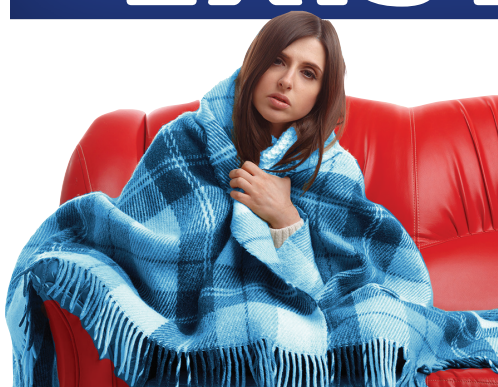


Fall in Love with Your Existing Home Again with the Help of Foam Insulation.

The **ULTIMATE** **FOAM INSULATION** *Buying Guide* **FOR** **EXISTING HOMES**



Signs Your Existing Home Needs an Insulation Upgrade

If your home is uncomfortable and your monthly energy bills are through the roof, then chances are you need new insulation.

There are more than a dozen signs and symptoms that you need new insulation, but all it takes is just one to make your home uncomfortable.

Here are just some of the problems you could be encountering if there is little to no or poor and under performing insulation in your home.

✓ **You have high energy bills.**

If your monthly energy bills are breaking the bank, it is a sign that the insulation in your home isn't doing its job.

The appliances you use to heat and cool your home are working overtime to attempt to make you comfortable, but are costing you a fortune because the house can't maintain a constant temperature due to air leakage.

✓ **The floors in your home are cold.**

Are you doubling up on socks? If your floors are cold, it's likely due to little or no insulation in your crawl space or rim joist.

✓ **Ice dams forming on your roof.**

Ice dams form when heated air from your home escapes through the attic and out of the roof. This melts the snow in the middle of the roof, but not on the edges, which forms the ice dams. This can cause a number of problems for your roof and result in hundreds or even thousands of dollars in damage.

✓ **The walls of your home feel cold to the touch in the winter.**

Cold air from the outside has made its contribution to your home being uncomfortable in the winter.

✓ **Your current insulation is more than 15-years-old.**

Fiberglass and cellulose insulation tend to settle and breakdown over time. When this happens, it leaves areas of your home with no insulation coverage, allowing for air leaks that make your home uncomfortable.

✓ **You're wearing extra clothes or using extra blankets.**

If you're to the point you are wearing layers of clothing and have to sleep with extra blankets, you probably need to update your insulation. The cold air from the outside is making its way in, while your heated air is escaping.

✓ **The pipes in your crawl space freeze.**

Have you experienced frozen and busted pipes? The cause is likely inadequate or no insulation in your crawl space. Insulation should create an air barrier that will prevent the cold air from freezing your pipes that could then burst.

✓ **People in the home suffer from terrible allergies.**

Fiberglass and cellulose insulation retain the allergens people come in contact with either outside or inside. Both materials are also irritants that can create dust in the home, as well as skin irritations if touched. No amount of cleaning can help defeat those allergies if your insulation is holding it inside your home. When this happens, those same allergens can be blown throughout your home.

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866-900-3626
RetroFoamofMichigan.com



Buying Insulation Isn't Something You Do Everyday

However, your choice for home insulation is a major decision that will impact your family's comfort and energy efficiency for years to come.

Over the last 15 years we've insulated thousands of existing homes across Michigan's lower peninsula, so you can imagine all the questions we've been asked during this time.

We created the **"Ultimate Foam Insulation Buying Guide for Existing Homes"** to help answer the common questions we've heard over the years so homeowners can have all the information they need to make an informed decision about insulating their home.

We hope this guide is a good resource to aid you in your journey to a more comfortable and energy efficient home.

RetroFoam of Michigan

What is Home Insulation and How Does it Work?

The insulation should work to keep the temperature inside consistent without the furnace or air conditioner running constantly.

Home insulation is defined as a material used to insulate something, specifically a building. Basically, insulation is the material used to reduce heat loss or heat gain by providing a barrier between the inside of your home and the significantly different outside temperatures.

Whether you're dealing with summer or winter temperatures, when you cool or heat your home, the insulation should work to keep the temperature inside consistent without the furnace or air conditioner running constantly.

It's important when talking about insulation to understand how it will impact your home's resistance to heat transfer and stop air flow – which will play a significant role in your home's energy efficiency and comfort.

Air flow into or out of your home is the movement of air through gaps and holes in your walls, attic, crawl space, rim joist, doors, windows, and electrical outlets. Air leakage is a major problem in many homes and contributes to energy loss, as well as discomfort.

There are three main types of insulation used in homes – foam, fiberglass, and cellulose.



Foam insulation can be either injected into enclosed cavities or sprayed into open cavities. Spray foam insulation can be used in the attic, crawl space, rim joist, and also unfinished walls during a remodel or addition.

Injection foam can be installed in enclosed spaces like existing walls.



Fiberglass insulation comes in batts and rolls or can be blown-in. It can be placed in unfinished walls, floors, and ceilings. It is fitted between studs, joists, and beams.



Cellulose insulation can be either loose-fill or blown-in. It can be used in existing walls and attic floors.



The Best Options for Insulating Your Existing Home

The last thing you want to do is choose an insulation that doesn't completely meet your needs. There is nothing worse than spending money in hopes of making your home more comfortable or lowering your monthly energy bills and not seeing any results. Here is a look at the areas of your home and what insulation will best fit your needs.

What is the Best Attic Insulation?

The types of insulation commonly found in attics are cellulose, fiberglass, and spray foam.

Unless your home was built for energy efficiency, you can probably reduce your monthly energy bills by adding or updating the insulation in your attic. Many older homes have inadequate, damaged, or improper insulation than homes built today.

Adding insulation to a newer home can pay for itself in just a few years, according to the U.S. Department of Energy. This includes the attic, where many homes lose heat during the winter months.

Cellulose Attic Insulation: Pros and Cons

Pros: Cellulose is relatively inexpensive when it comes to attic projects in comparison to other materials.

When blown-in, cellulose gets into some of the tight corners and hard to reach areas in the attic cavities.

Cons: Cellulose can shift and settle to one side of the attic due to airflow, which can make some areas of the ceiling thinly insulated over time. This means the insulation must be maintained and actively raked to be spread evenly every so often.

Homes with furnace duct systems in the attic can expect some of the cellulose dust to recirculate through the home.

Both fiberglass and cellulose require venting in the attic, which requires constant upkeep.

Fiberglass Attic Insulation: Pros and Cons

Pros: Can be a Do-It-Yourself attic project for an experienced handyman.

Fiberglass is the cheapest material for attic projects compared to other materials.

Cons: Fiberglass in the attic still allows for airflow, which is a major source of high energy bills and uncomfortable homes.

When it is disturbed, fiberglass releases particulates into the air which can be inhaled. This can cause coughing, nosebleeds, and other respiratory ailments. If particulates come in contact with the skin they can lodge in pores, causing itchiness, rashes, and irritation.

Spray Foam Attic Insulation: Pros and Cons

Pros: Insulates by creating an air seal in the attic, helping to lower monthly energy bills. Spray foam can be used to insulate the attic floor or the roof deck, which the latter can create an unvented attic system and semi-conditioned space excellent for storage.

Doesn't retain water like traditional insulation, meaning it doesn't promote mold and mildew growth if the roof leaks into the attic.

Spray foam insulation is not only good for the environment, it is also Class One Fire Rated, making it safe for the home.

Cons: More costly than traditional forms of insulation used in the attic.

Spray foam is too complex for an attic DIY project, so it must be installed by a professional.

WANT TO LEARN MORE ABOUT INSULATING YOUR ATTIC?
LEARN MORE AT [RETROFOAMOFMICHIGAN.COM/ATTIC](https://retrofoamofmichigan.com/attic)





What is the Best Crawl Space Insulation?

The two types of insulation commonly found in crawl spaces are fiberglass and spray foam.

Crawl space walls should be insulated with a non-water sensitive insulation that will work to prevent interior air from making

contact with the cold crawl space surfaces, according to the Building Science Corporation.

Allowing the interior air that is normally full of moisture to make contact with the crawl space surfaces can cause condensation, as well as promote mold and mildew growth.

Crawl Space Fiberglass Insulation: Pros and Cons

Pros: Fiberglass is suited for standard stud and joist spacing for a crawl space.

Installing fiberglass in the crawl space can be done by a homeowner who has experience and who isn't afraid of getting dirty.

Cons: Fiberglass can trap allergens, dust, and moisture in the crawl space which can promote the growth of mold and mildew.

If the underside of the floor is insulated with fiberglass, gravity will eventually cause the material to droop.

Crawl Space Spray Foam Insulation: Pros and Cons

Pros: Spray foam insulates while creating an air seal that will help prevent pipes from freezing and help keep floors warmer in the winter.

As the crawl space tends to be an area that sees a lot of moisture. Spray foam doesn't retain water, so it won't promote mold and mildew growth.

Cons: Some brands of spray foam have a slight odor after it has been applied, so it is important to know which brand is being installed.

Spray foam is more expensive than traditional materials.

The Building Science Corporation recommends a foam based insulation material for crawl spaces because it creates an air barrier.



What is the Best Rim Joist Insulation?

The most common insulation materials found in the rim joist are spray foam, fiberglass, and foam board.

In older homes, the rim joist is often left uninsulated. This means the only material between the homeowner and the outdoor world is the sheathing and siding, according to Fine Homebuilding. This lack of insulation can lead to drafts along the floorboards which makes the home an uncomfortable space.

COLD FLOORS KEEPING YOU FROM ENJOYING YOUR HOME?



Rim Joist Foam Board Insulation: Pros and Cons

Pros: There are many different types of foam board, and some rigid foam products are water resistant. This helps limit moisture buildup and mildew growth.

Expanded polystyrene board is the least expensive foam board product on the market.

Cons: Joints between sheets and boards must be taped to prevent air flow.

The air bubbles inside expanded polystyrene board stops heat transfer, but can accumulate moisture making it ineffective.

Rim Joist Fiberglass Insulation: Pros and Cons

Pros: Fiberglass is the inexpensive choice for the rim joist.

An experienced handyman homeowner can install it on their own.

Cons: Fiberglass does not do as good a job at insulating the rim joist because it is prone to mold and mildew problems, according to Home Construction Improvement.

Because fiberglass batts are air permeable, the material does nothing to prevent warm, humid interior air from making contact with the rim joist.

Rim Joist Spray Foam Insulation: Pros and Cons

Pros: Spray foam creates an air seal that will work to prevent outside air from getting in, thus reducing drafts near the floor board.

Spray foam insulation creates a custom fit air seal that gets into the tightest nooks and crannies.

Cons: Spray foam insulation is more expensive than traditional forms of insulation.

There is more prep work required to prevent overspray.

Fine Homebuilding recommends only air impermeable insulation for the rim joist - either spray foam or rigid foam boards.



What is the Best Insulation for Existing Walls?

Injection foam insulation and blown-in cellulose are the most common materials used to insulate existing walls without tearing down the drywall.

Blown-In Cellulose Existing Walls Insulation: Pros and Cons

Pros: Blown-in cellulose installed by a contractor is the cheaper option.

When blown-in, the cellulose can be installed from outside of the home.

Cons: Blown-in cellulose produces dust that will come out into your home through electric outlets in the walls.

Cellulose can still allow for air movement into and out of your home.

Injection Foam Existing Walls Insulation: Pros and Cons

Pros: Injection foam creates an air seal that stops airflow into and out of your home.

It helps reduce the sound from outside invading your home due to its sound dampening qualities.

Cons: There could be an instance where injection foam can't be installed. For example, if your current insulation is glued in the install becomes more difficult.

Anytime insulation is injected into existing walls, whether it is foam or cellulose, there is the possibility the walls could bulge or crack.



Preventing Air Leakage with Foam Insulation

If you want to make your home more comfortable and energy efficient, foam insulation is the best long-term solution as it prevents any air leakage.

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

When thinking of traditional insulation, think of it like the comparison of a wool sweater and a windbreaker.

A wool sweater on a cold fall day is warm and welcome. That same wool sweater doesn't help you keep warm if the wind is blowing and flowing right through it. A windbreaker is much more effective in keeping you warm, much like foam insulation's insulating and air barrier qualities.

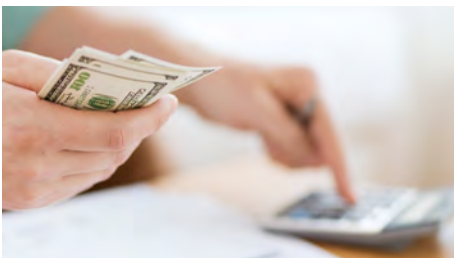
Another great example of how foam insulation works is when you're driving an old car down a dirt road.

You roll up the windows to keep the dust that your tires kick-up out, but it still makes its way in.

When you take this same trip in your brand new car, it is built to keep that outside, dusty air where it belongs, making your drive much more enjoyable.

Bottom line, the older car is cellulose or fiberglass and the new car is foam insulation.

Now, let's look more specifically at the benefits of foam insulation in all the areas of the home.



Spray Foam Attic Insulation

If you're looking to cut down the amount of money pouring out through your roof, foam insulation in your attic is the way to go.

High energy bills and the inability to maintain a constant temperature are just some of the signs that your attic needs new or updated insulation.

Open cell spray foam insulation creates an air barrier that stops air movement. The material can expand up to 100 times its original size, so it fills every nook and cranny in the attic. This air seal will help to lower monthly energy bills.



Spray Foam Crawl Space Insulation

Spray foam insulation is the best choice when insulating the crawl space of your home. The walls of the crawl space should be insulated with a material that does not retain water that will prevent interior air from touching the cold basement surfaces.

Allowing the interior air that is regularly full of moisture can cause condensation and promote mold and mildew growth, according to the Building Science Corporation. This makes spray foam the best choice because it doesn't retain water and it creates an air seal.

Injection Foam Existing Walls Insulation

Injection foam insulation can be installed in your existing walls without removing the drywall in your home.

Air flow in your home allows for the movement of air in and out through gaps in the walls and electrical outlets.

This air leakage is a critical source of your home's energy loss and also contributes to discomforts such as drafts, cold floors, and cold walls.

To reduce this air leakage, foam insulation works best because it provides heat resistance and an air seal.

Spray Foam Rim Joist Insulation

The rim joist is one of the most overlooked areas of a home, but if you're experiencing drafts near the bottom of your walls, it's likely the culprit.

Spray foam insulation will create an air seal that will keep the outside air from getting in, while reducing the drafts near your floorboards. Fine Homebuilding recommends only air impermeable insulation for the rim joist like spray foam insulation.

Foam Insulation for Your Existing Home

The area of your home you choose to insulate with foam will depend on the comfort and energy efficiency problems you have.

In some cases people just like you have seen great benefit from insulating one area of their home with superior foam insulation. If you want to see the full benefits of foam insulation it is best to insulate the entire house as it provides a complete air seal while providing the most comfort and energy savings.

OPEN CELL VERSUS CLOSED CELL

SPRAY FOAM INSULATION COMPARISON CHART

COMPOSITION	OPEN CELL	CLOSED CELL
EXPANDING	Light	Dense
BLOWING AGENT	High	Minimal
MOISTURE PERMEABILITY	Water	Chemical
SOUND DAMPENING	Yes	NA
AIR SEAL	Yes	Minimal
R VALUE PER INCH	Yes	Yes
COST	R	RR
	\$	\$\$

Foam Insulation Types

Foam insulation comes in all shapes and sizes. Well, maybe not shapes and sizes but there are a few different materials available to you. There is injection foam and spray foam, and when you're talking about spray foam there is the choice of open cell or closed cell foam.

Each type of foam has its own benefits and areas where it is best installed.

Spray Foam and Injection Foam

To know the differences between spray and injection foam insulation you need look no further than their names.

Spray foam insulation is installed by spraying it onto a surface, while injection foam is installed by injecting the material into a closed cavity.

Many newer homes are being insulated with foam insulation due to its energy efficiency and comfort benefits.

At the same time, homeowners of existing homes are also choosing foam to retrofit their attics, walls, crawl spaces, and rim joists to fix uncomfortable rooms as well as save money on their monthly energy bills.

Foam insulation never loses its shape, unlike traditional insulation materials.

It also fills cracks, gaps, and crevices when it is installed and never settles or sags over time.

Spray foam insulation can be sprayed into an open cavity like an attic, crawl space, or rim joist. It can also be used in new construction for the walls before the drywall has been put up.

Injection foam seals enclosed cavities like existing walls against air movement. It completely fills the cavity creating an air seal.

Open Cell and Closed Cell

Open cell and closed cell are both spray foam insulation and both create an air seal, but there are differences between the two as far as how they are applied, their efficiency in homes compared to other structures, and how they work in general.

Open cell spray foam is lightweight, pliable, and easy to work with. Closed cell spray foam tends to be more rigid and very dense. For example, if you needed to run new wiring, open cell spray foam is going to be much easier to work with because it is so pliable.

On the other hand, in pole barns, closed cell's rigid structure and durability makes it ideal for exposed walls because it is less likely to be damaged if it is bumped by machinery or tools.

Open cell spray foam also has a very high expansion rate, sometimes as much as 100 times over. This is why open cell is an ideal option for homes because it gets into the nooks and crannies of attics, crawl spaces, and rim joists. The material is flexible and as your home shifts and settles, open cell will shift along with it.

Closed cell spray foam has very minimal expansion when it is applied. It also will not shift or move when the structure settles, so it can pull away from the area it has been applied.

When it comes to moisture permeability, open cell is inherently moisture permeable, which means it allows the water to move through it. Closed cell is 100 percent moisture impermeable, which means it does not let water pass through it. One scenario where moisture impermeable isn't a great option is on the

roof deck of the attic. If a leak happens, then the open cell foam would be discolored letting you know where the leak was so you could quickly repair it.

Open cell is preferable in the home because it is hydrophobic. It will allow bulk water to pass through it, but not be retained and allows the foam to continue to maintain its insulation characteristics.

Closed cell will conceal the leak until the water builds up somewhere else and causes a much bigger problem.

Lastly, if you're looking to dampen that noise from outside, the thicker and softer material of open cell works wonders to reduce sound waves much better than the tight, dense make up of closed cell.



Retrofitting Existing Homes with Foam Insulation

There are a lot of things to think about when considering insulation for your home, and one of the main things is the cost of the project. There are several factors that go into determining the cost to insulate an entire existing home or even just areas of the home. Some of those factors include the size of the area you plan to insulate and the materials used.

Let's take a look at the process and cost to insulate your entire home and specific areas of your house.

Whole House Foam Insulation Process and Cost

When insulating an entire existing home with foam insulation, there are two types of products used – injection foam and spray foam. Essentially it comes down to whether the areas are open cavities or closed cavities.

Injection foam will be used throughout the house in any area that has closed cavities, like existing walls.

Spray foam will be used in areas that are open cavities, such as the attic, crawl space, and rim joist. For use in the home, in most cases, a good contractor will recommend using open cell spray foam.

Insulating an entire house can take approximately two days.

The first day is spent cleaning out existing insulation in the attic and crawl space to prepare it for the spray foam.

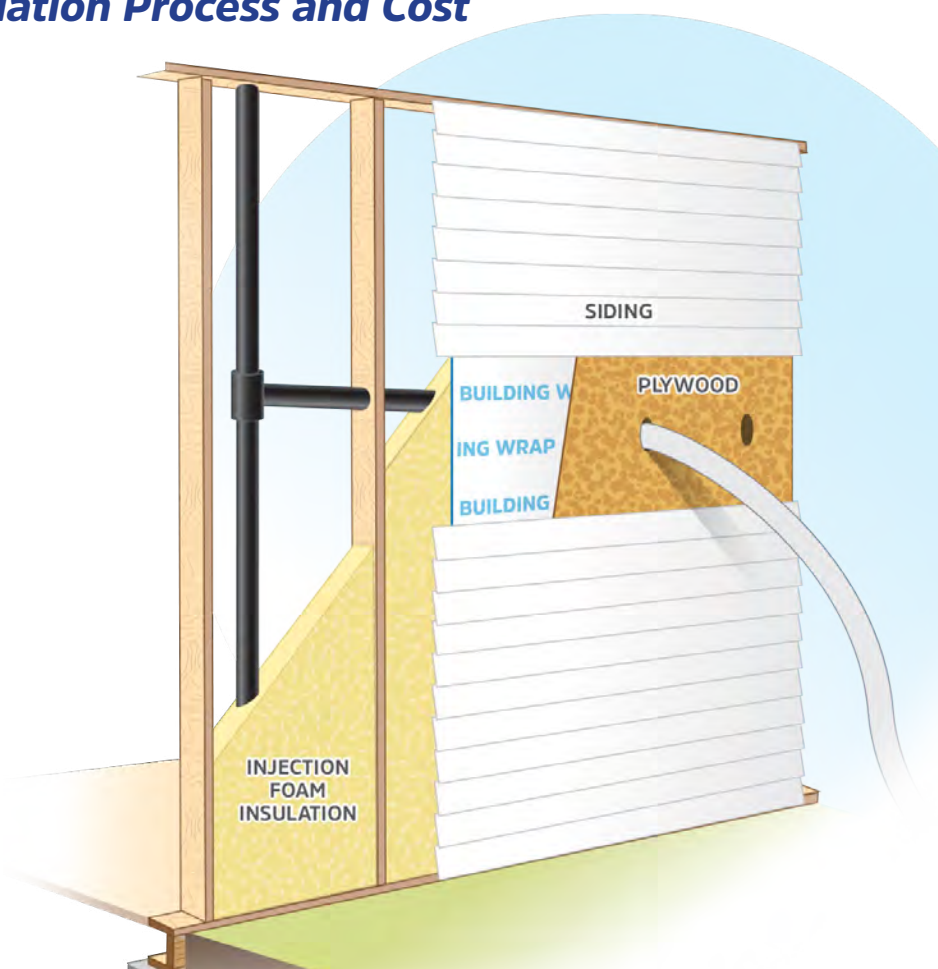
This process takes about 4 to 7 hours depending on the size of the job.

The second day of the project, two crews will come to the home to install the spray and injection foam insulation.

This can take anywhere between 4 to 7 hours depending on the size of the job.

The cost to insulate an entire existing home with foam varies widely. The price range is from \$8,000 all the way up to \$20,000 before any discounts or rebates.

The size of the treated surface area is what makes that price range so vast. The size of your living space is not the considering factor.





Attic Spray Foam Insulation Process and Cost

We get asked a lot if a homeowner should insulate the attic floor or roof deck with spray foam. We recommend that the roof deck is insulated with spray foam because an unvented system is preferable. It's more efficient and most utilities offer greater rebates for having the roof deck insulated. It also helps to extend the life of the roof.

The type of attic system you want is ultimately decided by what you want to do with the space.

For people who feel like they need that extra storage or just don't want to take the risk of moisture buildup, the unvented system is the way to go.

In the past it was important to vent an attic due to concerns about condensation. If there was a furnace or AC unit in the attic, then it was important to ensure the space was unvented.

The first step in insulating your attic is a crew will come to your home to remove the old insulation.

The older insulation must be removed for the spray foam to work effectively.

That old insulation must be removed because it hinders airflow throughout the house. While you don't want airflow out of the house, you do want good circulation and that old insulation impedes that circulation.

Another reason you will want to remove the insulation that is on the attic floor is because if the air flow is hindered, there will be a difference in temperature from the attic to the rest of the house. For example, in the summer if it is 85 degrees outside, then it is around 100 degrees in the attic, and the house is

about 70 degrees. That is about a 30-degree difference between your living space and your attic.

Any time there is a temperature difference there is a potential for condensation – the higher the temperature difference, the higher the probability of condensation because you have a bigger window for a dew point to fall into. This also has to do with the humidity in your home.

The old insulation that is on the floor of the attic will almost always be cellulose or fiberglass, which are both fibrous materials that are both proven to not only retain and hold moisture, but also fosters and invites condensation along with those moisture issues.

This condensation can then move into the drywall of your ceiling and the trusses inside the attic floor.

The big issue is this creates the perfect condition for mold to grow not only in the insulation, but in your ceiling and other areas of your attic.

If this mold is allowed to form and continue to grow, the cold air returns will pull that contaminated air throughout your home. Here is how that happens – the hot air rises and will stop at the drywall because the old insulation hinders it, and as the air moves across the now contaminated ceiling it will move to the cold air intake and get recirculated throughout the house.

The bottom line is the old insulation needs to be removed because it hinders the air flow into the attic, it can promote mold growth, and it is dirty. The old insulation on the floor has been exposed to air from the outside because the attic is vented.

The crew will go into your attic and use a vacuum system to remove the old insulation. The crew will then take it away and dispose of it properly.

The next day, another crew will come to your home and run a hose up to the work area in the attic. The majority of the second day is spent spraying the foam onto the roof deck or attic floor depending on the job. A thin layer of foam is also sprayed on the studs of the roof to stop thermal bridging.

Thermal bridging, also called a cold bridge or heat bridge, is an area of a building which has a significantly higher heat transfer than the surrounding materials resulting in an overall reduction in thermal insulation of the building.

Basically, any building material that makes contact with the outside and the inside will create a bridge.

These bridges are made of highly conductive materials, such as wood and steel.

Thermal bridging is most commonly found on the studs of exterior walls, attics, and roof structures.

Once everything has been sprayed, the crew cleans up the area so it looks just like it did before the project was started.

The size of the treated area in the attic to be sprayed is the largest contributor to the cost of the project.

The bigger the space, the more expensive the job will be.

The total projected cost to insulate an attic in an existing home ranges between \$5,000 and \$10,000 before discounts or rebates.



Wall Injection Foam Insulation Process and Cost

Cold walls and high energy bills are just some of the definite signs you need new or better insulation in your exterior walls.

For injecting foam into your existing wall cavities, crews will create access from the outside. It all just depends on the type of siding you have on your home.

Most types of vinyl, aluminum, cement board, and wood siding can be removed from the home so the crews can drill holes between the stud cavities where the foam will be injected. One strip of siding about half way up is usually all that needs to be removed.

Once the foam has been installed, the holes are filled with foam caps and the siding is replaced and cleaned as needed.

When working with brick siding, crews drill holes into the mortar in spots around the outside of the home to ensure the wall cavities are filled. Once the foam has been injected and the cavities are full, then mortar is used to fill in the holes that were drilled.

In some situations existing siding may not be able to be removed, so your insulation contractor would have to discuss a slightly different process. For example, if the wood siding can't be removed, crews drill into the face of the wood from the outside. A chalk line is used to drill uniform 2 ½ inch holes through the siding to inject foam into the existing wall cavity.

After the foreman injects the foam, another crew member follows behind them plugging the holes with a wooden plug. Once the plugs are placed, the homeowner can easily paint over them to match the siding.

An average exterior walls job will usually take anywhere from 3 to 5 hours.

Typically, when someone has their walls insulated, they do all of the exterior walls to completely seal off the outside from the inside of the home, including the common wall of an attached garage. The cost for insulating all of the exterior walls will range anywhere from \$3,000 to \$7,000 before discounts and rebates.

Crawl Space and Rim Joist Spray Foam Insulation Process and Cost

No one wants to deal with having cold feet or drafts around the floorboards, so insulating your crawl space and rim joist can fix the problem.

Before the crawl space can be insulated, crews must first remove any existing insulation.

In crawl spaces, there are two ways to insulate – crews can either insulate the crawl space walls or the underside of the floor of the house. What determines which area to insulate depends on whether there is duct work or a furnace in the crawl space.

If there are heat ducts in the crawl space, then a good contractor will want to spray the exterior walls and lay plastic on the ground.

When the walls of the crawl space are being insulated, the next step is to lay down plastic. The plastic covers the entire floor and if there are support beams, the plastic will overlap around them so moisture can't get through. The plastic is then rolled up the walls about a foot or so and the foam is sprayed onto the walls creating a seal.

This system will help the heat ducts radiate heat in the crawl space, thus also heating the floor. You aren't paying to heat the space, but rather it is more efficiently moving the treated air you're paying for by keeping the space the same temperature as the rest of the house.

If there are no ducts in the crawl space, insulating the underside of the floor is a better option. Since there is no heat source, this will cut the crawl space off from the rest of the house keeping it warmer. Essentially you won't be getting that cooler air coming up through the crawl space.

If only the underside of the floor is to be insulated, then no plastic needs to be laid down and crews will spray foam on the underside of the floor.

Once the foam has been sprayed, crews will work to clean the area up and make sure it looks just like it did before the job began.

Not all crawl spaces are created equal, so the size of the area to be insulated is the main contributor to the cost of the project.

The average cost to insulate a crawl space with spray foam insulation is between \$1,150 and \$2,500 before discounts or rebates.

For the rim joist, the first step in the insulation job process would be removing any fiberglass insulation from the rim joist and to ensure any furniture or storage be cleared away from the basement walls. Crews will then put plastic over the windows and nearby shelves or storage to ensure they do not get overspray on them.

Next, the person spraying the foam suits up, brings the hose into the basement and sprays the rim joist.

There's generally no cutting of the foam or cleanup with the rim joist unless there is overspray. It's a fairly quick and simple process with the job usually lasting about an hour and a half.

The average cost to insulate a rim joist with spray foam is between \$1,150 and \$1,500, but could be even less after discounts and rebates.



Foam Insulation Cost of Ownership

The lower initial cost of traditional insulation can be appealing to homeowners, but did you know in the long-run foam insulation ends up being cheaper and pays you back?

When you're looking into insulation for your home, it's important you look at the bigger picture – how much money will you save? Will you have to replace the material at some point?

How much is the insulation going to cost in the long-run?

Here is a look at how foam insulation saves you money while paying for itself.

Initial Home Insulation Cost

Insulating your home is a big decision that requires a lot of thought. Some homeowners only consider the initial cost of the project, but that is only part of the equation.

Foam insulation is typically about two to three times the cost of fiberglass or cellulose insulation.

What you may not have taken into consideration when thinking about traditional insulation is the cost of hiring a contractor, the cost of materials, and the cost if your DIY insulation project goes south.

Rebates for Home Insulation

Getting money back on your insulation investment is an added bonus to your more comfortable and energy efficient house.

Many energy providers offer rebates to their customers when they insulate certain areas of their homes.

Those rebates can range between \$50 and \$300 per area depending on the energy provider.

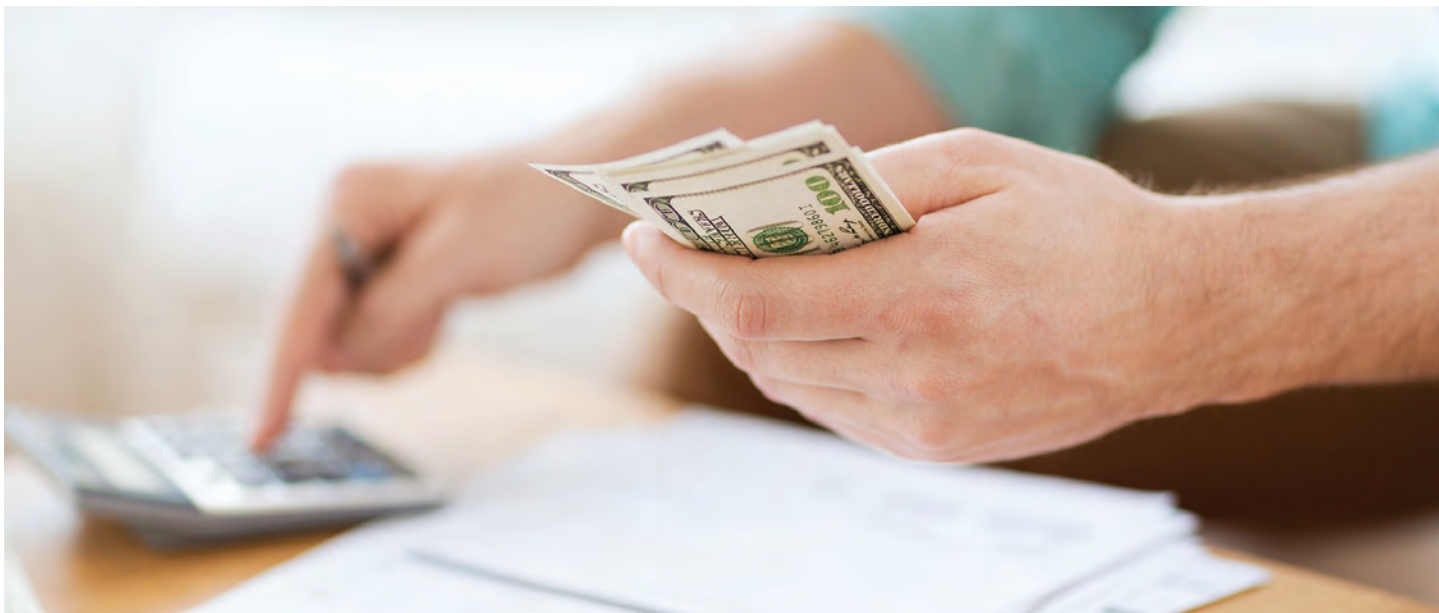
There are also instances when foam insulation can earn you even more money.

Some energy providers offer Home Performance rebates that are given to customers who create an air seal in their homes by adding insulation. These customers can receive between \$250 up to \$1,200 in rebates as long as they meet the requirements, one of which is creating an air seal.

Ask your energy provider or foam insulation contractor what kinds of rebates are offered for updating your insulation.

Fiberglass and cellulose do not create an air seal, so traditional insulation rebates are most often the lowest available.

Foam insulation on the other hand is known for its ability to create an air seal in the home. Traditional insulation still allows air to either move through it or around it. Foam insulation creates an air seal that will keep the outside temperature out while keeping your conditioned air inside. Energy providers understand the superior benefits created by an air seal, so they are willing to offer more aggressive rebates.



Energy Savings with Home Insulation

High monthly energy bills are a stress you shouldn't have to deal with.

It may not have occurred to you, but if you have little to no insulation in your home or inadequate insulation, then your hard-earned money is going right out of your roof. The attic is a sneaky place where either your heated air is escaping, or summer air is sneaking in.

Cold floors are another thing that can skyrocket your monthly energy bills. You keep turning up the heat and the floors stay cold. This comes from either the crawl space, rim joist, or even your walls.

While fiberglass and cellulose can help block some of that cold air, it doesn't stop it completely. Chances are, your monthly bills will still be higher than you want to pay.

The good thing about foam insulation is that it creates that air seal keeping the conditioned air you're paying for inside. Foam insulation also keeps the outside air out.

When insulating your home with foam insulation you are looking at monthly energy savings between 15 and 50 percent, depending on the areas of your home you insulate. The best bet is to insulate your entire home, as it works as a total system.

Home Insulation Replacement Cost

Over time it is inevitable that fiberglass or cellulose insulation will need to be replaced in your home, which is probably why you're reading this guide. Traditional insulation materials are known to breakdown, sag, and shift as time goes on. The replacement rate for these materials could be as soon as 15 years, not to mention the constant maintenance like raking drifted cellulose in the attic.

Foam insulation never has to be maintained and never has to be replaced, as long as the product is installed properly. Once the foam insulation is installed in your home, that is the end of it. A good contractor will also offer a lifetime warranty on the product and workmanship.

The only exception is when you are doing a major remodel and tearing out areas of the home where foam insulation was installed. This is the only exception to the rule, because once foam insulation is installed it should last for the life of your home.

Home Insulation Repair Costs

Having the worst-case scenario happen in your home is stressful enough, but adding additional cost in the mix can make it that much worse.

If there were a flood in your home, fiberglass and cellulose both retain water and greatly lose their R-Value when they become wet. This can also lead to the growth of mold and mildew in your home, which can be dangerous if left unchecked.

Fiberglass and cellulose are known to retain any water that gets into them. This means that water will be held against the wood frame of your home, as well as your drywall. That will leave you not only with the cost to replace your insulation, but your drywall

as well just for starters depending on the damage.

The cost to repair your drywall varies depending on the extent of the damage. A homeowner could be out a few hundred dollars or a few thousand. This doesn't include the cost to replace the traditional insulation, the cost of paint and supplies to get your home looking like it did before disaster struck, or the cost to repair the leak.

Foam insulation from the top manufacturers doesn't need to be replaced if it gets wet, as it doesn't retain water. An added benefit of foam insulation is that because it doesn't retain water, it also doesn't hold that moisture against the frame or drywall of your house.

Foam insulation also doesn't promote mold or mildew growth.

Another problem that arises is damage to the roof when there is inadequate insulation in the attic. The formation of ice dams can cause holes in the roof and water leaks into the attic. Ice dams can also lead to wood rot, mold and mildew in the home, and damage to your gutters.

Spray foam insulation combats ice dams by maintaining a constant temperature in the attic similar to the rest of the home. This will keep the snow from turning into ice and melt evenly across the roof.

1 Is foam insulation safe for my home?

The quick answer to the question is yes. Injection and spray foam insulation are both safe to have in every area of your home.

2 Do I need to remove old insulation before installing new?

Like many things in life, different situations have different solutions. For example, the way the foam insulation is installed and the cleanup necessary in an attic is vastly different than in the walls.

Any space that will have spray foam insulation installed, like the attic, crawl space, or rim joist will need to be completely emptied of the old insulation. A good contractor will want to remove that old fiberglass or cellulose, so the spray foam can get into every nook and cranny, creating an air barrier.

Luckily, getting the old insulation out of those spaces is only hard if you have to do it yourself. Most contractors will do the dirty work for you.

When it comes to installing injection foam in existing walls, the foam will flow through the cavity and compress the fiberglass. Insulation in the existing walls rarely needs to be removed.

3 How long does foam insulation last?

Foam insulation should last forever in your home – or at least as long as your home is standing.

Foam insulation not only has amazing insulating and air sealing properties, but it also doesn't break down or lose its shape over time like traditional insulation.

These traditional insulation materials will sag, compress, and lose their insulating abilities as the years go on, whereas foam insulation will be the last insulation you will need to have installed in your attic, walls, crawl space, or rim joist.

4 Can spray foam make my house too tight?

While it is very rare, a home insulated with foam can become tight, but the solution is very simple.

The fix is as easy as turning on a bathroom fan or kitchen hood once a day. This will exchange the air in the home, so you have fresh air coming in. Minor adjustments to the HVAC system can also help.

When insulating the whole house, a good contractor can perform a blower door test to check the air exchange rates.

5 How do you know when an enclosed cavity is full of foam?

During the installation process, a crew member will run a Slim Jim up and down the exterior wall cavity. This is done for several reasons.

To ensure there is no fire stops or no studs that will prohibit the hose from getting all the way to the top.



Answers to the 8 Most Common Foam Insulation Questions

This is also done to feel for the next stud. This ensures the installer has a good idea what is in the cavity from top to bottom and side to side.

The installer will then run the injection hose all the way to the top of the cavity and then all the way to the bottom. If the installer runs into any obstacles or blockages, another hole will be drilled either above or below it and more foam will be injected to ensure the cavity is completely filled.

Once the cavity has been completely filled, the holes are then plugged and the siding is replaced.

After the work is complete, if a homeowner still notices any cold walls or drafts, a good contractor with a lifetime warranty will come back out to ensure no areas were missed.

6 What happens to old insulation in exterior walls when foam is injected?

The type of insulation you have in your walls will determine what happens to it as cellulose and fiberglass perform and settle differently.

When it comes to old exterior wall insulation, fiberglass and cellulose can stay in the cavity as the injection foam will compact it as it is injected.

However, if other areas of the home like the attic or crawl space is being insulated with spray foam, then the old insulation would need to be removed.

7 How much can I save on energy bills with foam insulation?

With the addition of foam insulation in your home you could save between 15 to 50 percent on your monthly energy bills depending on a variety of variables.

The amount you could save on your monthly energy bills depends on what areas of your home you have insulated. While you can insulate the attic, walls, crawl space, or rim joist and see some savings, you will see the greatest benefit and savings from insulating your entire home.

Other factors that will determine the amount you save on your monthly energy bills include the age of the home.

If it's a newer home, you most likely won't save as much if it's an older home with little to no insulation at all. The number of people living in the home can also be a factor, as well as personal preferences on the thermostat settings.

8 Open cell vs. closed cell: which is better for my home?

Open cell and closed cell are both spray foam insulations, but there are differences between the two as far as how they are applied, their efficiency in homes compared to other structures, and how they work in general.

Open cell spray foam is a better fit for your home in most cases. It is a softer material that will move with your home as it settles and is easy to work with in case of a remodel, helps dampen those noises from outside, and costs less than closed cell.

Closed cell spray foam is better used in pole barns and block commercial projects, because it is a firmer insulation material that can take the hits of tools and machinery.

Both open cell and closed cell spray foams provide an air seal which is going to help eliminate drafts, heat loss, and moisture from getting into your home. That air seal can only be achieved with minimum recommended 2 inches of closed cell and 3 inches of open cell.

Discuss your project with a reputable insulation contractor to determine the best solution for your home.

FIND ANSWERS TO MORE FAQ AT [RETROFOAMOFMICHIGAN.COM/FAQ](https://retrofoamofmichigan.com/faq)





Hiring a Foam Insulation Contractor

Hiring a contractor is a big job and there is the possibility, if you choose the wrong person, your home insulation project could become a nightmare.

Here are some tips to hiring a good insulation contractor and avoiding disaster.

Make sure to go through the vetting process. It's important to know what questions to ask when you are considering a potential contractor. You should ask how long they have been performing the specific task you are asking of them – insulating an attic, crawl space, exterior walls, or rim joist. You should also ask them what kind of experience they have with the type of siding on your home, because working with vinyl siding for example is an entirely different job than working with brick. The other important question to ask is how long have they been using the material they plan on installing in your home.

The contractor should know about the products they use, and even the ones they don't. Any good insulation contractor should be able to explain the different types of insulation material that could be used and why they are using the product they are recommending.

Ensure they are a licensed contractor. It is important when choosing a contractor to make sure they are licensed in the state where they will be performing the work. If the contractor isn't licensed, then it could end up costing the homeowner money.

Is the contractor insured and do they offer a lifetime warranty? Insurance and warranties are two large things you need to worry about when hiring a contractor. Accidents happen, and general liability insurance

will protect the homeowner if an accident occurs or property is damaged. A lifetime warranty will cover the life of the product, so if there is an issue further down the road the contractor will fix the issues without further cost to the homeowner.

How experienced is the contractor? When sitting down with a contractor you will want to ask them how long they have been installing the insulation material you want installed in your home.

How experienced is the contractor?

When sitting down with a contractor you will want to ask them how long they have been installing the insulation material you want installed in your home.

You'll also want to know if that is their expertise. There are some contractors that do a little bit of everything – roofing, siding, windows, gutters, and everything under the sun. While the contractor may know how to do all of these things, this doesn't mean they are a master of any of it.

Are they trying to oversell you?

It is important that you are wary of estimators who work for contractors that are pushy and trying to upsell you. The best insulation estimators come to your home with the intention of solving your problems, not pushing you into work you don't need or want to have done.

Know what you need done and what you can afford. You know your entire house needs insulation, but you can't afford it all at once. Have a discussion with your contractor about what areas of the home will benefit you the most to start and plan out the rest over time.



Financing Energy Efficient Home Improvements

Some customers prefer to finance their home insulation. Many contact their bank or credit union to inquire about available financing options.

Others prefer to apply for convenient 12 month same-as-cash or traditional term loan financing through third party financing programs offered through their contractor. The approval process is quick and simple, and a good option for many homeowners.

Michigan Saves is an example of financing available to Michigan residents. They offer convenient low-interest loans for qualifying energy efficient home updates, including insulation.

See if your state has any similar programs available to homeowners.

Next Steps

Were all of your questions answered?

You can continue your research on our Learning Center.

Our Learning Center is loaded with information on the installation process, cost, financing, and dozens of questions we have answered for other homeowners. Just about anything else you would want to know about foam insulation can be found there.

We wish you the best as you consider foam insulation for your home.

retrofoamofmichigan.com/learningcenter





Working With RetroFoam of Michigan

Insulating your home is a big decision, so here are just a few reasons you should consider working with RetroFoam of Michigan:

1 We specialize in foam insulation for residential homes. We insulate dozens of homes each month across Michigan's lower peninsula. RetroFoam of Michigan only offers foam insulation because of its superior benefits.

2 We are experienced. With more than 10,000 homes insulated under our belt since 2002, our crews are spraying and injecting foam insulation in homes every single day. We don't use subcontractors and our employees are highly skilled and experienced.

3 We offer a lifetime warranty. RetroFoam of Michigan offers a lifetime warranty on both the material we use and the workmanship of the install.

4 We are licensed and insured. RetroFoam of Michigan is a licensed builder in the State of Michigan and carries liability insurance.

5 We are not pushy sales people. We don't use high pressure or haggling. Many home improvement contractors have a reputation for high pressure sales tactics to get homeowners to buy on the spot.

As homeowners ourselves, we don't like this tactic and we know you don't either. Our goal is to evaluate your home and determine if foam insulation is a good fit for your situation, then leave you with the facts and answer any questions you have so you can make the best decision for your family.

OUR MISSION IS TO
WOW
HOMEOWNERS
WITH AN
UNHEARD-OF
CONTRACTOR EXPERIENCE
TO ACHIEVE
MAXIMUM COMFORT
AND ENERGY EFFICIENCY
THROUGH THE MEANS OF
ENVIRONMENTALLY FRIENDLY
FOAM INSULATION.



Request Your Free Estimate

If you live in Michigan's lower peninsula and you're ready to take the next step and schedule a free in-home estimate, give us a call at 866-900-3626 or fill out the form on our website at RetroFoamofMichigan.com