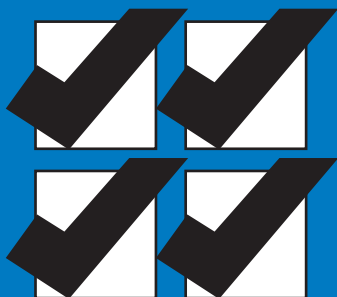


ENERGY CHECKLIST FOR HOME BUYING AND SELLING.



The purchase of a home is the largest and most important investment most people ever make. And one of the most influential factors in that decision is the energy efficiency of the house. In fact, a National Association of Home Builders (NAHB) survey has found that two out of three homebuyers list energy efficiency as a primary consideration when buying a new home. And more and more potential home buyers are becoming concerned with energy efficiency as experts still predict energy costs to increase throughout the decade.

BUYING A HOME

If you're planning on buying a new home, or an existing one, make sure you examine it for the four basic areas of energy efficient construction. These include: 1) optimum amounts of insulation, caulking and weatherstripping, 2) storm windows and doors or double- or triple-pane windows, 3) an efficient heating and cooling system, and 4) efficient lighting and appliances.

If you're buying a previously lived in home, make sure you also ask the owner for past utility bills. They provide a good indication of how wisely, or wastefully, a home uses energy. Many utilities also offer energy audits at a low cost for existing homes. Take advantage of these if available in your area. Finally, builders and real estate agents will often evaluate homes to determine how energy efficient they are. Ask for these as well.

SELLING A HOME

If you're planning On selling your home, remember the same four areas of energy efficiency can also help you. You might not be interested in spending a lot of money to install a new heating and cooling system but there are many less costly projects That can better prepare your home for sale. These Include such things as upgrading the insulation levels in your home, and caulking and weatherstripping around windows, Doors or baseboards to reduce air leaks. Such simple tasks will make your home more attractive to potential buyers.

Remember, more and more lending institutions are lowering their debt-to-income ratio for buyers of energy-efficient homes. The rationale is that owners of energy efficient homes will spend less on energy each month and therefore have more income available for home mortgage payments. Thus, many buyers can qualify for more expensive homes if they can buy an energy efficient one. Also, the more energy efficient your home is the more potential buyers will be available to you. And chances are your home might sell faster too.

✓ ENERGY CHECKLIST

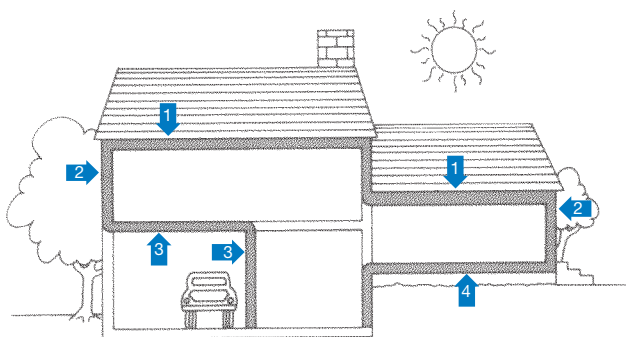
Whether you're planning to buy or sell a home. The CertainTeed Home Institute Energy Checklist can be a help to you. It lists the typical energy saving* features that should be in all homes. Before going ahead with the checklist, review the following to help you better understand what you are evaluating—and aid you in asking the right questions.

✓ INSULATION, WEATHERSTRIPPING, CAULKING

Since energy efficiency is so important to home buyers these days, a home insulated to optimum levels is a must. A properly insulated home can help you save on your fuel bills.

By far the most popular insulation material today is fiber glass. It is highly thermally efficient, noncombustible and won't settle or deteriorate with age.

An energy efficient home has fiber glass insulation all over.

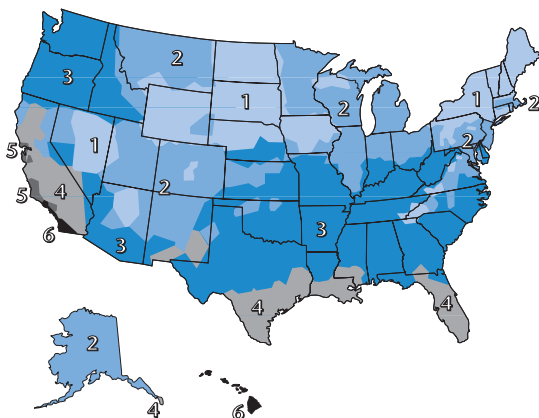


As you can see above, insulation should be installed in the attic (1), the sidewalls (2), in the ceiling/walls surrounding an unheated garage (3), and in the crawlspace (4).

Remember, insulation effectiveness is measured in R-Values or the ability of the material to resist the flow of heat. The higher the R-Value the greater the insulating power.

The CertainTeed Home Institute has prepared the following chart of recommended insulation levels based on current thermal recommendations developed by the Department of Energy. To use it, locate your geographic zone on the map, then find the appropriate R-Value for attics, sidewalls and floors.

* Savings vary. Find out why in the Seller's Fact Sheet on R-Values. Higher R-Values mean greater insulating power.



Zone	Gas	Heat Pump	Fuel Oil	Ceiling			Floor	Crawl Space (B)	Slab Edge	Basement	
				Attic	Cathedral	Wall (A)				Interior	Exterior
1	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
2	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
3	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
4	✓	✓	✓	R-38	R-38	R-13	R-13	R-19	R-4	R-11	R-4
5	✓			R-38	R-30	R-13	R-11	R-13	R-4	R-11	R-4
5		✓	✓	R-38	R-38	R-13	R-13	R-19	R-4	R-11	R-4
6	✓			R-22	R-22	R-11	R-11	R-11	(C)	R-11	R-4
6		✓	✓	R-38	R-30	R-13	R-11	R-13	R-4	R-11	R-4

(A) R-8, R-22 and R-28 exterior wall systems can be achieved by either cavity insulation or cavity insulation with insulating sheathing. For 2" x 4" walls, use either 3 1/2" thick R-15 or 3 1/2" R-13 fiber glass insulation with insulating sheathing. For 2" x 6" walls, use either 5 1/2" thick R-21 or 6 1/4" thick R-19 fiber glass insulation.

(B) Insulate crawl space walls only if the crawl space is dry all year, the floor above is not insulated, and all ventilation to the crawl space is blocked. A vapor retarder (e.g., 4 or 6 mil. polyethylene film) should be installed on the ground to reduce moisture migration into the crawl space.

(C) No slab edge insulation is recommended.

Attic Insulation. Attic insulation is the most important thing to look for when evaluating the energy efficiency of a home. Check the attic (including the attic door). If it has 6" or less of fiber glass insulation, it should be upgraded to the recommended level of insulation for your geographic area.

Sidewall Insulation. After attics, sidewalls are the second most important area to check for insulation. Since you can't see inside, to determine how much insulation exists press your hand on the wall. If it feels cold in the winter or hot in the summer it may need more insulation.

Properly insulated walls will not only help save energy, but improve comfort in your home.

Floor, Garage and Crawlspace Insulation.

Check for adequate levels of insulation under floors and in unheated crawlspaces. If the floor above feels cold to bare feet in the winter, adding insulation can help improve the comfort of the room. Also, look for proper insulation levels in garages and crawlspaces.

In addition to the more obvious places for insulation mentioned above, there are additional areas within a home which should be buttoned up.

Water Heater Insulation. Check to see if the water heater is well insulated. It should be. If not, the heater should be wrapped with fiber glass insulation. An insulated water heater can help you retain as much as 5-12% of energy that would otherwise be wasted.

Heating/Cooling Ducts or Pipe Insulation. Are the ducts and pipes insulated? Insulated pipes keep hot water flowing through them better. In the winter, insulation helps prevent pipes exposed to the cold from freezing. Insulated ducts increase the energy efficiency of your heating and cooling system.

Weatherstripping and Caulking. Check to see that all air cracks around window and door facings, at the joints of corner trim and siding, and at the joints of roof eaves are caulked and weatherstripped to avoid heat and air conditioning loss.

WINDOWS/DOORS

In many homes, the leading culprits of heat loss are windows and doors. Therefore, it is important to look for storm windows and doors or more efficient windows with double- or triple-pane glass to increase energy efficiency.

Storm Windows/Storm Doors. Standard windows and doors can lose approximately five to eight times more energy than an insulated wall area of the same size. Therefore, it is important to check for storm windows and doors. They can help reduce energy loss.

Double- or Triple-Pane Glass. Energy efficient windows with double- or triple-pane glass have two or three pieces of glass fused together around the edges with a space in between them filled with air or inert gas. If a window has double-pane glass it means it offers double the thermal efficiency of a regular window. Triple-pane glass provides three times the efficiency. Check for double- or triple-pane windows or consider replacing old windows with this type. They're an added energy efficient benefit.

Higher Efficiency Air Conditioning System.

Many central air conditioning units also have SEER ratings. Look for these when evaluating a home's air conditioning system. As mentioned, SEER ratings of over 9 are excellent, 7 or less indicate the air conditioner consumes a greater amount of electricity and is more costly to run.

High Efficiency Water Heater. Water heaters are major energy users. Check to see if the one in your prospective home is installed closest to points of usage. Also, to reduce costs try a lower thermostat setting between 140° if you have a dishwasher, and 120° if not. When replacing, choose an energy efficient model.

LIGHTING & APPLIANCES

The lighting and appliances in a home, to a lesser degree, also affect the amount of energy it consumes so look for efficient ones. Certain types of lighting as well as modifications can save a great deal of energy. A good way to evaluate efficiency of major appliances is to look for the bright yellow and black ENERGYGUIDE label to help you determine estimated annual operating costs.

Fluorescent Replacements. Look for fluorescent fixtures. They are highly energy efficient. A 40-watt fluorescent bulb at half the energy cost. If your prospective home doesn't have fluorescent fixtures find out if you can replace existing lighting. Besides the traditional ceiling tube, you can now buy fluorescent bulbs to fit standard incandescent lighting units.

Timers or Photocells on Outdoor Lights. Check to see if your prospective home has timers or photocells on outdoor lights. They're an added energy efficient benefit because lights automatically turn on and off according to darkness and thus are used only when needed.

High Efficiency Appliances. When purchasing a newly constructed home, check the ENERGYGUIDE label for such appliances as dishwashers, water heaters and furnaces. It will help you evaluate their annual operating cost and thus overall efficiency. If replacing any appliances, buy energy efficient ones and try to use them only as necessary, and not during peak electrical demand hours of 3-9 p.m.

The checklist is divided into the same four areas of energy efficiency discussed on the previous pages. Place a mark in the good column if your prospective home or the home you plan to sell has the energy efficient features listed in the checklist. When you're done add up the check marks in the good column. This will allow you to better compare the energy efficiency of one house to another.



ENERGY SAVING AREA

GOOD POOR

INSULATION (See Map)

Attic or Ceilings	<input type="checkbox"/>	<input type="checkbox"/>
Sidewalls	<input type="checkbox"/>	<input type="checkbox"/>
Floors	<input type="checkbox"/>	<input type="checkbox"/>
Garage	<input type="checkbox"/>	<input type="checkbox"/>
Crawlspaces	<input type="checkbox"/>	<input type="checkbox"/>
Water Heater	<input type="checkbox"/>	<input type="checkbox"/>
Heat/Cooling Ducts	<input type="checkbox"/>	<input type="checkbox"/>
Pipe Insulation	<input type="checkbox"/>	<input type="checkbox"/>
Weatherstripping	<input type="checkbox"/>	<input type="checkbox"/>
Caulking	<input type="checkbox"/>	<input type="checkbox"/>

WINDOWS/DOORS

Storm Windows/Storm Doors	<input type="checkbox"/>	<input type="checkbox"/>
Double or Triple Pane Glass	<input type="checkbox"/>	<input type="checkbox"/>

CENTRAL HEATING & COOLING SYSTEMS/MODIFICATIONS

Automatic Setback Thermostat	<input type="checkbox"/>	<input type="checkbox"/>
Special Fireplace Devices/Features	<input type="checkbox"/>	<input type="checkbox"/>
Oil/Gas Furnace or Heat Pump	<input type="checkbox"/>	<input type="checkbox"/>
Air Conditioning	<input type="checkbox"/>	<input type="checkbox"/>
Water Heater	<input type="checkbox"/>	<input type="checkbox"/>

LIGHTING & APPLIANCES

Fluorescent Fixtures	<input type="checkbox"/>	<input type="checkbox"/>
Timers or Photocells on		
Outdoor Lights	<input type="checkbox"/>	<input type="checkbox"/>
Appliances	<input type="checkbox"/>	<input type="checkbox"/>

In addition to the energy saving features listed above, a number of other characteristics will obviously affect energy consumption. Design and position on a site for instance are very important. The checklist does however help you compare energy saving features present in one house you like versus those available in another you're considering.

If you're selling a home you'll be able to better determine what steps need to be taken to make your home more desirable to more potential buyers.

The above checklist is a guide to help you evaluate the purchase of a home or prepare for sale. Material was compiled from various trade association, independent research data and specific research done by CertainTeed Corporation. If you have any additional energy related questions, write to the CertainTeed Home Institute, P.O. Box 860, Valley Forge, PA 19482 or call 800-782-8777.

✓ **CENTRAL HEATING & COOLING SYSTEMS/MODIFICATIONS**

The efficiency of a central heating and cooling system will have a major effect on your annual energy bills. Since it is so important, you may wish to have it professionally tested. Don't forget to look for oil and gas furnace modifications such as higher efficiency furnaces and an automatic electronic thermostat. Such modifications can help you save on your heating bill.

Special Fireplace Devices/Features. Many fireplaces have the capability to circulate warm air in a room through vent systems. Some also have automatic flue dampers which open when the fireplace is in use, but close automatically when it is not to keep heat from escaping through the chimney. Check for these extras in a home.

Automatic Setback Thermostats. Look for automatic setback thermostats. They cut energy costs by automatically lowering or raising home temperatures around your living schedules. If the home you're considering has one, it's a plus.

High Efficiency Oil/Gas Furnace or Heat Pump. Many high efficiency oil and gas heating systems have rating guidelines which have been developed by the Federal government. The efficiency rating for a furnace and boiler is termed AFUE (Annual Fuel Utilization Efficiency). An efficient oil or gas heating system will have an AFUE of 80 percent or higher.

If you're looking at an older furnace check to see if it runs smoothly or quietly. Look for oil stains and signs of wear. Ask how old it is. The average furnace can be expected to last about 25-30 years. When replacing choose a more energy efficient model.

Heat pumps both heat and cool your home and may save money depending on where you live. They are rated separately on their heating and cooling efficiency. A Heating Seasonal Performance Factor (HSPF) rating is assigned to measure its heating efficiency. A HSPF rating of more than 7 is excellent. A Seasonal Energy Efficiency Ratio (SEER) rating measures a heat pump's cooling efficiency. The higher the SEER the more efficient it is at cooling. A SEER rating over 9 is excellent.

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