



A buyer's guide to existing homes

FACT SHEET

1 OF 4



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Purchasing a home is an important and exciting event. As a homebuyer, you will be confronted with a number of important decisions such as size, floor plan, aesthetics, location and price. In the midst of these decisions, energy usually is not given much consideration, even though it can dramatically affect the operating costs, comfort and even safety and durability of the home. Luckily, there are steps you can take as you shop for your new home to ensure that energy is given its proper due.

ASSESSING HOME PERFORMANCE

The home-buying process typically includes viewing multiple properties with a real estate agent and attending house showings. This is your first opportunity to consider energy use in your future home.

You can get a general idea of a home's performance by talking with the current owner. If the owner has utility bills for the last year, ask to see them. Since energy use varies with the thermostat setting, ask what temperature the house is typically kept at in the winter and summer to see if the current owner's habits are similar to yours. Each degree of difference in the thermostat setting results in a three percent difference in heating & cooling costs.

While you're doing a walk-through of a house you also have a good opportunity to inspect its various components, which can provide some clues as to how well the house performs in keeping the occupants comfortable.

WHAT TO LOOK FOR WHEN VIEWING HOMES Heating systems

Furnaces. Modern, high efficiency furnaces are so effective at getting the last bit of energy out of gas that they can use a plastic chimney! If the furnace is vented with PVC plastic pipes, typically it will be at least 90 percent efficient. If the furnace is old and inefficient, you might want to consider replacing it with a high efficiency multi-stage furnace with an ECM motor for quieter, more comfortable operation, as well as providing significant electrical saving.

Boilers. Some homes have boiler systems that distribute steam or hot water through radiators for space heating. Boilers typically last longer than furnaces, as long as 30 years compared to 15 years to 18 years for furnaces. If the boiler is more than five years old, it probably has an efficiency rating less than 85 percent. Some new boilers now have efficiency ratings as high as 94 percent. Also, because boilers do not have air ducts, it is more difficult to install central air conditioning.

Fireplaces

Open-hearth fireplaces add ambiance to the room, but they also waste a great deal of energy. While a fire is burning, heated air from the house is exhausted up the chimney along with the combustion air. Similarly, unless the damper closes tightly, the flue will continue to draw heated air up

HOME ENERGY COSTS

Research in Wisconsin has found that energy bills in homes vary from \$700 to \$2,100 per year, with a typical homeowner paying \$1,200. This means that annual energy costs can vary by as much as \$1,400 per year—and a more energy efficient house could save you the equivalent of a month or two of mortgage payments.



the chimney when the unit is not in use. Look for tight fitting glass doors on both gas and wood-fired fireplaces.

Water heaters

Gas water heaters typically cost about half as much to operate as electric. A high efficiency model will likely be vented out the side of the house. Look for signs of leaking and discoloration or signs of scorching at the bottom or near the burners on gas water heaters—they may be signs of faulty operation.

Central air conditioners

An ENERGY STAR® central air conditioner should have a seasonal energy efficiency ratio (SEER) of at least 12. Replacing a unit over ten years old could reduce your cooling bill by 15 percent and up to as much as 50 percent if the unit is 30 years old.

Windows

Signs of condensation or water damage around windows are symptoms of too high humidity or poor performing windows. Window replacement is an expensive repair—but dual pane, argon gas-filled, low-emissivity replacement windows can increase both comfort and the resale value of the home.

Peeling paint and stains

Interior or exterior peeling paint could be a symptom of moisture problems. Interior stains can be a telltale sign of insulation voids, high relative humidity or other indoor air quality problems.

Appliances

The previous owners of your new home may want to take the existing appliances along with them. Since replacements purchased will affect your energy bills for years to come, select new appliances carefully. You can be assured of choosing efficient equipment if you buy appliances bearing the ENERGY STAR label. ENERGY STAR qualified units are as much as 10 percent to 50 percent more efficient than their conventional counterparts. Even if the previous owner has left the appliances you should consider purchasing newer, more efficient ones. Refrigerators, in particular, can

be high energy users; replacing a refrigerator that is more than 10 years old makes good economic sense.

Exhaust Fans

Exhaust fans remove excess moisture, odors and gas fumes. Look for exhaust fans in bathrooms and over kitchen ranges that vent to the outdoors. A bathroom fan must carry air and moisture out of the building—not just into the attic. Turn fans on to see how noisily they operate. Noisy fans typically are inefficient and generally will not be used regularly, leading to moisture related problems.

Recessed lights

Older recessed light fixtures can be both a major source of heat loss and a serious fire hazard. Try to determine if existing light fixtures have an “I.C.” (Insulated Ceiling) rating, meaning they can be safely air sealed and insulated.

Ice dams and icicles

Ice dams result from warm air leaking into the attic and poor insulation. Houses with serious ice dam problems cause water to back up under the shingles and enter the house. Water stains on the ceiling near exterior walls, or damage to the shingles near the roof edge, could indicate ice-damming problems.

Insulation

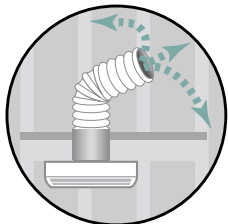
Homes built before 1980 often are not adequately insulated. Attics should have a minimum of 12 inches of insulation. Homes lacking wall cavity insulation will also have considerably higher energy bills and are more likely to be less comfortable in both winter and summer.

In older homes, look for evidence of plugholes every 16 inches along the top or bottom of exterior walls. This indicates that wall insulation has been added. But these typically are painted over or hidden under the siding, additional inspection may be necessary.

Most homes built after 1980 should have minimally adequate insulation although many would benefit from additional insulation and air sealing.

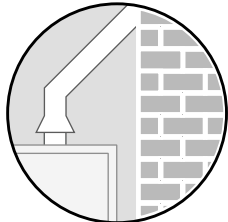
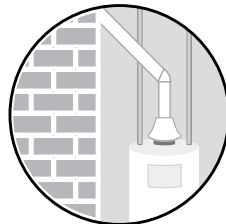


WHAT TO LOOK FOR WHEN VIEWING HOMES



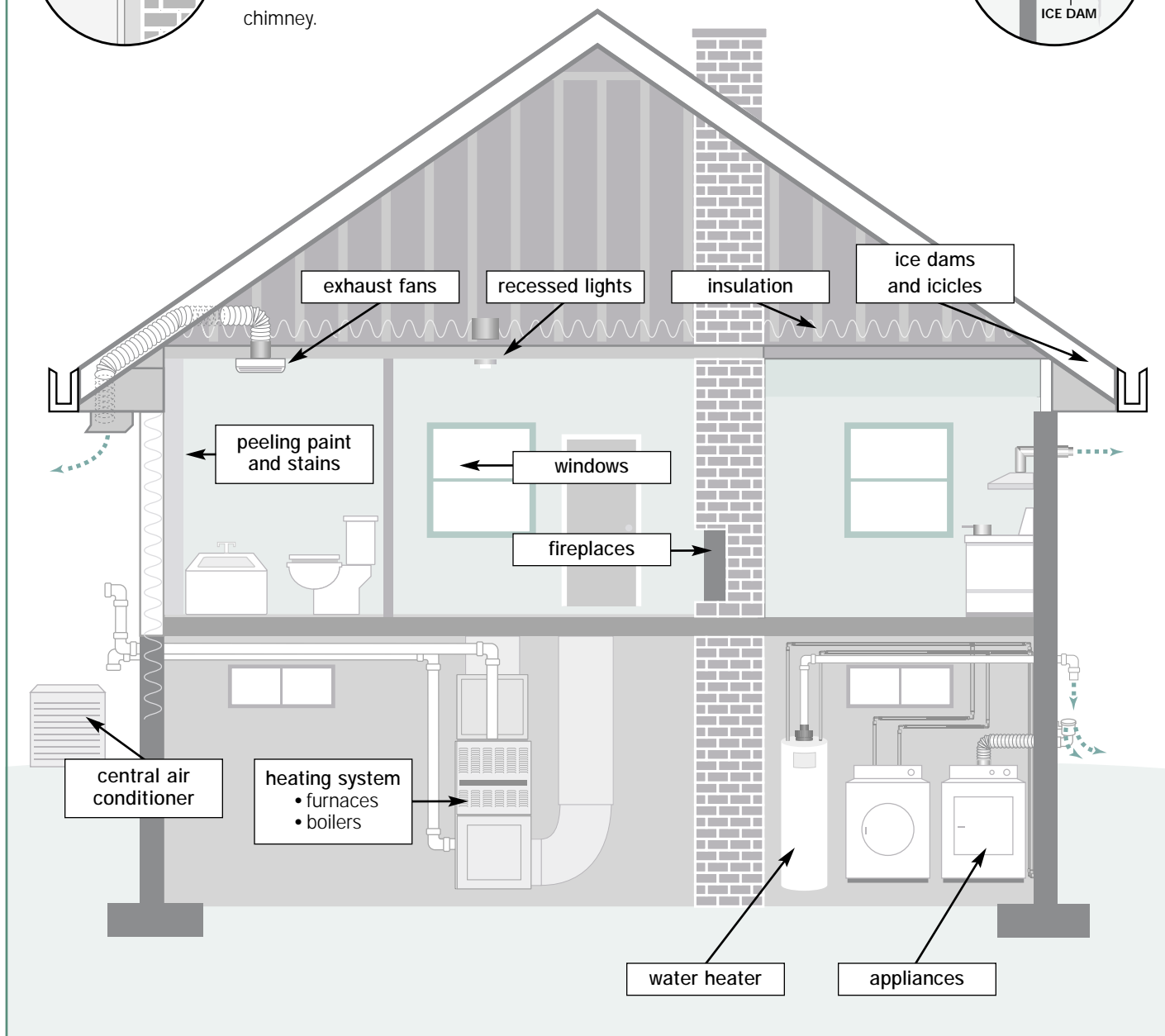
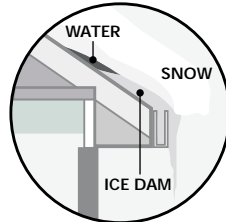
Exhaust fans should be properly vented directly to the outdoors (see house illustration below), not into an attic space.

A water heater that vents out the side of the house (see house illustration below) is more efficient than one that vents into a chimney.



A furnace that vents out the side of the house with plastic pipe (see house illustration below) is more efficient than one that vents into a chimney.

Ice dams at the edges of roofs are a sign of inadequate attic insulation, excessive air leakage, or both.





HIRE A PROFESSIONAL HOME INSPECTOR

Your informal inspection of the house should not replace the services of a licensed home inspector. If you decide you want to make an offer on a house, have a home inspector look for defects in the property that could affect safety or resale value. Homebuyers often make offers to purchase contingent upon such an inspection. Be sure to ask the inspector about any concerns raised during your own inspection.

CONSIDER A HOME PERFORMANCE WITH ENERGY STAR EVALUATION

Home inspectors are usually generalists with varying degrees of expertise in home energy use and do little actual testing of the performance of the home and its systems. A

consultant working with Home Performance with ENERGY STAR provides another level of evaluation for your new "dream house." A Home Performance consultant can conduct an evaluation to accurately measure the home's energy efficiency and identify potential problems that could contribute to high energy use, discomfort or unsafe conditions. The consultant can recommend improvements to the building or appliances and help facilitate any necessary work. Also, it is much less disruptive to make these improvements before you move into the home.

If the Home Performance consultant suggests a project with considerable cost, such as a new furnace, you may be able to include the cost in your mortgage. As you shop for a loan ask lenders about how to best do this. Some lenders offer energy improvement mortgages where the consumer can incorporate the cost of energy efficiency improvements into the mortgage for no additional down payment. Projected reduced energy use can actually lower your monthly out-of-pocket expenses in operating the house, making you eligible for a more favorable mortgage.

LEARN MORE

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Contact Focus on Energy at 800.762.7077 to learn more about how to contact a Home Performance with ENERGY STAR consultant, and other ways to save energy.

energystar.gov

This Web site contains useful information about ENERGY STAR® qualified appliances.

eere.energy.gov

Tips on saving energy and money at home.

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