

## Recognizing High Performance Homes

### Historical Census of Housing

1940 – 2000 95, 582, 2568 (1-4 Units, Mobile Homes)

### U.S. Housing Stock

The 2005 American Housing Survey by the U.S. Census Bureau shows that there are more than 124 million homes in the housing stock, with a median age of 32 years. About one-third of the housing stock was built in 1960 or earlier. About 10 percent was built in the 1960s, and another 20 percent was built in the 1970s. Of the remainder, 13 percent was built in the 1980s, another 13 percent was built in the 1990s, and 8 percent in the first years of the 21st century.

Housing Inventory July 2013		
Total Units	Number	Percent
	<b>132,419,000</b>	<b>100.0</b>
Owner-occupied units	76,091,000	57.5
Renter-occupied units	38,816,000	29.3
Vacant units	13,379,000	10.1
Seasonal units	4,133,000	3.1

**Are sustainability and energy efficiency upgrades playing a role in today's residential and commercial real estate market? Definitely, say those in the field.**

- 90 million homes waste energy
- A typical house wastes 30 percent more energy than an efficient one does
- A typical home energy retrofit costs around \$10,000 per house -- before any utility or governments energy rebates are applied. A home energy retrofit doesn't just save energy for a single year -- it prevents waste year after year on an ongoing basis once it's done

The national association of Home Builders states that buyers today will be living in their homes approximately 8-10 years before selling.

## **Housing and Sustainable**

Housing is one of those basic social conditions that determine the quality of life and welfare of people and places.

Where homes are located, how well designed and built, and how well they are weaved into the environmental, social, cultural and economic fabric of communities are factors that, in a very real way, influence the daily lives of people, their health, security and wellbeing, and which, given the long life of dwellings as physical structures, affect both the present and future generations.

Although sustainable housing is often associated with wealth and affluence, it does not need to be so – genuinely sustainable houses are those that are inclusive and affordable for all. Addressing the issue of affordability is, therefore, a necessary condition for transformation towards sustainable housing. And yet affordability is not enough, because the so-called affordable homes cannot be considered sustainable if they create negative impacts on the environment or social life. The marriage of affordability with other sustainability conditions is a must.

### **Sustainable Houses are those that are designed, built and managed as:**

- Healthy, durable, safe and secure
- Affordable for the whole spectrum of incomes
- Using ecological low-energy and affordable building materials and technology
- Resilient to sustain potential natural disasters and climatic impacts
- Connected to decent, safe and affordable energy, water, sanitation and recycling facilities
- Using energy and water most efficiently and equipped with certain on-site renewable energy generation and water recycling capabilities
- Not polluting the environment and protected from external pollutions
- Well connected to jobs, shops, health- and child-care, education and other services
- Properly integrated into, and enhancing, the social, cultural and economic fabric of the local neighborhood and the wider urban areas
- Properly and maintained, timely renovated and retrofitted

### **Affordable Homes**

Living in satisfactory housing conditions is one of the most important aspects of people's lives. Housing is essential to meet basic needs, such as shelter, but it is not just a question of four walls and a roof.

Housing costs take up a large share of the household budget and represent the largest single expenditure for many individuals and families. Regardless of your income, family size, or geographic location, consumers must obtain food, clothing, child care, maintenance, repairs, property taxes, and utilities, insurance and add health care cost. All of these elements help make a house an affordable home. However, income can be a misleading measure of housing affordability. To arrive at an "affordable" home price, let's follow the guidelines of the Consumer Finance Protection Bureau (CFPB) which has established new laws that take effect January 2014. Some new terms "Ability-to-Pay" and Qualified Residential Mortgage which will now only allow a total debt-to-income of 43% of your gross monthly income for loan approval.

Affordable homes are assessable homes at all price range that are budget conscious without sacrificing the amenities that it offers. Establishing a budget that includes maintaining a home and maintenance can be challenging. When considering a resale, begin a looking at the major components of the house that will need replacing at some point and do the following steps for each component:

- Estimate the replacement cost
- Determine the life expectancy
- Determine the current age of each item
- Calculate the estimated remaining life expectancy
- Rank the house components in order of increasing estimated remaining life expectancy and then plan for any expenses expected in the next five years.
- Watch for any upcoming “expense clusters” – A high amount of maintenance costs in a short time period

### The Whole Lifecycle of Houses

One way to prepare for the costs of owning a home beyond the mortgage payment, insurance and taxes, is to know the expected life expectancy of your home's components.

The life expectancies of the components of a home depend on the quality of installation, the level of maintenance, weather and climate conditions, and the intensity of use. Some components may remain functional but become obsolete due to changing styles and preferences or improvements in newer products while others may have a short life expectancy due to intensive use.

The average life expectancy for some components has increased during the past 35 years because of new products and the introduction of new technologies, while the average life of others has declined.

House Component	Years Life Expectancy	House Component	Years Life Expectancy
• Caulking	5-10	• Deck Planks	25
• Paint	7	• Wood	10-30
• Roofing Adhesives	15+	• Vinyl (Exterior)	20
• Air-Conditioners	8-15	• Enamel Steel Kitchen Sinks	5-10
• Boilers	20-35	• Faucets	15-20
• Compactors	6	• Carpet	8-10
• Dehumidifiers	8	• Laminate	15-25
• Dishwashers	9	• Linoleum	25
• Disposers	12	• Pumps, Sumps, and Wells	5-12
• Dryers	13	• Termite Proofing	12
• Exhaust Fans	10	• Garage Doors	20-25
• Freezers	10-20	• Garage Door Openers	10-15
• Furnaces	15-25	• Light Inserts	20
• Gas Ovens	10-18	• Security Systems	5-10
• Heat Pumps	16	• Smoke/Heat Detectors	8-10
• Humidifiers	8	• Air Conditioners	10-15
• Microwave Ovens	9	• Air Quality Systems	15
• Range/Oven Hoods	14	• Attic Fans	15 – 25
• Electric Ranges	13-15	• Central Air Conditioning Unite	12-15
• Gas Ranges	15-17	• Ducting	10
• Refrigerators	9-13	• Electric	15
• Washing Machine	5 -15	• Furnace	15
• Water Heaters	10-11	• Asphalt Driveway	15-20
• Cast Iron Bathtub	50	• Aluminum/Aluminum Clad	15-20
• Fiberglass Bathtub	10-15		
• Shower Door	25		
• Toilet	50		

Lastly, we must engage and empower residents to purchase and retain affordable homes through promoting educational and counseling opportunities; the more we know about affordable housing as a community, the better prepared we are to create and sustain it.

### **The Future We Want is Homeownership Affordability and Sustainability**

American homes use almost 25% of the energy consumed in the United States. About 80% of that energy is used in single-family homes, 15% in multi-family homes (such as apartments and condos), and 5% in mobile homes. Although residential energy use has steadily increased over the past 25 years, it has increased at a slower rate than the rate of population increase. However, many efficiency gains are being offset by increases in the number of electronics and appliances in the average home. There are still many large opportunities for improvement, especially in areas such as whole-home performance and systems.

Introducing concepts related to sustainable housing into local government and business performance measures and country policy decisions will change the way we all live and do business. This, of course, will take a while. New practices and policies are being developed and confirmed. Such as, adding the energy efficiency category to the appraisal report and loan application approval. Plus many cities and counties across the nation are requiring energy efficiency plumbing fixtures on older homes before selling them today. Utility and State programs are spending millions to help residents and to institutions that are used by the community, like hospitals, government offices and non-profits to maximize energy efficiency.

These programs are aimed at customers that might not otherwise make investments in energy efficiency that could lower their energy bills due to the upfront costs and long pay-back times. The chances for these fundamental changes to occur are much higher now than ever before.

### **Housing Market Recovery**

With the US economy and housing market now recovering, investment in the nation's housing inventory is also picking up. Lenders and new owners are rehabilitating millions of foreclosed properties. Older homeowners are retrofitting their homes to accommodate their future needs. Households in general are increasing their investments in environmentally sustainable improvements.

And with the huge echo-boom population moving into the home buying market over the coming decade, the remodeling industry can look to an even more promising future.

According to Joint Housing Center at Harvard University research, institutional sellers made improvements to about a third of their foreclosed properties prior to sale, with an average expenditure of about \$6,500 per unit. About 60 percent of owner-occupant purchasers undertook improvements averaging \$11,100, while investors spent even more per unit on average. In total, spending on distressed properties added almost \$10 billion to home improvement expenditures for last year.

### **High-performance, Green, Sustainable, Energy Efficient**

All are terms that are often used interchangeably. While they may conjure visions of solar roof panels, geothermal heating, and other expensive technologies, most home builders agree that the most important components of a high-performance home are windows, doors, insulation, and HVAC systems.

High performance homes whether new or existing are designed, revised or upgraded for total comfort, better air control, durability, safety and energy efficient.

Homes that meet certain criteria are issued a high performance label such as Energy Star or Georgia Power EarthCents along with rebates and financing options to encourage the use of highly efficient technologies. For information about federal tax credits for energy-efficiency improvements, go to [www.energystar.gov](http://www.energystar.gov).

## **What are Energy Ratings and Audits?**

### **HERS (Home Energy Rating System)**

The Home Energy Rating System (HERS) Index is the industry standard by which a home's energy efficiency is measured. It's also the national recognized system for inspecting and calculating a home's energy performance.

The HERS Index was created by RESNET (Residential Energy Services Network) in order to give homeowners and buyers a standard by which they could measure the energy efficiency of houses they currently own or are planning to buy. You could say it's kind of like the home industry's version of the MPG (miles per gallon) rating that you find in the auto industry and the lower a home's HERS Index Score is, the better its home efficiency.

**June 4, 2012 – RESNET “Home Efficiency Milestone Reached as One-Millionth American Home Receives HERS Index Score”** RESNET went from certifying a few hundred homes a year to 120,000 in 2011, which was 40% of all the new homes sold that year. The expected increase in 2012 to be even greater, seeing as how the Gilbert home is already the one-millionth to be rated for its home efficiency.

RESNET hopes to make energy ratings, together with their subsequent HERS Index Scores, a routine part of the home buying process.

HERS consists of diagnostic testing using specialized equipment, such as a blower door test, duct leakage tester, combustion analyzer and infrared cameras to determine:

- The amount and location of air leaks in the building envelope
- The amount of leakage from HVAC distribution ducts
- The effectiveness of insulation inside walls and ceilings
- Any existing or potential combustion safety issues

Other variables that are taken into account include:

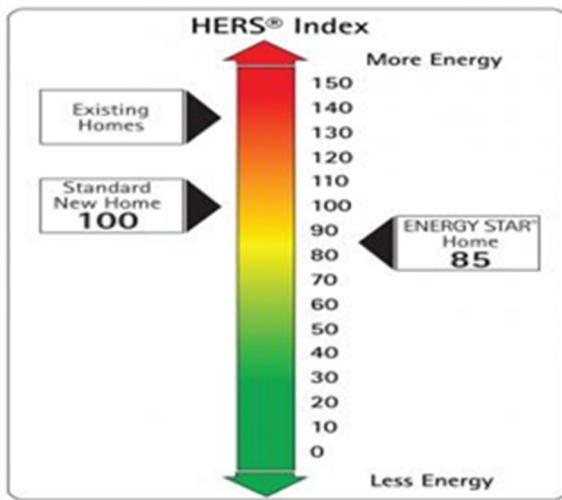
- Floors over unconditioned spaces (like garages or cellars)
- Attics, foundations and crawlspaces
- Windows and doors, vents and ductwork
- Water heating system and thermostats

The comfort and efficiency level of your home is determined by the interaction between the mechanical system, air distribution system, insulation, air barrier, solar control, etc. because the comfort, efficiency and indoor air quality are all dependent on how these systems work together.

The report will also contain a cost/benefit analysis for the recommended improvements and expected return on investment.

Home owners, potential purchasers and renters rarely have access to the information they need to understand the energy efficiency of a given home and opportunities for improvement.

This information can motivate owners to upgrade their homes and help prospective buyers and tenants select more efficient housing. You can anticipate the cost of energy bills and efficiency upgrades.



- The U.S. Department of Energy has determined that a typical resale home scores 130 on the HERS Index while a standard new home is rated at 100.
- A home with a HERS Index Score of 70 is 30% more energy efficient than a standard new home.
- A home with a HERS Index Score of 130 is 30% less energy efficient than a standard new home.
- 50 represent average while 75 is a better performance.

### In-Home Energy Audits

In-home energy audits can be conducted by your local EMC (Electric Membership Corporation) or a highly qualified contractor.

Not all energy audits are the same. There are energy inspections, energy surveys, energy assessments, home performance assessments, home energy ratings, and many more terms that all seem to fall under the banner of "energy audits." An important element in an energy audit is accurate and up-to-date knowledge of the current energy consumption patterns at the home. An Energy Audit is a practical and valuable way to establish this information. Using this baseline data it is then possible to identify and work towards goals and priorities for future improvement. In many cases audits will uncover relatively simple fixes in the areas of air sealing and insulation and hard-to-detect areas such as air infiltration.

An in-home energy audit takes about 3-4 hours and provides you with a prioritized list of where your home improvement dollars will offer the best payback. These improvements might include duct sealing, extra insulation or sealing outside leaks. Some improvements you'll be able to do yourself; others are best left to a professional. The energy auditor will do a room-by-room examination of the residence, as well as a thorough examination of past utility bills.

Best of all, your energy audit puts you in the driver's seat, so you can perform the improvements according to your family's schedule and budget.

### Preparing for an Energy Assessment

Before the energy auditor visits your house, make a list of any existing problems such as condensation and uncomfortable or drafty rooms. Have copies or a summary of the home's yearly energy bills. (Your utility can get these for you.) Auditors use this information to establish what to look for during the audit. The auditor first examines the outside of the home to determine the size of the house and its features (i.e., wall area, number and size of windows).

The auditor then will analyze the residents' behavior:

- Is anyone home during working hours?

- What is the average thermostat setting for summer and winter?
- How many people live here?
- Is every room in use?

Your answers may help uncover some simple ways to reduce your household's energy consumption. Walk through your home with the auditors as they work, and ask questions.

What contributes to a high performance home?

- Windows and doors
- Heating and AC
- Home Insulation
- Appliances
- Light Fixtures
- Landscaping
- HERS Index of 65 or lower

### **The Future of the American Dream of Home Ownership**

While there is still plenty of room for improvement in our current economic and housing climate, it is time to set a clear direction for the future of the American dream of home ownership. Along with local government agencies, community banks and home lending tools now offer a personal touch with innovative strategies in providing housing that is safe, efficient and affordable to all community members.

### **Cost of Ownership – Cost of Lifestyle**

Affordable housing is commonly considered on a cost basis. Your mortgage payments are only a fraction of what you'll pay once you move into a house.

The cost of home ownership might be a lot more than you think. Although buying a home is a big investment, owning one comes with a new set of expenses you may not have had while renting or living with Mom and Dad. These extras can put a strain on your daily finances if you aren't prepared. First-time homebuyers hope that their dream house will last, but people who have owned homes for years will testify that there are trials ahead.

What does the cost of ownership include?

- Down payment
- Closing cost – can be a deal killer
- Mortgage payment
- Annual property taxes on its value
- Hazard insurance - The condition your home is in represents how risky you are to your insurance company and the susceptibility to natural disasters
- Mortgage insurance – Standard guidelines include credit score minimum and appraisal review
- Homeownership association fees
- Annual maintenance cost 1% - 3% annual (\$100 is generally a good average amount to set aside each month)
- Utility cost - Rising energy prices hike several key components of the total cost of living for many Americans. Not only does driving become more costly, heating and cooling also become less affordable (insulation)

- Commuting from home to work
- Renovations, revisions, replacements, updates

All home buyers want a move-in condition home and no buyers want to overpay for them. Regardless of the home condition, it is the buyers' perception of value and how it stacks up against competing homes that will determine which home gets their offer.

The future home buyer will focus on qualifying the costs of owning and occupying a particular home versus another. Other key buying factors include performance, modern features, amenities, quality, and monthly utility cost. **NAR:** 53% of buyers started a home improvement project within 3 months of buying, typically in the kitchen.

### **Cost of Lifestyle**

Although desired home features vary somewhat according to region, type of home, and buyer demographic, there are certain features that are consistently attractive to today's buyers. Interestingly, though, the importance of those features to searchers is very different depending on whether the home is new or previously owned. Many people shopping for real estate today are younger than previous generations of home buyers, and they're extremely tech savvy. They grew up with smartphones, apps, and Google searches. And they want to use technology not only in their search for a home but throughout the home itself.

- **#1 Energy Efficiency – energy saving**
- Cutting-edge technologies - Nearly 90 percent of these homebuyers wouldn't even consider living in a home that isn't tech-friendly
- Remote home control – controlling the climate, lighting, garage or security systems through their mobile devices – full home automation
- Walk-in closet in master bedroom – large closets will never go out of style
- Spacious kitchens with stainless steel appliances – energy efficiency
- Kitchen islands, eat-in kitchen
- Walk-in kitchen pantry
- Granite countertops
- Wider doorways
- Laundry room on every level, linen closet in the bathroom
- Hardwoods floors
- Special purpose rooms, media room
- Home office tops with built-ins
- Outdoor fireplace or fire pit, exterior lighting
- Larger garage with extra storage
- Amenities, close to work, dining, shopping, in-law suite

### **Did you know?**

**In the average home, 75 percent of the electricity used to power home electronics is consumed while the products are turned off. That's because just having things plugged in uses energy.**

### **Did you know?**

**Georgia's 41 EMCs were the first utilities in the state to offer green energy programs? Formed in 2001, Green Power EMC offers green energy technologies across the state, which serves more than 3,000,000 Georgia homes, businesses, factories and farms. [www.greenpoweremc.com](http://www.greenpoweremc.com).**



- Georgia Power - <http://residential.georgiapower.com/products-programs/energy-audit>
- Jackson EMC - <http://www.jacksonemc.com/home-save-energy-money/home-audits/diy-energy-audit-kit>
- Walton EMC - <http://www.waltonemc.com/video/homeenergyaudit/homeenergyaudit.html>
- Cobb EMC - <http://www.cobbemc.com/content/energy-audit>
- Suwanee EMC - <http://www.sawnee.com/content/green-power>
- Grey Stone Power - <http://www.greystonepower.com/UploadedFiles/pdf/1038673.4253009259.pdf>
- [www.TogetherweSave.com](http://www.TogetherweSave.com)

Residential programs include RESNET certification and ENERGY STAR labeling.

### **Energy Saving 101**

As much as half of the energy used in your home goes to heating and cooling. So making smart decisions about your home's heating, ventilating, and air conditioning (HVAC) system can have a big effect on your utility bills - and your comfort.

### **Energy Usage**

- Heating energy 29%
- Cooling energy 17%
- Water Heating 14%
- Appliances 13%
- Lighting 12%
- Electronics 4%
- Other, i.e. power strips 11%

Lights are the first things turned on in the morning and the last things switched off.

### **Did You Know?**

**Electric lighting burns up to 25% of the average home energy budget. The electricity used over the lifetime of a single incandescent bulb costs 5 to 10 times the original purchase price of the bulb itself.**

**If every American home replaced just one light bulb with a light bulb that's earned the ENERGY STAR, we would save enough energy to light 3 million homes for a year, save about \$600 million in annual energy costs, and prevent 9 billion pounds of greenhouse gas emissions per year, equivalent to those from about 800,000 cars.**

### **Example:**

Lighting and light bulbs - Use certified light bulbs, such as Compact Fluorescent Light bulbs (CFL) or Light Emitting Diodes (LED) to provide bright, warm light while using 75% less energy, and lasting up to 10 times longer than traditional incandescent bulbs. This means more money in your pocket.

Homes that use incandescent bulbs waste \$400 a year on utility bills when compared to homes that have energy efficient lighting throughout.

## Did you know?

Energy experts say about 35 percent of home cooling is lost through the roof—and more through the walls, windows, and doors.

## Save Energy at Your Home Tips to Ensure Top Home Performance

- **Programmable thermostat** - If you have a programmable thermostat, make sure it is set properly. As much as half of the energy used in your home goes to heating and cooling. One simple way to ensure you don't waste money is by correctly programming your home's programmable thermostat. During the summer and winter set the thermostat 3 degrees warmer or cooler while you are at work. You can then schedule the A/C to turn on prior to your return, so the house is nice and comfortable when you get home.
- **Outlets and electronics** - The average U.S. home electronics uses 25 percent of electricity while the products are off? In the United States alone, "vampire power" costs consumers more than \$3 billion a year. You can reduce unnecessary costs on your utility bill by unplugging electronics such as cell phone chargers and power strips when they're not in use.
- **HVAC equipment** - Keep your cooling and heating system at peak performance by having a qualified contractor conduct tune-ups in the spring prior to a hot summer and in the fall before a cold winter.
- **Air filter** - Check your air filter monthly and change it at least every three months so your HVAC system will operate at peak efficiency. The air filter is designed to catch particles, which reduce the amount of air delivered through ducts. A dirty filter can even cause the air handler to shut down.
- **Seal your heating and cooling ducts** - Ducts that move air to-and-from a forced air furnace, central air conditioner, or heat pump are often big energy wasters. Sealing and insulating ducts can improve the efficiency of your heating and cooling system by as much as 20 percent - and sometimes much more. Seal ducts that run through the attic, crawlspace, unheated basement, or garage
- **Windows and doors** - Check the weather-stripping around your doors annually and replace as needed. Weather stripping keeps drafts from coming in; over time, it eventually wears down. During summer months, use blinds and curtains to block unwanted heat from the sun shining through windows.
- **Install renewable energy systems**
- **Power management for your computer** – set to a low-power sleep mode when not using it. You can save up to \$50 annually on your electricity bills

These are common problems found in homes that may not be as energy efficient as they could be and can benefit from a whole-house energy improvement. Investing in home performance work can make your home more comfortable, and at the same time improve its energy efficiency saving you money on utility bills and helping to protect the environment, too.

## Summary

In a rapidly changing and urbanising world, the provision of adequate and affordable housing remains a key priority for all governments. No longer regarded as simply a roof over one's head, housing today plays a crucial role in achieving sustainable development – as visualized by the idea of sustainable housing.

Sustainable housing is, however, yet to gain its due fame in developing communities. Yet in most cities, decent and safe housing remains a dream for the majority of the population, while government considers affordable housing as merely a social burden.

Sustainable housing is often considered from a predominantly “green” perspective (resource saving, greenhouse gas reduction) Today, we must advocate a more holistic approach, which recognizes the multiple functions of housing – as both a physical and social system – and which seeks to enhance and harmonize the environmental, social, cultural, and economic dimensions of housing sustainability.

Sustainable housing policies should deal with the affordability, social justice, cultural and economic impacts of housing, and contribute to making healthy residential neighborhoods and sustainable cities.

Property condition matters today when selling, buying and financing a home. Properties for sale are priced based on the current real estate market and property condition. It may be a great buy on paper, but when you are at the property, it might not be that great of a value... based on condition.

Let’s get real... The future home buyer will focus on qualifying the costs of owning and occupying a particular home versus another. Other key buying factors include performance, modern features, amenities, quality, and monthly utility cost.

According to a recently released national survey of 18-35 year old, today the up-and-coming generation of homebuyers desires a home to suit their needs and sense of style. This group of first time homebuyers will be much larger than the baby boomers.

- 77% of respondents seek “essential, purposeful” homes, equipped with the technological capabilities they have grown accustomed to, as opposed to stereotypical luxury homes preferred by man in their parent’s generation
- 43% of those surveyed want a more customized and less “cookie cutter” home
- 53% of millennials believe home technology capabilities are more important than “curb appeal”
- House hunters are looking for updated kitchens and bathrooms that might be less flashy, but will save them money over the long run

### **Home Repairs and Renovation**

The Joint Housing Center at Harvard University did a study on home repairs, and renovation...they determined after buying a home homeowners spent an approximately \$12,600 with upgrades and revisions.... And most of this money was financed on a credit card.

Financing \$12,600 as example on credit would result in around \$400 minimum monthly payment. On the flip side, your homebuyer or homeowner could participate in the Dream Home Cash Challenge program and finance the same dollar amount into their mortgage for \$50 month payment. The question today... does your homebuyer pay \$400 vs. \$50 a month on home revisions?

Homeowners who add energy-efficient features to their homes can even certify their renovation project by adhering to the National Green Building Standard®, which ensures upgrades meet efficiency targets and offers homeowners an added competitive edge when they sell their home in the future.

### **Affordability and Suitability is a National Concern**

Housing costs vary across the nation, but the lack of affordable housing affects everyone in all corners of the country. Housing costs vary across the nation, but the lack of affordable housing affects low-wage workers in all corners of the country. Ensuring that all families have a safe and stable place to call home is a public policy priority. Today homebuilders, renters, homeowners and homebuyers are concerned.

Recent statistics estimates that 6.2 million potential buyers, to “leak out gradually” over the next two to three years, while an improving economy creates new demand “for the next three to four years. Those are big pluses.”

Homes that are more energy efficient, comfortable and affordable, that’s the goal of our builders today and government regulators. Builders are adding a wide application of energy efficiency measures to their homes today.

They work closing with the building industry and with manufacturers of materials, equipment and appliances. Builders also, work with state and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use.

### **Why Energy Efficiency**

Why wait? Our energy future can be decided NOW. The development and implementation of energy-efficient products, technologies, and services:

- Saves consumers and businesses money
- Drives innovation and productivity
- Supports a cleaner environment
- Reduces dependence on imported oil

Importantly, it does so without sacrifice - energy efficiency enables us to do more while using less energy.

### **What is an energy efficient home?**

Energy efficiency is "using less energy to provide the same service". A home which incorporates common sense design principles, without compromising on comfort, to:

- Reduce the need for expensive heating and cooling appliances/equipment
- Reduce appliance running costs and therefore energy bills
- Reduce energy related greenhouse gas emissions

In fact, an energy efficient home is generally more comfortable, easier to maintain and costs no more to build than a conventional home.

Energy efficiency is not energy conservation. Energy conservation is reducing or going without a service to save energy. For example: Turning off a light is energy conservation. Replacing an incandescent lamp with a compact fluorescent lamp (which uses much less energy to produce the same amount of light) is energy efficiency.

Both efficiency and conservation can reduce greenhouse gas emissions. The least cost and most sustainable energy resource we have is conservation.

### **How to Finance Energy Efficiency Projects**

There are several loan products that help current or potential homeowners significantly lower their monthly utility bills by enabling them to incorporate the cost of adding energy efficient improvements into their new home or existing housing.

These programs eliminates the need for homeowners or homebuyers who are interested in making their home more energy efficient to take out an additional mortgage loan to cover the cost of the improvements they intend to make to their property. These programs are available as part of a home purchase or by refinancing your current mortgage loan.

- FHA 203(k) Streamline
- FHA 203(k)
- FHA Energy Efficient Mortgage
- VA Energy Efficiency Mortgage – The mortgage may be increased up to \$6,000

### Labels

ENERGY STAR certified new homes are designed and built to standards well above most other homes on the market today, delivering energy efficiency savings of up to 30 percent when compared to typical new homes. A new home that has earned the ENERGY STAR label has undergone a process of inspections, testing, and verification to meet strict requirements set by the U.S. Environmental Protection Agency (EPA), delivering better quality, better comfort, and better durability.



<http://www.georgiapower.com/Earthcents/residential/home.cshtml>

**Georgia Power Earth Cents** - Quality, comfort and a lifetime of energy savings.

Because quality, comfort and energy savings are even more important today than they were back in the early 1970s when Gulf Power first invented the GoodCents Home. These days' consumers are re-evaluating their lifestyles right down to the appliances and automobiles they buy. So, why not buy or build the most energy-efficient and environmentally friendly home possible?

When you choose an EarthCents Home, you know you're not just getting a home that looks good on the outside. You're also getting quality construction with all the interior features and options that make this home — your single largest personal investment — one that pays you back with energy-efficiency dividends in the form of lower utility bills month after month, year after year.

EarthCents Homes are built by people who understand the interactions of all the systems within the home — the cooling, heating and ventilation system; the water heating system; the insulation and air-barrier system; the appliances and lighting; and the windows. It's only through a thorough understanding of this "house as a system" concept that builders can truly guarantee their customers quality, comfort and a lifetime of energy savings.

What are the benefits of a Gulf Power EarthCents Home?

- A lifetime of energy bill savings
- Improved indoor air quality and moisture control
- Greater year-round comfort
- High-quality, sustainable construction
- What are the Gulf Power EarthCents Home features?

What are the Gulf Power EarthCents Home features?

- Properly installed insulation in the walls, attics and floors
- High-efficiency cooling, heating and ventilation (HVAC)
- High-efficiency water heating
- High-performance low-E windows
- High-efficiency lighting and appliances
- Tight building envelope and HVAC duct system verified through inspection and performance testing procedures.

**Sunbrite Home Services**

[www.sunbritehomeservices.com](http://www.sunbritehomeservices.com)

Mrs. Nicole Toliver

[nicole@sunbrieday.com](mailto:nicole@sunbrieday.com)

(404) 997-9166 mobile

(770) 670-7674

"Have a Sunbrite Day"

Cathy McDaniel

404-550-0775

[classeswithCathy@gmail.com](mailto:classeswithCathy@gmail.com)

[www.cathymcdaniel.com](http://www.cathymcdaniel.com)