electricity costs much lower a few decades ago, some builders discouraged the added expense of insulation. However, as heating and cooling expenses continue to rise, insulation is an investment that will not only pay you back in energy savings but also in added comfort for your family.

Below are warning signs that your home may need to be re-insulated.
Your home is cold in the winter and warm in the summer.
You have high heating and cooling bills.
Your walls feel cold to the touch in the winter.
Your furnace is on all the time in the winter.
Your air conditioner is constantly running in the summer.
Your floors are cold in the winter.
You feel drafts in your home.
Ice dams form on your roof in the winter.

Many things can contribute to the symptoms above, including inefficient HVAC systems, old windows, and poor insulation. Read on to learn about how re-insulating your home can eliminate or greatly reduce these problems. Proper insulation is an investment that will maximize the energy efficiency of your home, and eliminate or reduce your discomfort.

How Insulation Works

When you heat or cool your home insulation should keep the temperature in your house consistent without the furnace or air conditioner running constantly. This keeps energy bills down while maximizing your home's comfort for a steady temperature year-round.

It's important to understand how insulation will impact conduction (heat transfer) and convection (air flow), which both impact your home's comfort and energy efficiency.

Traditional forms of insulation, like fiberglass and cellulose, are resistant to heat that is transferred via conduction. In the winter, this heat transfer is from the inside to the outside, whereas the heat transfer is from outside to the inside in the summer.

However, traditional doesn't mean effective. In fact, traditional insulation poorly protects against convection, or air flow.

Airflow is the movement of air into or out of your home through the gaps and holes in your home's walls, attic, crawl space, rim joist, doors, windows, and electrical outlets.

Air leakage is a major problem in many Michigan homes, contributing to a major source of a home's energy loss as well as the discomforts of drafts, cold floors, and ice dams. Some homes can leak enough air each day to fill two blimps! Imagine the impact on monthly heating and cooling bills.

When it comes to reducing air leakage, foam insulation is the best option since it provides both heat resistance and an air seal.

Preventing Air Leakage with Foam Insulation

The properties of foam insulation allow it to completely fill all the gaps and crevices in your attic, walls, crawl space, and rim joist, greatly reducing energy loss and high energy bills. Fiberglass and cellulose can't fully stop air leakage.

Not only can foam insulation air seal your home, it also boasts the following benefits:

- **Savings up to 50% on heating and cooling bills**
- **Cut down airborne noise through walls by up to 80%**
- **Reduces allergens and pollen from infiltrating through walls**
- **Reduces the chance of critters getting into home**
- **Does not promote mold or mildew growth**
- **Won't breakdown, change its shape, or lose its R-Value over time**

Your home is usually your greatest investment, and foam insulation benefits provide immediate and long-lasting comfort and savings for you and your family.

The Types & Application of Foam Insulation

Foam insulation comes in two different forms: spray and injection foam. Spray foam is sprayed in an open cavity in a liquid state and is generally used in new construction, while injection foam is pumped into an existing cavity which makes it suitable for insulating existing homes.

Injection Foam Insulation

Foam insulation can be injected into an enclosed cavity like an existing wall or a cathedral ceiling. Don't tear down your walls, or wait until you remodel to upgrade your insulation. Foam can usually be injected with existing fiberglass insulation still in place, but if loose cellulose exists in the walls remove as much as possible before insulating with foam.

Most exterior walls can be insulated from the outside, but in rare cases it is necessary to insulate from the inside of the home.

With vinyl or aluminum siding, a piece is removed from the home with a hole drilled in each stud cavity. After the foam is injected the holes are plugged, siding is put back on, and the area is cleaned up to look like it did before.

Wood siding can be a little trickier. If it can be easily removed, the same process above applies. If it can't be removed, holes must be drilled through the siding and plugged when finished.

Brick exteriors can also be insulated from the outside with no bricks removed. Small holes are drilled through the mortar joints between every stud to inject the foam insulation. At completion the holes can be re-mortared and usually matched to the existing mortar.

Spray Foam Insulation

Foam insulation can also be sprayed into open cavities of existing homes such as attics, crawl spaces, rim joists, as well as open studded walls during new construction or remodeling. Spray foam can be either closed cell or open cell.

Open Cell

As open cell foam dries the gas inside the cells escapes through openings in the cell's wall (hence, "open cell"), resulting in foam that is very light and pliable, shifting with your home as it settles. Under hydrostatic pressure water will pass through open cell foam, exposing leaks in your roof, walls, or crawl space so they can be repaired before any extensive damage takes place. Open cell foam can be sprayed in areas like attics, open walls, rim joists, and crawl spaces.

Closed Cell

When closed cell foam dries it traps gas inside its cells, creating a dense and heavy structure. This creates an impermeable surface that is more resistant to weathering and temperature change. Closed cell foam has a higher R-Value per inch than open cell foam, and is also generally more expensive. Because of its durability, the exposed walls of a pole barn is a great application for closed cell foam.

Hiring a Foam Insulation Contractor

Foam insulation is effective in air sealing your home when it is installed properly by trained insulation installers. So, finding and hiring a good foam insulation contractor is very important.

When gathering quotes from foam insulation contractors, ask the following questions to make a smart, informed decision.

What licenses and insurance does the contractor have?
The contractor you hire should be a licensed builder in the State of Michigan and carry general liability insurance. Ask to see proof verifying their license and insurance.

How long has the contractor been in business?
How long has the contractor used foam?
Look for contractors who know what they're doing. A contractor should have experience working on the same type of structure that you have. Ask if they have experience installing foam in homes with features—such as brick walls or cathedral ceilings—that are also present in your home.

What products does the contractor use, and how familiar is the contractor with those products?
Be on the lookout for contractors who pressure you to use insulation that's inappropriate for the task, or has a higher R-Value than you need. A good contractor should offer both injection and spray foam, insulate any problem area in your home, and explain when each type of foam insulation is appropriate.

Did the contractor provide a formal quote?
After inspecting your house, the contractor should provide you with a written, formal quote. Avoid contractors who only tell you what the job will cost, or scribble a number down on the back of a business card.

What incentives and rebates can the contractor recommend?
Consumers Energy, DTE, and a few other energy providers in Michigan offer cash rebates for insulating specific areas in your home, and a good contractor will know what incentives are available to save you money.

Does the contractor specialize in insulation, or foam insulation?
Some contractors are general in nature. Others are very specialized in insulation, or in foam insulation. Contractors who are more focused typically have more experience, understanding and skills in the specific trade.

Does the contractor use subcontractors?
A contractor can either install the insulation themselves, or contract the work out to a third party subcontractor. The best customer experience and workmanship usually comes from contractors who do the work themselves.

Does the contractor offer a warranty?
Humans are prone to error and things can sometimes go wrong. If this happens during your insulation install, or if something doesn't seem right after, having a contractor who is attentive to your concerns and fixes any issues is a great peace of mind to have.

The Cost of Foam Insulation

Foam insulation is typically priced by the square foot of area insulated.
This price is dependent factors such as:
Specific area of the home to be insulated (walls, attic, crawl space, etc)
Square footage of the area to be insulated
Difficulty of the job (type of siding, two-story home, etc)

People often call our office and want a quote over the phone, but since every home is different it makes this nearly impossible. Even if a homeowner knows the measurements, an estimator is almost always needed, They visit the home to visually inspect the project, take measurements, and write up drawings to provide the crew if the homeowner should decide to get the work done.

However, most insulation contractors can provide a quote for a new construction home by viewing the blueprints.

We've insulated certain parts of a home for as little as $1,050 (our minimum charge), and have re-insulated entire homes (the crawl space, walls, and attic) for anywhere between $7,000 and $15,000, depending on the variety of factors listed above.

To give an idea on rough price ranges to insulate certain areas of the home:
- **Existing exterior walls could range anywhere from $2,000 to $8,000**
- **An attic could range from $3,000 to $8,000**
- **Crawl space could range from $1,050 to $3,000**
- **A rim joist could range from $1,050 to $1,500**

Many contractors offer discounts (for seniors, military, etc), and adding in available energy provider rebates and federal tax credits will lower the total investment even more.

Financing for Energy Efficient Home Improvements

The rebates and tax credits mentioned previously can reduce your investment in foam insulation but these usually come after your project is completed.

Most contractors will require a deposit and signed contract to get your job scheduled on the calendar, with the remaining balance due the day of completion.

Some customers prefer to finance their home insulation. Many contact their bank or credit union to inquire about available financing options, and most contractors also offer financing options. RetroFoam offers 12 month special financing options with approved credit. Call for details, 866-900-3626.

All situations are different, but we've seen some customers save enough money on their monthly energy bills to cover their monthly loan payments, which is a huge win for the homeowner!

You Are Now On Your Way to a More Comfortable Home!

Hopefully you've found this guide to home insulation helpful in your quest to maximize your home's comfort and energy savings!

Want to do more research? Review the helpful FAQ page on our website at http://retrofoamofmichigan.com/faq

If you live in Michigan's Lower Peninsula and want a free in-home estimate, please fill out the form on our website or call our office at 866-900-3626