

HEATING BILLS

Will Higher Heating Bills Justify a New Furnace?

With home energy bills expected to rise almost 50% this winter, the frugal American may face a tough call. Should I replace my furnace or try other methods to reduce energy use? The most effective way to cut the expense may be to spend thousands of dollars to replace an inefficient furnace.

Your furnace uses nearly half of the energy piped into your home. Yes, you can turn down thermostats, caulk windows and add insulation, but as cost effective as that is, it has its limits. There is no pat answer for the question as to replace or not, dependent on prices staying high or decreasing. If the prices stay high or go higher, then a new furnace could be one of the best investments you will ever make.

If you have an old furnace it might be worth running some calculations to see if you would benefit.

Find a chart to perform the calculations: www.nytimes.com/yourmoney.

The federal government began requiring in 1992 that furnaces have an annual fuel utilization efficiency, or A.F.U.E., rating of at least 78 (minimum for boilers that heat water for radiators is 80). With electronic ignitions instead of pilot lights and quiet variable speed motors, some heaters have ratings as high as 95%.

Alternative projects:

Installing **new windows** makes little economic sense. But if you are for aesthetic reasons, the high cost of fuel will get you a payoff sooner. Replace an old **refrigerator**, which typically is responsible for about 6% of a home's energy bill. An energy efficient **clothes washer** that uses less water might be even smarter because you get to save twice, first on the washer's power and then on the power used to heat the water. An old **water heater**, which accounts for 11% of the home energy bill should be considered. Some people will consider tankless water heaters that heat the water only as you need it. They cost about \$1,000 and use about 30% less energy. **Thermostats** can be programmed to lower the temperature when no one is home.

The federal Energy Policy Act of 2005 offers tax incentives for homeowners who install new furnaces and water heaters in 2006 and 2007. See www.nytimes.com for further links to more detailed information.

Weighing Potential Savings From a New Furnace

Annual Heating Cost:

Analyze total winter heating bills, subtracting non-heating energy use, using a bill from May or September as a base.

Efficiency Rating or Current Furnace:

Furnaces bought after 1992 should have an annual fuel utilization efficiency (A.F.U.E.) rating. Assume anything older than 15 years is around 65%.

New Furnace and Installation Cost:

Get several estimates for the total cost of installation. Your local labor costs, house size and insulation, and extent of new ductwork that will be needed will factor into the total cost.

Your Annual Savings:

If your old furnace is A.F.U.E. rated at 65%, your savings per \$100 dollars would be \$31.57 if you installed a furnace with a 95% rating. If your annual fuel bill is \$1,500, your annual savings would be 31.57 times 15 or 473.55 dollars.

Time Until Payoff:

Divide the investment—say, \$4,000—by your annual savings. In this case, it would take more than eight years to break even.

Return on Investment:

Divide the annual savings by the cost of the installation and multiply that by 100. If the new furnace will cost \$4,000, your first year return on invest would be 11.8%.

