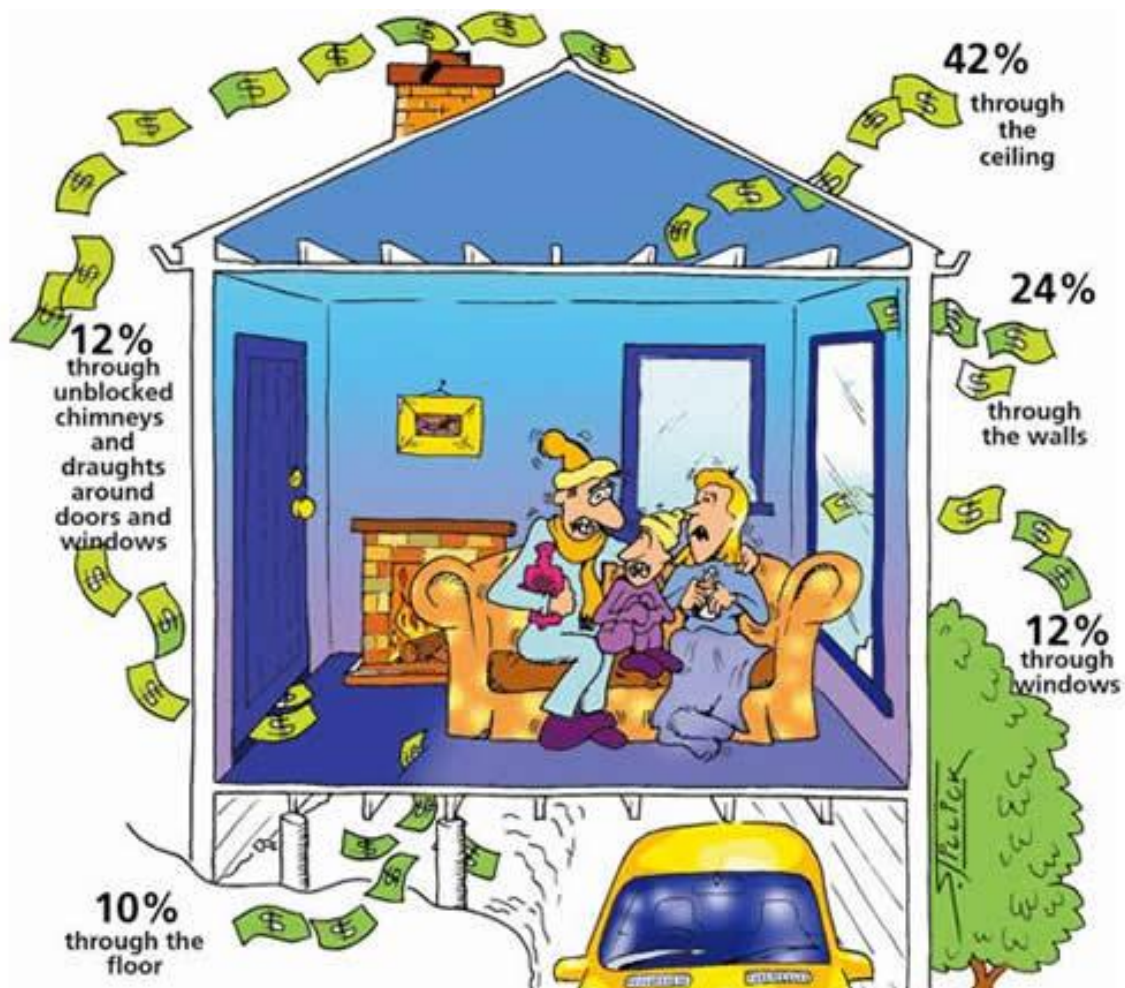


# How to Make Your Home Energy And Cost Efficient



## **Table of Contents**

Introduction

Chapter 1: Determining Current Costs

Chapter 2: Cost Over Savings Analysis

Chapter 3: Getting Started Finding Your Biggest Needs

Chapter 4: Start Small For Big Savings

Chapter 5: Your Window Savings

Chapter 6: The Fireplace Advantage

Chapter 7: Energy Saving Habits To Develop

Chapter 8: The Thermostat

Chapter 9: Energy Star: Understanding What It Is

Chapter 10: Outside The Home

Chapter 11: Alternative Sources Of Fuel

Chapter 12: The Energy Efficient New Home

Conclusion

## Introduction

Are you ready to find out if in fact your home is as energy efficient as it can be?

Most of us have some big and some small things that they can do to better the cost efficiency of home. Whether you just want to drop a few dollars off of your gas bill or you are looking for a better way to fuel your home altogether, doing just a few things can make a tremendous amount of difference in your home.

Why bother with cost efficiency? You can afford the bills so why bother? Many people will be shocked to learn that they can lose up to 25% or more of the energy in their home without the need to. You literally could be flushing your money down the drain.

The good news is that making your home energy efficient does not have to be overly challenging. It also does not have to be overly costly either. There are some changes that will cost a decent amount of money to implement into a home. These are usually the things that need to be taken into consideration if you plan to save a great deal of money.

As you will see in this e-book, there are plenty of things that you can do to better your home's ability to use energy more wisely from just about every aspect you can imagine. But, in our first chapters, we need to take the time to really analyze if in fact making the change is worth it.

There are some products and some companies that do promise that you will save a great deal of money and you wind up investing a great deal to wind up not saving anything.

The best thing for anyone that is looking to improve their home's ability to use energy wisely is to take a good look at what the product or need is, how it is used, the cost of the product and the cost of the installation and then determine if in fact it has the potential of making up those funds through energy savings. Some won't. Others will.

Throughout this e-book you will learn things that you can do right away to improve the energy efficiency of your home. You will also learn different ways to save money on everyday needs that you have. You will find yourself saving money and living in a more efficient and environmentally friendly home.

## Chapter 1: Determining Current Costs

One of the first things that you should do when looking at your ability to make your home more cost efficient is to know just what you are currently paying.

By taking the time to determine what you are currently spending on energy, you can better determine which areas you have the potential to save with. In each area of the country, there are different rates, different co ops and a wide range of different types of fuel to take into consideration.

It is up to you to find out what you are paying based on your monthly bill payments. Look at those payments and notice two things.

- What is the amount that you pay per unit that you use of that fuel type?
- What is the amount of that fuel type that you use per month in units?

Your goal, then, is to notice how you can change these.

### Can You Lower The Cost Per Unit?

The first way to determine if you can lower your costs with your fuel usage is to determine if you have the most cost effective provider of that fuel.

In many areas of the country, there are several providers of each type of fuel that you need. For example, you may have a choice in which gas company you use or which electric company that you use. If that is the case, then you should determine which is capable of providing you with the lowest rate per unit of fuel used.

To find out if you have an option in this service, simply contact your local government. They can easily tell you which providers are available as well as provide contact information to you.

Then, give each provider a call and ask them if they do in fact provide to your home. If so, then ask what their rates per unit are, as well as any transfer or account set up fees that they may have. Do this for all of the providers in your area until you find the most affordable choice.

By doing this, you can instantly save money without having to worry about investing anything but a few minutes of your time.

### Can You Lower The Number of Units?

The next step in this process is to determine if you can lower the number of units that you use of your fuel type. Now, the most simplistic of ways to do this is through simply turning off more power or fuel to your home.

One thing that people do not realize is just how much it matters that you turn off and unplug the appliances and other tools for your home.

Throughout the next pages of this e-book, you will learn not only how to improve the efficiency of your home, but also how to simply use less energy altogether. When you do this, you are better able to find lower costs.

For now, start off by investing a few minutes right now. Get up and walk from room to room in your home. Turn off any light, any fan, any appliance that is on. Don't forget to unplug those units that leave LED lights on even when they are turned off. These units can save you a great deal of money. Go ahead; see how much you can already save just by doing this.

## Chapter 2: Cost over Savings Analysis

Before we get into saving you money with methods to lower the number of units that you spend on your fuel each month, we do need to show you the benefits of energy savings by smart investment.

Because the world is in a fuel crisis and the cost of gas and other energy means continues to rise, there are those not so nice guys out there that are promoting products that are anything but a way to save money. These products may work, but probably do not.

The trick is that you need to know before you purchase them if in fact they are something that is cost effective or if they are something that will be a waste of your hard earned money.

We can help you with a few good tips about purchasing any item that may be presented to you as a way to save energy on your home's fuel usage. Take some time to really think about what you are investing in before you do so. This alone can save you money.

### **Tips for Analyzing Benefit**

Take these tips to heart:

- What is the product promising to do for you? Any product that is promising amazing results is probably not providing them. If there was a miracle product out there, wouldn't we all have it by now?
- What is the cost of this product in the first place? How much will it cost you to purchase, install and then use this product?

- Does this cost actually figure any savings to you within the first days of use? In other words, it should be able to immediately help you to save money on your energy needs.
- Finally, how long will it take you to make up the difference in the cost of the product over the amount of money you have invested in it? If you can not get your costs back quick enough, it too may not be the right choice for your needs.

When you take these things into consideration, you will find yourself better able to understand the true benefit of any supposed energy savings gadget that is out there. Now, there are sure to be those things that do actually work too. But, you need to find them first.

### **Know Before You Buy**

There are several things that you should know about before you invest in these energy savings products as well. Now, mind you, if you are talking about a ten dollar investment, it does not take all of this research. But, if you are talking about replacing or amending any of your major energy producing systems in your home, such as your furnace, then it pays to pay attention to the details.

One thing to find out is who the company that is offering this product actually is. For example, who is marketing this product to you? If you can take a few minutes to find this out, you can log into the Better Business Bureau's website and find out if in fact they have had any claims put in against the company or person that may in fact have to do with this product.

You can also search for reviews of the product by using your favorite search engine and the name of the product followed by the word review. When you do this, you may find several different websites all providing a different look at what this product can or possibly will not do for you.

Take the time to determine if there are good or just bad points to this product.



Also beneficial is to take some time to learn about the way that the product's manufacturer backs up their claim. If you find that the product does not work as effectively as it has promised, can you send it back to them? If so, before you even purchase it, you should know where you can return it to get your funds back.

Doing these things is almost a must when you are purchasing from a company that you have not heard about in the past. What's more is that protecting yourself is something you have to do.

### **Is It Worth The Cost?**

There are plenty of traps out there that can really cut into any potential that you have in gaining anything from a product. But, the bottom line is that the product that you are purchasing to help you to save money must be able to actually do that.

To do it, the cost of the product must be able to be made up quickly by the product saving you the money.

You should also take some time to determine if this product fits a need that you have. If you are investing in a \$2000 new furnace for a home you do not use, it may not be all that beneficial to you. But, if you use that furnace each day, then this money can come back to you ten fold quickly, if the product is worth the investment of course.

Finally, although we have said quite a few negative things here regarding products on the market that may not be beneficial to your home's energy efficient needs, it is important to note that there are plenty of great companies and services out there that actually are capable of providing the highest quality service as well as lowering your costs for fuel.

In fact, if you think about it, solar panels wouldn't be around if someone hadn't thought to use the sun's powers to heat us.

You also would not have plenty of the other things that we use each and every day to if someone hadn't thought that this was a great idea and then made it happen.

Therefore, it does make good sense to insure that you do take the time to consider what the product is and what it is promising. While there are scams out there, there are also quite a few beneficial products on the market that can better your ability to save money on your home's fuel needs too.

## **Chapter 3: Getting Started By Finding Your Biggest Needs**

Now that you have an idea of how to go about considering any and all products that you will put into your home, you should be considering what your biggest potential need for your attention is.

As you found out just how much you are spending each month on your energy needs, you should be able to see which your largest consumer is. For most people, this is gas.

### **Gas**

Gas is quite expensive and there is no doubt that in the coming years the prices of it will continue to rise. But, there is more to consider than just that. Think about the fact that within the next sixty years, most scientists believe that we will have exhausted all of our crude oil supplies around the world, leaving all of us to face the fact that there may not be any gas left to use.

As the supply of a product dwindles, the costs of it go up. To make matters worse, we continue to use more and more gas each and every year.

In addition to that, gas is not the world's healthiest fuel choice to burn. It does not help the environment when we burn it daily in our cars and to heat our homes. Simply, depleting the vast resources we have as well as hurting the environment while we use it are two reasons to stay away from gas usage.

So, what does this mean? It means that now is the time to look at how you can save gas costs within your home. The prices are going to continue to rise and there is no doubt your bills will continue to rise as well. Yet, this does not have to mean that you can keep losing a great deal of money either.

There are plenty of ways to save on gas, as you will see throughout this e-book. If it is your biggest cost in fuel usage in your home, this is where you want to start.

## **Others to Think About**

Of course, gas is not the only type of fuel that you use in your home. In fact, electricity can be another potential money saver if you learn to use it wisely. In fact, all you need to do is to invest your time in finding out where you use these fuel sources and how you can save in doing so.

## **What Do I Do Now?**

Once you have found out what your fuel costs are and where your largest money saver is, you can begin to look for answers to your specific needs in energy savings. But, there are some other things to think about too.

Making the big changes can be costly. Therefore, you will want to do all of our little changes first so that you can go back later and make larger ones with the funds that you save. Here's what we mean.

If you take the time to install some added insulation in your home, you will begin to reap the benefits of needing less fuel to cool or to heat your home. Now, take this savings and consider stockpiling it, so to speak. When you can, down the road consider purchasing solar panels for your roof so that you can begin using literally free power instead.

There is no doubt that some changes are going to be costly, but if you can find them beneficial in the long run, they may be well worth it.

## **Chapter 4: Start Small For Big Savings**

Throughout the next chapters in our e-book, you will find many, many different tips and tricks to helping you to save money on your home's energy needs.

But, as we mentioned, it is smart, even most beneficial to start small and work up to larger changes in your home. Now, that does not mean that you can not do both, but we will begin talking about some of the small, inexpensive ways that you can begin to see energy efficiency in your home.

In the next pages, we will list some pretty simple things you can do right now to get started at saving your hard earned money.

### **Insulate Your Water Heater**

There are several things that you can improve with your water heater to see benefits in energy savings.

First off, do you realize that you are heating water to a certain temperature for your shower or your washing machine only to bring that temperature down by mixing it with cold water so that it is usable? Most people can not use straight hot water and that's where some savings can come in. Lower the hot water temperature to the lowest comfortable setting for your needs.

If you have an energy efficient hot water heater, you can save a great deal of money just not heating the water as hot as you normally would. Most hot water heaters have dials that you can use.

You can lower it just a bit or a good amount, just do not drop it below 120 F, as this is an unsafe level for bacteria and sanitation reasons. This is especially helpful if you have an electric heater.

Another thing to consider doing is to install a timer on your water heater. What is the sense of warming water over and over during the day if you are not home or

do not use it during the day? Have the water heater timer kick on before you come home from work so that hot water is ready and waiting for you.

Even better is insuring that the timer keeps the heater off during the night when you know you won't be using it. You can again set the temperature on your hot water heater to aid in getting it right.

Probably one of the largest benefits in regards to your water heater is to have it insulated. Most of the time, your water heater will already be insulated, you just need to take it to the next step. By adding insulation around the outside of your water heater, you are keeping the heat inside the water heater and therefore reducing the need for the heater to turn on and heat, using fuel to do so.

This is a large benefit to anyone that is perhaps housing their water heater in the basement or in another area of their home that is not heated.

There are two solutions here. First, you can purchase prepaid hot water heaters to easily apply to your hot water heater. These fit snugly over it and take just minutes to install.

Another option is to consider making your own with strips of insulation cut the size of the circumference of the water heater. Use duct tape to keep it in place. Just be careful not to cover the areas where gas or piping are located otherwise the water heater will not function properly for you.

## **Your Piping**

The next big yet easy energy saving solution for you to consider is to insulate your home's piping. Piping carries hot water to and from the various faucets in your home. The route that it takes is important to consider.

In addition, it is important to insure that while the hot water is traveling to its destination it is staying as hot as possible. If not, you will be tempted to just up the temperature on your hot water tank.

Yet, all you will need to do is to insulate the pipes to insure that the water temperature does not drop when traveling from the hot water heater to the actual place where you will use it.

This can be very beneficial to those that have piping that runs through areas of your home that are not heated, such as the basement or even outside. When this happens, the temperature of those pipes can become very cold, especially in winter months, drastically lowering the temperature of the hot water you need.

To remedy this, just purchase and install insulation for your hot water pipes. You will find very easy to use pre-made foam pipe insulation available to use.

To do so, just cut down one side of the insulation with a sharp knife so that you can insert it over the top of the piping. Make sure to measure for a snug fit too. Snap it onto the piping. When you come to a corner, joint or other angle, all you need to do is to bend the foaming to form fit over the piping. Most of the time, this is easy to do. Then, use duct tape to cover any of the slits you have made and the joints.

It also pays to do this with cold pipes as well. These pipes often sweat and then drip onto the other hot pipes, again, lowering the temperature in them. In addition, insulating them can help to protect them from freezing and or breaking during winter months.

## **You're Furnace**

Your furnace is probably one of the largest consumers of energy in your home. It makes sense that you should want to take into consideration any and all different types of ways to keep those costs lower.

One of the simplest yet most effective methods to keeping your furnace running efficient is to simply change the furnace filters often. Both your air conditioning units and your heating units have filters that allow air to pass through them.

When your filters are clogged with dust and other stuff, it makes it harder for the air to get into your unit and therefore makes the unit work harder.

The harder that it works, the more energy it needs to have. In fact, if they are overly clogged up, you can cause your entire unit to become overheated and then find problems such as your compressor going.

See, the problem here is not the costs though. Your filters are likely to cost just a few dollars and they are even easy to replace. Yet, people just do not get to their furnace and take care of it as often as they should. You should check your furnace filters each month.

There are two different types of filters you can use. The first is the standard type and these are very inexpensive to purchase and are disposable. Many people dispose of these each month just to make it easier on themselves instead of having to bother with checking them.

If you purchase other type, which is a more expensive, allergen and small particle filter, you may not want to dispose of it each month. Rather, put it up to the light to see if in fact light can make it through. If not, then it is time to replace them which is likely to be one time every three or so months.

You may also have a self charging electrostatic filter. These filters still need your attention at least each month. Here, you will want to clean them monthly by rinsing them from the clean side. These usually need to be replaced one time every several years.

Another benefit that you can get from your furnace is to insure that you have it checked and cleaned each year. You should do this as it can help to improve the overall efficiency of the unit. Most heating and cooling experts say that having the unit checked each month can help you to save throughout the year and keep you from having to replace the unit too soon.

## **Ceiling Fans**

Another aspect of your home that you can save some money on is the ceiling fan. Most homes have these installed throughout them. If you do not, consider



adding them. Most of the time, they are not too costly, and can even be found quite inexpensively.

You can save a great deal of money with ceiling fans if they are used right.

In the summer, use your ceiling fan in a counterclockwise direction. Allowing it to spin this way will keep air moving. Moving air feels cooler and therefore you will not need to use your air conditioning as much. In addition, it will help to keep the air moving and keep the thermostat set higher. The air conditioning units in homes will use a great deal more energy than that of a ceiling fan.

But, in the winter, you should use them as well. In this case, have them spin at their lowest setting and in reverse (clockwise) so as to push the hot air that rises from the ceiling down onto the working area of your home.

At the lowest setting, it will not cause a breeze in your home either but will keep the furnace from having to be set too low during the winter months.

In the coming chapters, we will talk more about other elements in your home that need to be taken into consideration when it comes to energy efficiency.

There is no doubt that you may be thinking that covering your pipes and keeping your hot water tank insulated are going to cost you some money. That is true. In fact, you may find yourself spending a couple of dollars and investing some time in making sure that those things are happening.

Yet, the benefits of doing these things with these units in your home are definite. There is no doubt that you can keep your energy costs down by investing a little money in these projects.

## Chapter 5: You're Window Savings

Consider your windows. Are they everything that they can be to you?

There is no doubt that windows in a home are necessary, but they can cost you a great deal of money when it comes to energy. The fact here is that windows allow for air to pass through them easily. In effect, they can be a huge part of your energy usage.

In fact, those that have windows that are not providing a good amount of insulation can be looking at up to 35 percent of their loss to come from their windows. 35 percent of the energy that you use can be due to your windows.

### **Should You Replace?**

To repair this problem, there are several things that you can do. First off, this is one case when you will want to carefully consider the benefits of replacing your windows. If you have older windows, it may be necessary to replace them.

Windows on a home should be replaced any place from every ten years to every twenty depending on the type of window and its insulation. It is not so much their age, though, as the way in which they work.

What you are looking for is a good level of protection. You want the heat to stay in during the winter months and the cold to stay out. Flip flop that for the summer months. Nevertheless, this can be hard to do for older windows.

Those that have fewer than two panes of glass should be replaced for additional energy efficiency, if your budget allows for it.

If there are cracks, breaks and other areas where the window is compromised, these too should be replaced beyond a doubt.

But, when it comes to replacing windows, it is not necessary about purchasing the most expensive one out there. Because the windows in your home make up such

a large, large faculty of the energy that you use, you want to purchase the highest quality, energy efficient windows that you can.

They should look the way that you want them, but it is more important to get those that will keep temperatures even throughout the home instead.

The cost of replacing windows is a large one, yet the fact is that they can save you a great deal.

It may be that you wish to wait a couple of additional months before purchasing windows and that is just fine. In the meantime, why not consider any of these other window tips to save you money?

### **The Candle Check**

We can not always feel or see a draft that is being caused by your window. To help you to see if there is in fact air coming through any area of your windows, use the candle check.

- Take a candle (or you can use a piece of lightweight thread if you like) to your windows. Do this on a windy day where the trees are moving.
- Next, run the candle or thread along the edges and the panes. Do this slowly as to not move the candle fire or the thread any more than necessary. Notice where the candle or thread moves. If there is movement from an area, then this is an immediate problem that should be handled.
- In cases where there is movement, repair this damage right away. You are throwing away (or letting seep out) your money.

Once you have an idea of where the problem areas with your windows actually are, you can remedy them. If you need to replace caulking around the interior or the exterior of your home's windows, it is necessary to completely remove and clean off any remaining caulk first. A clean layer will insure a snug fit for the new application.

Consider the weather stripping as well. You can now purchase self stick foam as well as rolled up rubber weather stripping that can be added to virtually any window. These are simply to apply and can instantly save you countless dollars on your home's energy bill. You can easily purchase them as well.

### **The Winter Plan**

Let's say that you have an older window problem in your home but can not find the money or time to replace your current windows. You know that during the winter months that heat is escaping, what can you do?

One solution that many people turn to is that of using thin, clean plastic films to place over the window. These do quite a bit of good when they are applied correctly. Of course, you do need to insure that you do that.

To do so, purchase these inexpensive (usually just a couple of dollars) films for the windows in your home, especially the larger ones. Most department stores will carry them in their hardware section.

The film will need to be stretched tightly over the window. Then, you will use a blow dryer to remove any wrinkles in it. Once this is done, you simply will need to use a two sided tape to seal down the edges to keep air out.

This type of product works by keeping air from flowing into or out of the home. It is a good solution for those that can not replace drafty windows in their home during the winter months.

## **Window Decoration Tips**

What most of us do not realize is that our windows can allow a lot of air to escape, especially larger ones. One way that you can take energy use seriously is to insure that the way that you decorate your windows is the best way to keep energy in.

The more layers of protection on something that is drafty or even good windows, the more air will stay out.

For example, if it is possible, install shutters on your windows for the winter months and use them. Close in the windows especially on very cold days or very windy days. This will keep the cold from getting in.

But, inside your home, you can even more layers of protection to take into consideration. First off, if you have blinds on your windows, make sure that those blinds are lying flat and that they cover the entire window. In addition, the shades that you use should be pulled all the way down.

Finally, decorate your windows with drapes and curtains that are lined. These are a bit more in cost than other drapes, but they provide a great deal of energy protection to those in need. This is a great tip for those that are looking for ways to easily save money. A heavy drape covering the window can help you to save countless dollars in energy costs all winter.

Paying attention to your windows will allow you to save a great deal of money. Repair any problems that you may have as soon as possible.

## Chapter 6: The Fireplace Advantage

When most of us think about a fireplace, we think about a warm fire blazing on a very cold winter night. If that is the case, then you should take into consideration how the fireplace can affect your home's energy benefits and your home's cost effectiveness.

A fireplace can be a blessing. If you use it correctly, it can generate a good deal of heat for you to use throughout your home during those cold winter months. Since wood is a renewable energy source, it is not hard to find, overly costly and does not need to be something that hurts the environment either.

Yet, there are some problems with fireplaces that you should take into consideration too. If you have one, insure that you are not wasting your hard earned money right through that smoke stack.

### **It's drawing away Your Heat**

One of the largest problems with a fireplace in a home is that it can actually draw the heat inside a home up, onto the roof and out the house.

This is not what you want to see happen with your fireplace. In fact, this will cause you to lose quite a bit of energy quickly. But, unless you give up your fireplace altogether for a lower fuel bill, you will need to take some steps to help you to save money with it in your home.

For example, determine if you actually use the fireplace. Many people like the idea of having it there but never actually use it. If it is there for decoration, then seal it. You should have your fireplace sealed off at the top. You should, though, provide some ventilation into this area. If you do not do this, you will find condensation forming in your chimney and causing mold and other problems to form.

Once the fireplace is sealed, have the chimney insulated as well. Adding a layer of insulation there is an important factor in keeping the home warm.

Now, the key here is to remember to remove that insulation and inform others that use your home that it is there. Otherwise, you can catch fire to your home easily.

### **Other Fireplace Tips**

In addition to this, there are other things that you can do to insure that your fireplace is not costing you too much money in energy costs.

For one thing, make sure that you have a damper on the fireplace. This will help to keep the heat in while still allowing the necessary ventilation. Make sure that you use it as well. To do so, it needs to be working in its proper way.

Of course, you should have your fireplace checked out each year as well. If you use your fireplace, this is a necessary task to have completed. It will allow you to make sure that the fireplace is working correctly and that there is no build up of soot or carbon in the actual chimney. Removing and having this cleaned also can help to insure that the fireplace is keeping you safe and warm too.

If you do not have any, add glass doors to the front of your fireplace. As the fire dies down after you have used it, the glass doors will help to keep the heat from being lost altogether.

Keep ash and debris out of the fireplace as much as possible too. The build up of these in your fireplace can cause problems with the ability to generate heat.

For your insert, consider one that is both tube and glass. The glass doors of your fireplace will actually keep you from losing too much heat, as we mentioned. In addition, though, when you add on a tube and blower to your fireplace, you can keep the glass doors closed and force the heat out into the home, allowing for better and more energy efficient usage of it. You get more from the fire, in other words.

Yet another option to consider is the heater insert. This is the ideal choice for those that are looking for a way to get the most benefit from their fireplace. In this case, you will need a well designed, efficient model. It should come with blowers as well as thermostats.

Simply place them into your fireplace and they will allow you to increase your heating efficiency because it will help to maintain the heat there. You do not lose the effect of the fireplace that we all love so much either.

Don't give up your fireplace; just make sure that you get the most from it without losing from it.



## Chapter 7: Energy Saving Habits to Develop

Do you remember as a child being asked by your mother if you were “born in a barn?” There are plenty of reasons why this is important. The fact is that there are small things, even simple things, to incorporate into your every day life to see improvements in your energy usage without really having to do much of anything.

In fact, all you really need to do is to insure that you get yourself into some habits and within a month you will notice changes.

While switching one light off isn’t going to make a huge deal on your bill, combining this with other features will show you some real signs of improvement and quickly too.

To help you, here are some of the best habits that you can form to gain great energy saving benefits from the beginning.

### **You’re Shower**

You probably do not realize how this affects your energy bills, but it does. Unless you take a very long shower, you may not realize that it is more effective and uses less hot water than a bath does.

Instead of filling up the tub with water, you save a great deal by using the shower. To make it even a better option, install a water saving shower head. These are inexpensive (although they do cost more than a standard shower head) but will reduce the amount of water that comes through and is wasted. You simply will use less water and reap the benefits of lower consumption.

Because you do not need to use as much hot water, you are reducing the work load of your hot water heater and saving energy in the process.

## **Appliance Use**

Next, take a look at your appliances usage. There are certain appliances that generate heat more so than others. The washer and dryer as well as your oven are prime candidates.

Therefore, whenever possible, use these during the cooler parts of the day such as the morning and in the evening, to keep your air conditioning from having to kick on. If it is already hot and you are using them, the air conditioning units have to work harder using more energy to do so and costing you more.

During the winter, doing this will help you to keep your home warmer in the coldest times of the day, therefore keeping your furnace from having to work as hard and using less energy.

## **Washing Clothing**

When washing clothing, there are some great tools to use here too for energy savings. First off, only run full loads of laundry. If you run just a few items, you are simply wasting the energy that is needed.

In addition, make sure that the weight of the object is taken into consideration. Keeping like weights together can help to reduce the amount of time that some items are needed in the dryer. For example, if you wash towels together, which require longer periods of time to dry, you can save energy when you wash light weight t-shirts.

Another tool that has been put onto the market is cold water detergent for your washer. These chemicals claim to work well if cold water, meaning that you do not need to use as much hot water in your laundry. Without using hot water, you lessen the demand on your hot water heater and therefore lower your costs significantly.

Keep the units working at their best. That means cleaning out the dryer filter too. There are two things to consider here. First, keep the interior filter clean by cleaning it after every load. This allows the clothing to dry faster with each load.

Second, clean the tubing that runs from the dryer to the wall clean as well. This should be cleaned out every six months for optimal use.

## **Cook Tops**

Cook tops that are electric can pose a problem for those that are looking to save energy. These pull quite a bit of electricity to be used effectively. To help to keep this to a minimum, make sure that you select the right size burner for the pot that you are using.

Another trick with these units is to insure that the bottom of your pan is flat. Those that are rounded have less surface area actually touching the cook top, causing it to take longer to heat and therefore requiring more energy use for the same meal.

Keep the surfaces cleaned and wiped down after each use. If you have a gas stove, in this case, keep the carbon build up around the actual pilots clean as well. They will work better and use less gas in the process lowering your costs while doing so.

## **Lights**

Throughout your home you will find various lights on and off at all times of the day, right? Make it a habit to turn them off each time you leave a room. In addition, you will want to make sure that the smallest comfortable light is in use at all times, not necessarily the light that is going to fill the room.

In addition, as you go throughout your home replacing bulbs (as they burn out of course) begin replacing them with compact fluorescent bulbs. These are becoming more and more readily available even at the supermarket and department stores. Although they will cost more to put them into your home, they will benefit you.

These light bulbs put out as much as four times as many lumens per watt. So, if you purchase a 25 watt fluorescent bulb, you are going to have as much light as if

you were using a 100 watt bulb of the standard, incandescent bulb. Therefore, with lower wattage use, you will use less electricity and save money.

In addition, these light bulbs will last you almost ten times as long as a standard light bulb will. In some case, you won't have to replace them for years! This is definitely worth the investment. Doing this slowly as the others die out will allow it to be less of a cost shock.

## **Exhaust**

Your home needs exhaust systems in it. Some older homes may not have them though. This is one system you will want to consider adding if that is the case.

You can benefit from an exhaust fan in your kitchen area to pull out the heat and humidity from the area as you are cooking. In the summer, their use is outstanding in these areas to keep your air conditioning working less.

In addition, the bathroom is another area of your home for an exhaust system. Here, the humidity can be pulled out before causing the air conditioning to kick on.

But, be careful. During the winter months, do not use these systems as often. They can pull the heat from your furnace that is trying to keep your home warm out, causing your furnace to work harder and losing money with energy costs.

## **Window Tips**

While we have already talked about how windows affect the heat and air conditioning in your home, it also is important to mention them as in habit usage.

If you will be using your windows during the summer months to bring in air, do so! This is a great way to bring in free, fresh air to your home. But, do not turn off the air and open the windows. Instead, open them once the effects of the air conditioning have worn off and the home has started to heat up. This way, you do not lose the benefits of all the work your air has used.

In addition, during winter months, keeping the drapes and blinds closed can significantly lower the energy need for heat throughout your home especially during dark hours and colder periods. But, you can benefit from opening up those drapes when the sun is shining and allowing the home to get some free heat from that sunshine.

During the night, the drapes will act as insulation to the windows keeping heat in during the winter and cool air in during the summer.

In summer months, if there is a breeze or if there is a temperature drop to a comfortable level, ease off the air conditioning and let the cool air from night cool down the home.

In addition, make sure that you lock your windows when they are closed. That little extra push can help to keep the right temperature maintained.

## Chapter 8: The Thermostat

There is another aspect of your home that needs careful consideration. That is the thermostat. What temperature you set it at is really a personal comfort situation. Yet, more and more, people are finding that there is cost savings in using the right thermostat and the right level of comfort to boot.

For example, during the summer months, do you have the air conditioning set low enough that it feels comfortable to wear a long sleeve shirt or pants? Do you grab for a blanket? This is a signal that perhaps you could raise the thermostat and still be quite comfortable.

In the winter, you shouldn't want to put the fan on or want to wear shorts. You can see how just lowering the heat a bit can save you a good deal of money. Yet, there is no magical number here.

Unfortunately, there is a great deal of money that can be saved by just dealing with the heat in the summer or the cold in the winter. Yet, you do not have to flip it off altogether to gain some benefits of extra money in your pocket.

### **The Right Temperature**

Finding and setting your home at the right temperature is the first goal. It is said that during the winter, setting the heat at 68 F degree is the best starting point. In the summer months, your goal is that of 76 F degrees. Every time that you can either move this number up or down for cost savings; you can save a decent amount of money per two degree movement.

Therefore, if you are in the winter months and you have your thermostat set at 70 F degrees normally, if you can still feel comfortable by lowering it to 68 F degrees, you will be able to save a good deal of money.

In the summer, keep the air conditioning set at just 76 F degrees and turn on a fan. Doing this will pull out all of the humidity in the air and keep the temperature at a great level. If you can tolerate moving these more so, you will save money.

But, beware. If you continuously are moving them up and down, you are not doing yourself any favors. In fact, if you get cold so you raise the air conditioning, only to become hot again and lower it, you will be wasting money.

As the air in the home cools down; it does not take as much energy to keep it at that level. But, if you raise the temperature and the home heats up, the air conditioning needs to work twice as hard to get it back down. This causes quite a bit of money to be lost in the turn.

Pick and stay at the right temperature in the home and you can benefit from energy savings.

### **Programming Help**

One thing that you really do want to take into consideration is that of programmable thermostats. These are not too expensive. They are probably just a few dollars more than a standard model and make a large difference.

What can they do? First off, they still work the same as other thermostats to. When the home's temperature changes so much so that there is a need to call to the air conditioning unit or the furnace to balance it out, they do so. Yet, they have additional features as well.

For example, you can program them to turn on before you come home from work. Let's say that you are at work most of the day and the kids are at school. There is no one in the home. Why keep the heat on full blast? If the period of time is longer than a couple of hours, these programmable thermostats are a blessing.

You simply set the time in which you will be home (usually about an hour or so before so) and at that time they will kick on. Better models will be able to be

programmed for various days of the week too (such as Saturdays you may be home all day.)

When the time comes to turn on, they do and get the home to the right temperature. You do not notice any difference until you notice your heating or cooling bills have dropped.

You can also program them for different temperatures at night, when you are sleeping. By raising the temperature in your home during the summer a couple of degrees, or lowering it a couple of degrees in the winter, you can save a great deal of money.

You do not need to remember how to do this when it comes to using your programmable timer in the thermostat as it will take care of that for you.

If you are looking to save money in energy costs, installing a programmable thermostat is one of the best moves for you to make. It is simple to install and easy to use. It will save you a good deal of money too.



## Chapter 9: Energy Star: Understanding What It is

Have you heard of Energy Star? If you have not, this is your friend for sure.

If you are purchasing any new unit for your home, from a dishwasher or refrigerator to the hot water tank and the furnace, Energy Star is something that you do want to take full advantage of.

This is a term, a distinction that you should have on any of the appliances or major systems within your home. When a product is deemed to be Energy Star ready, it is capable of providing the necessary service to you but through reduced energy costs.

The Environmental Protection Agency, or EPA, along with the US Department of Energy is the sponsor of Energy Star programs. Their goal is to help each person to save money as well as to help each of us to protect the environment by using energy efficient products and by using energy benefiting practices.

The Energy Star program has been able to help people to save quite a bit of money. The EPA claims that in 2005, Americans were able to save someplace around \$12 billion dollars by using Energy Star products and therefore saving on their utility bills.

But, it does not stop there. They also claim that by using these products, Energy Star has helped to avoid greenhouse gas emissions that would be about the same as that of 23 million cars in 2005 alone. Therefore, it is a good program to take note of.

The program is in place to allow people to save money, but how much money can you actually save by using Energy Star products? The EPA estimates that in most cases, by choosing an Energy Star product over one that is not, you can save about a third or more of your energy bill with the product. In addition, you help to cut down on greenhouse emissions by about a third as well.

The problem was that it seemed for a long time that to get an energy benefiting product you must give up some features to cut back on the use of your product. Yet, with Energy Star, the program was designed to allow for all of the same products and services with no sacrificing of the quality of comfort of the product but still saving money.

### **In Your Needs**

So, how does Energy Star play a role in helping you to save money? There are several ways. In short, you want to select services and products that offer the Energy Star seal of approval. There are several ways that you can gain these benefits.

#### **When Purchasing New Appliances**

For example, if you are purchasing a new appliance, you can save a good deal of money by purchasing a product that is Energy Star approved. Most of us have seen the yellow tags on appliances to show us just what the benefits to our energy bill is if we purchase this product.

In order for an appliance to get this tag on it, it must pass some pretty amazing tests to insure that it is efficient enough to be considered an Energy Star product. The guidelines are set for each type of product through the United States Department of Energy and by the Environmental Protection Agency.

If you are looking for a new appliance, such as a refrigerator, a washer or dryer, a dishwasher, an oven, a cook top...any appliance for your home, look for one that is Energy Star approved as it will save you a great deal of money in the long run.

## **In A Home**

Something that has been just becoming available is the ability to tap into Energy Star benefits through your actual new home purchase. As you will see in later chapters, you can now purchase homes that are Energy Star efficient. If you do this, you will save a great deal of money.

Look for a home that has been designed specifically for energy efficiency and you will walk away with benefits.

## **Other Benefits**

You can also go to the EPA's website to gain tools that will help you to design and fix problems related to energy needs as well. You can find how to lower your energy bills while still providing a great deal of comfort to you and to your family.

A business can also find benefits of using Energy Star products. Just as you can implement these products into a home, they can fit well into most businesses as well. Some times, the rewards here are better bottom lines.

## Chapter 10: Outside the Home: Landscaping For Energy Benefits

Have you thought about the outside of your home for energy efficiency?

Landscaping a home can be done in such a way as to allow for benefits in the energy department. In fact, you can save about 25% of your household energy consumption with a landscaping design that incorporates just the right placement of trees.

There are many things that can be done to improve your outdoor living area to keep you feeling just as happy and content as it will in keeping your energy usage to a minimum.

### **In fact, landscaping can do several things:**

- It can help you to lower your heating and cooling costs dramatically.
- It can help you to protect your home too, from wind damage and sun fading (such as with paint!)
- It can help to lower the costs related to the amount of water, fuel and even the number of pest control products you need to use.
- It can help you to gain benefits such as less noise and even improve the air quality in your home.

All of this from energy efficient landscaping; yes, and it usually results with a great looking yard too.

### **What You Need To Do**

So, how can you get this done correctly? The Department of Energy in the US says that if you place just three trees surrounding your home, you can save

yourself any place from \$100 to \$250 on your energy bills. This is because of what a tree can do.

## **Winter**

In the winter time, the right placement of a tree can keep out some of the cold, but will still allow the warm sunshine of the winter day to stream in.

If you have any idea of what wind chill is, you can see another benefit of trees. The wind chill is the way that the wind cools things down. In the winter months, the wind chill is a secondary temperature. While the actual temperature can be 20 degrees F, the wind chill can knock it down considerably, making it feel as if it is much colder than it really is.

When you add a tree, shrubs or other structures outside of your home, the wind is stopped and can not hit the home, therefore reducing the wind chill factor for your home.

If you install what are called windbreaks (or any item that can stop the wind before it hits the home) you can reap benefits of up to 40% less fuel consumption in heating your home. If you live in a very windy area, you can lose even more, up to one third, of your winter fuel costs in this manner. (This is as compared to a home without these benefits.)

## **Summer**

In the summer time, you will reap the rewards of cooler air. This happens due to evapotranspiration (the process of the tree moving and letting off water vapor) and shading from the tree. It can lower the temperature up to nine degrees in this way.

Another key point to make is that in a shaded area underneath a large tree, the temperature can be as much as 25 degrees F cooler than it is just above a layer of blacktop on your street.

All of this equals about 15% to up to 50% of lower need for air conditioning in the summer months. This can keep your costs down considerably. All of this just from a beautiful looking tree.

In other ways, the landscaping that you do outdoors can find benefits to your energy usage. It is easy to see that placing trees in the right locations can help. Here are some other things to take into consideration.

- Make sure that water drainage is draining away from your home with a natural landscape that moves away from the home. This will allow for better protection of your foundation.
- When it comes to installing a new roof, look for Energy Star choices. In addition, this is the perfect time to consider solar panels and what they can do to lower the costs of your home.
- Of course, you can also purchase and use outdoor landscaping equipment and garage related tools that are Energy Star approved too.

## Chapter 11: Alternative Sources of Fuel

Are you looking for a new way to provide energy to your home? In today's world, the race is on for the next fuel efficient energy source.

One thing that you are likely to do is to keep on eye out for what is new when you are purchasing something new. For example, let us say that you are looking to purchase a new hot water tank. There are plenty of hot water tanks that work off of gas or even electricity. But, this would be a great time to consider a solar powered one as well.

There are many appliances being made each year that offer a new and improved type of fuel source. You will find these are more expensive, in many cases, than a standard tool. Yet, that does not mean they should not be considered.

### Alternative Options

There are many different types of alternative fuel options on the market. For example, one of the most widely known and fast becoming popular type of alternative fuel is that of solar powered fuel. This type of fuel comes from the sun, a renewable source that is also free to use.

There are plenty of solar powered products available from lighting fixtures for outdoors to solar powered hot water tanks and much more. These all work in the same way. They take in the solar rays from the sun during the day light hours and store them so that when you call for energy, you can easily access it any time that it is needed.

While they may cost more to purchase, just consider the fact that they really cost nothing to use. The better quality products are even reliable in areas where there is not a lot of sunshine all day long either.

Yet, beyond solar power, there are other fuel sources that are coming about. There are cars and other appliances (including your furnace) that could soon be

run on corn power. Corn, yes the stuff you eat! This too is another renewable source of fuel.

In some areas, restaurants are getting their power from fuel that is directly related to waste. By burning waste, in the right type of facility of course, there is the ability to benefit from fuel.

Still, consider water and wind power. These are natural and completely clean fuel sources that are likely to be used in our products for our homes for many years to come.

In fact, some homes are being heated through a combination of these methods. For example, an energy efficient home can have water heated through solar power. This water is then circulated throughout the home, from the floor boards up, to generate warmth throughout the home. It moves back to the solar area in a large loop to start all over again.

If you are considering the purchase of a new product or a new appliance, why not consider what these types of products can do for you?

While they may not be readily available everywhere, they are definitely going to be. In fact, being more readily available is something that improves everyday.

If you are looking for an upgrade to a more energy efficient fuel source, you will find excellent products and companies installing them throughout the web. Take some time to research. In fact, you may begin to see some of these products at your local department store soon too.



## Chapter 12: The Energy Efficient New Home

The Energy Star program that we talked about in an earlier chapter also provides for Energy Star new homes. If you have a home that has been certified as an Energy Efficient home, then you are well on your way to saving a great deal of money on that home.

These homes are becoming more and more popular choices. That's because people realize that the way that their home is laid out, designed and landscaped all plays a large role in how costly it will be to power and run that home. There is no limit to the number of options that can be played into here.

If you are purchasing a new home, it is well worth your time to consider looking for or building one that can be considered Energy Star certified.

What are they? Energy Star homes are homes that have met specific guidelines as per the US Environmental Protection Agency and through the US Department of Energy. These homes are actually about 15 percent more energy efficient than those that have been built by the 2006 International Energy Conservation Code which is generally used.

### **What They Can Offer**

There are plenty of benefits that can come from an Energy Star home. Each home has to abide by the guidelines set forth, but the type of benefits that they offer can still differ from one home to the next.

You may find benefits such as:

- Better insulation in the home's structure.
- The construction has been done in such a way as to make it tighter and neatly fitting.

- The duct work is tight and better for energy benefit.
- The windows on Energy Star homes are usually a large plus as they are generally quite high performance in that they allow little to get in or out in the way of energy.
- The heating and air conditioning units are highly Energy Star approved for energy efficiency.
- The lighting in the home as well outdoors is more energy beneficial.
- The appliances in the home are all Energy Star approved appliances.
- Even the home's landscaping can help it to qualify for this certification.

When you purchase an Energy Star home, you are getting a home that has been designed to meet specific guidelines. What's more is that you are sure to get the most out of this type of investment. There is no doubt that these high quality, high performance appliances and design features may cost more, but they are designed in such a way as to pay off in the long run.

Of course, purchasing a new home or building a new home that is energy efficient is good for your wallet and the environment. Yet, many people shy away from this as they think that it is too complex, too strange or something that is too much work.

Yet, this can not be farther from the truth. Energy Star products are designed to be both energy efficient and user friendly. In fact, there is really no reason not to take full advantage of products like this.

## Conclusion

Is your home energy efficient? Have you learned any ways that you can better your home through this e-book? You may have the feeling that you just want to do everything in this book and all of a sudden reap the rewards.

But, this is a costly process in that case. Why not tackle one project at a time finding and improving the efficiency of your home one step at a time? There are some small things that will take only a few minutes to improve yet there are those projects that can take much longer. How can you find the right ones to do?

Remember that we went through and talked about which were your biggest energy draws. Use that as a starting point. If winter is on its way, it pays to pay attention to the windows in your home and the furnace. If summer is quickly moving in, think about planting a few trees to save you countless of dollars over their lifetime.

The bottom line is that fuel costs continue to rise. There is no law, rule or other factor that will be swooping in to lower them. As much as we like to complain about this, the best thing for us to do is to insure that we are looking for ways to use the least amount of fuel as possible. When we do that, we can find many benefits overall in the way that our home looks and the way that it functions.

Making your home energy efficient is a process and one that is definitely worth it every step of the way. Start now and keep working at it. Keep your money in your pocket instead of out the cracks in your floor and windows!