

# Top 10 Things to Consider BEFORE Selecting a Replacement Window

The American Recovery and Reinvestment Act of 2009 was passed and signed into law in February of 2009. Homeowners are now being generously rewarded with a tax rebate incentive of up to \$1,500.00 if they make qualifying environmentally-friendly improvements to their homes by the December 31, 2010 deadline. The proverbial legislative ink had barely dried, as window manufacturers far and wide seemingly materialized out of obscurity. Suddenly, everybody and their uncle was now nobly boarding the energy-savings bandwagon, offering window deals of a lifetime. Promises were made, guaranteed to slash fuel bills, while rescuing Mother Earth from a certain impending doom.

Naturally, our green inner child aspires to do our fair share in preserving our environment... not to mention our wallets. Saving a bundle on utility costs and receiving a bundle back from Uncle Sam seemed like a delightful no-brainer for many thousands. For them, wasting valuable time and money by putting off needed home improvements was simply no longer an option. Thousands of others, however, remained skeptical and are still putting off the inevitable. Perhaps they just aren't convinced that their windows really need replacing. Or maybe, they just don't know which window company to trust or even where to begin. If you fall into this latter category, then stay tuned.

Saving money, saving the environment, and collecting a whopping \$1,500.00 reward are good things; very good things. That said, there are a plethora of potential pitfalls lurking on the horizon if we consider energy-efficiency while neglecting everything else. Therefore, I've listed what I regard as the top 10 most important things to consider BEFORE selecting a replacement window. I encourage homeowners to use this article as a checklist prior to getting an estimate on replacement windows.

## **1. REPUTATION OF COMPANY/PROBLEMS WITH START-UP COMPANIES**

Though there are many fine reputable window manufacturers to choose from, homeowners also need to beware of start-up companies. Of course, all companies were start-up companies at one time. Nevertheless, new figures from [InsolvencyJournal.ie](http://InsolvencyJournal.ie) reveal that four companies a day went belly up in the first seven months of 2010, up 22% from the same time in 2009. We've seen window companies go out of business, change their names, and reopen. We've seen companies like Republic and Kensington declare bankruptcy, potentially leaving customers holding the bag with worthless warranties and un-serviced windows. We've seen no fewer than 17 major window manufacturing corporations file for Chapter 11 in the last 3 years.

A word to the wise: Check out a company's reputation BEFORE spending your hard-earned cash. Exercise caution BEFORE purchasing from a highly leveraged impersonal company or a start-up company.

## **2. HOW LONG WILL A WINDOW LAST BEFORE YOU NEED TO REPLACE IT?**

The next thing to consider is how long a window will last. All windows are NOT created equal. Windows run the gamut, from the quality of the glass package to the quality of the framing system. Investing in replacement windows for your home should only be done once. Most windows are only made to last 10 to 20 years. Some cheap windows that go for \$150 to \$200 may only last for 3 to 5 years. Some manufacturers claim that their windows will last for 50 years or even a lifetime, but they are often unwilling to back those claims in writing.

## **3. WINDOW WARRANTIES: READ THE FINE PRINT**

Some manufacturers not only claim that their windows will last a lifetime, but they even back it up with a so-called "Lifetime Warranty." Before you get too impressed, you'd be well-advised to read the fine print. Many so-called lifetime warranties are misleading. Many lifetime warranties refer to the lifetime of the window, not the lifetime of a homeowner. Such a guarantee is virtually meaningless. It's like saying, "I guarantee you that you will stay alive up until the day that you die." Double-talk. Take a few minutes on the Internet and look up "Lifetime Warranty Definition." You'll see what I mean.

## **4. DON'T GET "FRAMED" WITH FAULTY FRAMES**

There are a wide variety of window frames to choose from: wood frames, vinyl frames, fiberglass frames, aluminum frames, wood frames covered with aluminum or vinyl, and composite frames. Decisions! Decisions! If you wait until a window salesperson arrives at your doorstep to figure out which frame is best, guess which frame the salesperson will recommend? Naturally, the one his company sells.

There are pros and cons to each choice. Get all the facts BEFORE you buy.

### **Wood frames**

Because many homeowners like the look of wood, wood frames are still a popular choice. One advantage of wood is that wood is energy-efficient. Wood is a non-thermal conductor, so it won't lose heat or draw heat in from the outside. The downside is the constant maintenance required to keep wood looking decent. If you enjoy painting, staining, scraping, and sanding, then by all means, be my guest. But keep in mind that wood can also shrink, rot, and warp, which means you'll probably have to replace your windows over and over. This is good for the manufacturer, but bad for you.

Of course, some companies treat wood in an attempt to preserve it. However, treated wood may contain toxic chemicals. Also, wood is expensive. Other framing options are much more economical. So when we stop to consider the cost and hassle of maintaining wood frames, the cost of replacing windows, and the danger of toxic chemicals,

wood windows may not be the best choice. Instead, a homeowner may be better advised to consider alternatives that will save time, money, and a tree.

### **Aluminum or vinyl-clad wood frames**

Next, consider aluminum or vinyl-clad wood frames. Like frames made entirely of wood, clad wood frames also require maintenance, though not quite as much. Aluminum-clad wood frames are more energy efficient than aluminum window frames, though they are not as energy-efficient as wood frames without aluminum. And clad frames have been known to hide water infiltration, leading to costly deterioration hidden under the cladding. There have been lawsuits involving this very issue recently, involving well-known companies. Your best bet is to avoid this technology.

### **Fiberglass or Composite frames**

Some say fiberglass is the wave of the future. That remains to be seen. There are some advantages of fiberglass frames. Fiberglass is strong when going against the grain. Since Fiberglass extrusions are made by a Pultrusion process, which is the binding of small glass fiber together with glue. This is similar to the process used to produce particle board (gluing of wood fibers). The result is that when fiberglass is hit along the grain it cracks like a hot knife through butter. Remember the major damage on Corvettes when they were involved in "minor" fender benders.

Fiberglass has to be screwed together, leading to weak joints in the movable sashes. Fiberglass and composite window frames also cost more than other types of frames. Plus, since they have to be painted or top-coated at the factory, some colors tend to fade.

Since fiberglass windows are relatively new on the scene, only a few companies currently make them. Therefore, their long-term performance is still uncertain. Fiberglass window frames also cost more than other types of frames. Fiberglass extrusions must be painted because the sun/UV rays will degrade the glue, making the extrusion fragile and susceptible to cracking.

There are additional areas of concern regarding fiberglass. One should think long and hard before choosing this option.

### **All-aluminum frames**

If you want energy-efficient windows, all-aluminum frames should be avoided like the plague. Aluminum conducts heat. In the winter, your heater will need to keep running constantly to make up for the heat loss. Then in the summer, you'll need to keep your air conditioner running full-blast to offset the hot air circulating indoors.

### **All-vinyl hollow frames**

All-vinyl hollow frames offer some advantages. They are available in some options but due to lack of structural support they are limited in size maximums as well as mull configurations. They are available in architectural shapes, and various colors. They are energy-efficient, easily customized, competitively priced, and they require very little maintenance. The disadvantage of all-vinyl hollow frames is that they do not possess the strength of metal or wood. This problem can easily be solved, however, by stiffening the vinyl with rigid extruded reinforcement rails.

### **Completely reinforced Vinyl Windows**

A select few windows incorporate the ease of maintenance and low conductivity of vinyl that is reinforced completely with a specially extruded stiffener. The result is the best of all worlds and you get a window that is energy efficient and strong! Homeowners who want the best for their home should strongly consider this option.

## **5. ENERGY-EFFICIENT WINDOWS**

With the skyrocketing costs of utility bills and a natural concern for the environment, prudent homeowners should definitely consider the energy-efficiency of a replacement window, among other things. There is a combination of factors that contribute to the overall energy-efficiency of a window. The type of frame, the number of glass panes, the type of coating and the number of coats applied to the surface of the panes, the type of filling that goes between the panes, and the type of security locking system all contribute to the energy-efficiency of a window. We'll consider each of these factors, one at a time.

## **6. LOOK FOR THE ENERGY STAR LABEL/CHECK THE U-FACTOR**

When looking for an energy-efficient window, the first thing to look for is the Energy Star label. Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy, which was formed to help homeowners save money and protect the environment through energy efficient products and practices. If a window carries the Energy Star label, it has been approved as energy-efficient and may qualify for up to \$1,500.00 in a tax credit for 2010. But be careful. Not all Energy Star labeled windows qualify for a tax credit. Furthermore, not all windows that do qualify for a tax credit are as energy efficient as others. For example, in order to qualify for the tax credit, new windows must have a U-factor and Solar Heat Gain Coefficient (SHGC) less than or equal to 0.30.

Remember: a window may have the Energy Star label, but it may not meet the .30/.30 requirement. In such a case, it will not qualify for the tax credit. Also, there are many windows on the market that have a much better U-factor than .30, meaning they are much more energy-efficient than those windows that barely meet the minimum standard. Some windows, in fact, have a U-factor as low as .21. Keep in mind, the lower the U-factor, the more energy-efficient the window. U-factors can be checked by visiting the NFRC (National Fenestration Rating Council) website at <http://www.nfrc.org>.

## **7. HOW MANY PANES DOES THE WINDOW HAVE?**

One of the contributing factors of a window's energy-efficiency is how many panes a window has. Some claim that dual paned windows are just as energy-efficient as triple-paned windows. Others maintain that triple-paned windows are more energy-efficient.

Though it is true that a dual-paned window with a soft-coat Low-E coating will usually have better thermal performance numbers than a triple-paned window without a Low-E coating, it is equally true that a triple-paned window with two surfaces coated with a Low-E soft-coating is more energy-efficient than a dual-paned window with a soft-coat Low-E coating.

Here's what Energy Star says:

"All energy efficient windows have at least two panes, but not all double-paned windows are energy efficient. Twenty years ago, double-paned meant energy efficient; today, advanced technologies have enabled the development of windows that are much more efficient than traditional clear-glass double-paned windows."

Two of those advanced technologies include multiple soft coating and filling the spaces between the panes with inert gas.

## **8. MULTIPLE SOFT COATINGS ENHANCE ENERGY-EFFICIENCY**

Coatings can be applied to the window panes to make a window more energy-efficient. However, not all coatings are created equal. Double soft coating is superior to single soft coating and vastly superior to pyrolytic hard coating. A window's overall energy-efficiency can also be improved by applying a double soft coat Low-E to two of the three panes of glass in a triple-paned window. Each coat contains many layers of atomically thin metal oxides.

## **9. GAS FILLED BETWEEN THE PANES OF GLASS IS A MUST**

The spaces between the panes should be filled with inert gas to increase energy-efficiency. Argon is predominately used while some claim they use Krypton. Because Krypton is extremely more expensive than Argon it is unlikely a low price window really uses Krypton. A select few manufacturers have developed mixtures of gas to be filled in between the glass. The result is a more expensive and energy-efficient window than one utilizing straight Argon. The resulting improvement in energy efficiency will typically pay for the increase in cost.

## **10. SECURITY LOCKING SYSTEM**

One thing that is often overlooked is the security locking system of a window. Most windows have flimsy latches that make it easy for a burglar to break through. Though we've said a lot about energy-efficiency, keeping your valuables

and loved ones safe and secure is certainly more important than saving a few pennies on utility bills. A top-of-the-line security system may bring the overall energy-efficiency of a window down a tad. But the minuscule drop in energy-efficiency will be more than compensated by the peace of mind you'll experience knowing your home is safe and secure.

## **SUMMARY**

In summary, when choosing a replacement window, consider these 10 things BEFORE you make a purchasing decision:

1. Is the manufacturer reputable?
2. How long will the window last before you have to replace it?
3. What kind of warranty does the window have? Read the fine print.
4. What qualities are you looking for in a window?
5. How energy-efficient is the window?
6. Is the window Energy star approved? Does it qualify for the tax credit?
7. How many panes does the window have?
8. Does the window have multiple layers of soft coating?
9. Are the spaces between the panes filled with a gas that helps insulate the window?
10. Finally, consider the quality of the security locking system.