Green Home Survey Overview

**2010**

*“There are no passengers on spaceship Earth. We are all crew,” Canadian educator and communications theorist Marshall McLuhan said in 1964. Strongly associated with concepts such as “global village” and “global theater,” McLuhan knew Internet technology would re-define the role of people on Planet Earth.*

Sit in a chair at a computer and in seconds you can be anywhere in the world. Within less than an hour, you can travel the world. It feels like a spaceship. We are all somehow closer, even to people half a world away. We know all too well that, if someone wastes or abuses the Earth’s natural resources, it affects us all.

We affect the planet—for good and for ill. Generations from now, the Earth will know that we were here because what we do now can change the face of the planet for generations—even centuries—to come. With all that we do, we leave a “footprint” behind us. If the footprint is positive, we will be remembered well. But if it is a negative one, what kind of legacy is that? We all want to do better. And we can. It’s not so hard really.

## I’m here to help

My title is Certified Green Consultant. It’s a brand new profession. It’s something like the “energy auditors” that you may have heard about, but a lot more. Think of me like you would a personal fitness trainer or a nutritional consultant. Only my business isn’t exercise or health. My business is to server as your personal “Green Home” coach.

Together, our mission is to ensure that your home is as comfortable and high-performance as possible—and, in particular, that you can save as much as possible on your energy and water bills. In these difficult economic times, I know how important that can be. And I want to help.

Achieving these goals obviously involves more efficient use of energy and water—that’s one of the easiest ways to cut down on your energy and water bills, of course. But my purpose goes beyond that. It’s also to help you to protect your family from indoor air pollution, to create a living environment that is bright and inviting, and to increase the value of your investment in your home and property.

And, I promise, this is going to be fun. I’ll do the heavy lifting—both literally and figuratively. I’ll climb into attics and crawl spaces, take measurements, and do the research and calculations. You get to tell me about how you want your house to work—what bothers you, what could be better. And you also get to tell me about your top priorities? How much do you want to reduce your heating or cooling bills, or is this a major concern for you? Are you intrigued by new energy and water technologies, but haven’t had time to look into them? Would you like to reduce your carbon footprint and do something good for the planet?

## C:\Users\Grace\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\V6CY7R8W\MCj04380730000[1].pngCertified Green Consultant Services

To keep things simple, I offer two basic types of services. You let me know what works best for you:

* A 90-Minute One-on-One Green Home Survey
* A Year-Long Green Home Improvement Plan

I can provide a 90-minute Green Home Survey and point out to you ideas and recommendations that can improve your home comfort and efficiency. Lots of these ideas can yield big improvements (and lower utility bills)—with little or no expenditure. Oftentimes, what’s involved is nothing more than just changing habits and being aware of how a house is designed to function.

Additionally, you and I can collaborate on a year-long plan—tackling big things and small things. This plan begins with the same 90-minute Green Home Survey, but goes much more deeply into matters that affect your family’s living environment and your home’s long-term well-being. I offer this extended service because I truly care about you helping you to obtain the best performance you can from your house and to get the most value possible from your homes—quite possibly, the biggest investment you’ll ever make.

## Quick Paybacks

The goal at every step of the process will be to identify all possible enhancements to your home’s efficiency and to establish a priority order for these items, based on:

* What’s important to you
* The cost involved, if any
* The payback period (or how quickly you can recover your investment through energy and water savings—and, hence, lower utility bills)

Above all, I want to make sure that the vital systems of your home are working properly.

## Green Home Survey

Here are the basic considerations covered, in order, by the Green Home Survey, the 90-minute home walkthrough:

* Architectural design, age, construction, and compositional materials of the house. In other words, what’s the story behind the choices that the builder made? How does all this fit together? This part of the survey includes walls and siding, roofing, windows, doors, fireplaces, living areas, and more.
* Heating and cooling systems. Proper functioning is essential to your family’s comfort—and to your costs. These vital systems are the biggest energy expense for most homeowners. Mechanical functioning, maintenance, surprising options, and easy-to-do tips are some of the things the survey explores.
* Ventilation, air exchange, insulation, and thermostats don’t always receive a lot of attention, but they are critical to making that sure all of the home’s big systems work right and that indoor air is fresh and healthy
* Doors and windows represent some fascinating technology advances. New materials and designs, glass composition, thickness, and glazes make doors and windows worth a closer look. Discussions about weatherstripping and replacing worn-out parts can save you from spending more than you need to.
* Appliances and electronics. Regular maintenance is critical—and, though often easy, just as often forgotten. A new issue for homeowners is “phantom load”—electricity that is used by electronic devices and some other small appliances even when they are not turned on.
* Lighting is full of opportunities for cost savings. In most homes, changing light bulbs saves both money and time. Lighting also can be more “purpose driven” and artsy, creating a mood and not just spraying brightness everywhere. Timers and sensors also can help to reduce electricity costs inside and outside the house.
* Finally, water use and water heating offer some of the simplest and cheapest efficiency improvements—and yet they, too, are often overlooked.

## Home as Ecosystem

One of my personal goals is to help you and your family members to deepen your appreciation and knowledge of your home as a “residential ecosystem.” Every part of a home is designed to work harmoniously with every other part. A house, in fact, is a system made up of a series of smaller subsystems:

* Heating and cooling
* Plumbing
* Electrical wiring and lighting
* Appliances
* Water heating
* Water usage
* Landscaping

A house needs to keep air pressure in balance. Negative pressure on the inside of a house means that air can flow in but not out. This can create all kinds of problems, such as pulling exhaust gases back into the living space and giving entry to moisture, mold, and plant growth.

Here’s a comparison that I like to make. A house—that is, a residential ecosystem—is like a human body. Builders and service professionals refer to the residential “thermal envelope.” What they are talking about is every part of the house that protects your family from the outside elements. That includes the walls, the roof, attic, foundation, crawlspace, windows, and doors.

Comparing the house to a human body, the thermal envelope would be like the skin, the body’s protection from all outside elements.

A house has heating and cooling systems for comfort and a thermostat to control temperatures on the coldest winter night or the hottest summer day. Likewise, the human body has systems that regulate temperature. The hypothalamus in the brain regulates body temperature. Perspiration cools the body. The adrenal system directs performance.

In a house, clean and unbroken vents and ducts are essential to good circulation (of air). In the human body, blood vessels serve circulatory needs. And most of us are familiar with how that circulation system doesn’t function right when it gets clogged. The same is true of the circulation system in the residential ecosystem.

And, finally, the home has a plumbing system to bring in water for life’s basic needs and to carry away waste. The human body, of course, also has its own plumbing and waste-removal systems.

The key point is this. The home—the residential ecosystem—is like us. It’s a living, breathing thing that needs care and maintenance. When this care and maintenance is provided, it will work properly and serve the owner many long and happy years.

## Energy Ratings and Energy Star Standards

The modern home is full of technology and the results of sophisticated science and research designed to improve the home’s performance and efficiency. Decades of testing in the laboratory; experimentation with polymers, resins, and metal alloys; materials science trials of durability, strength, heat resistance, and conduction, and more, all have led to the creation of energy-efficiency ratings and standards that set the bar for optimal home performance. In the United States, these standards are most prominently embodied in the U.S. government’s Energy Star and WaterSense rating systems.

A Certified Green Consultant can explain the meaning and use of the Energy Star and WaterSense rating systems— perhaps the consumer’s most important guide to improved home energy and water efficiency. For example, did you know that products in more than 60 categories are eligible for the Energy Star rating—a designation that stands for energy savings, cost savings, and protecting the environment? You may be surprised at the wide range of products identified with Energy Star. Here is a sample:

### Appliances

* Battery chargers
* Clothes washers
* Dehumidifiers
* Refrigerators and freezers
* Room air cleaners… and more

### Heating and Cooling

* Boilers
* Central air conditioners
* Ceiling fans
* Furnaces
* Insulation
* Programmable thermostats… and more

### Other Home Products

* Light bulbs
* Light fixtures
* Outdoor and holiday lights
* Roof coverings
* Water heaters
* Windows and doors… and more

### Home Electronics

* Cordless telephones
* DVDs
* Home audio systems
* Home theaters
* Television sets

## C:\Users\Grace\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\CNZJ1NIP\MCj04378350000[1].wmfAnd more high-performance, energy-efficient products are being identified all the time!

In addition, in working with a Certified Green Consultant, you will learn about the additional standards and ratings as they pertain to insulation (R-values), to doors, and windows (U-factor, solar heat gain coefficient, visible transmission, and of course the Energy Star ratings).

The various types of insulation, their placement in the house, and recommended installation techniques and levels (depending on your climate zone) all will be covered. Our collaboration also will change the way you shop for many of the products and services that you user in your home every day. I’ll help you to become a wiser and sharper shopper, knowing what all the labels mean, and what they imply for your family’s well-being.

## Making Your Move to a Green Economy

The “Green Economy” isn’t about just economizing to save money anymore! The concept of the “Green Economy” now also applies to living and making choices in a way that enriches not only our own lives, but the life and sustainability of the planet as well. At the same time, new forms of energy production are reducing the need to burn fossil fuels that send heat-trapping carbon dioxide and other gases into our atmosphere.

Your experience with a Certified Green Consultant will include an introduction to the many advances being made in the use and application of home-based solar, wind, geothermal, and biomass technologies. Our discussion will be open and honest about some of the important hurdles that these exciting forms of renewable energy still face, such as:

* Cost
* Intermittency
* Connectivity to the power grid

As always, as a Certified Green Consultant, I will present all of the possibilities to you, but always will tie these options back to your own interest and priorities, costs, and expected payback periods—the length of time until that upfront investment is paid off with the energy savings realized from use of the technology.

As part of this process, you will learn the difference between passive solar energy and active solar energy; and how virtually everyone can start using some principles of solar energy in the home without major expenditure. Solar air heating, three types of solar water heating systems, and two electricity-generating solar systems—photovoltaic panels and concentrating solar power—will be illuminated, and possibilities explored.

Homes also can have their own wind energy systems, but there are several good reasons why this technology is still in its early stages. Environmentalists are enthusiastic about geothermal heat pumps, and we’ll see why, and how all renewable energy options are capable of changing the way in which the residential ecosystem uses energy.

Help Me! Help Me! Help Me!

You got it! That’s what I am here for. I’ve been trained to know about many of the resources that are available free of charge, and I’m primed to share that information with you. Whether it’s getting a visual picture of how to install a radiant heating system or performing maintenance on a central AC condenser or knowing which improvements qualify for a government tax credit, and how to secure approvals… I’m ready to assist you in obtaining all of the help and support you need.

## C:\Users\Grace\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\V6CY7R8W\MCj03970440000[1].wmfOne More Thing That Distinguishes Me from All the Rest

You can be sure that I’ll be using energy-efficient light bulbs when I am spending my time burning through all of the latest research and information about our rapidly changing world of energy and water use. What are the forecasts for electricity prices? How will “smart grid” technology affect your home energy costs? What’s the next step in averting climate change and reducing carbon emissions? How can we preserve our precious and—in many cases—diminishing water resources? How will the decisions of lawmakers affect you and your family?

I am, with great purpose, not called an auditor, a rater, or an inspector. I am a Certified Green Consultant—dedicated to immersing myself in the world of energy and water use and technologies, and sharing that wealth of information with you to better serve the needs and comforts of your family. I am not just “a Consultant.” I am “*your* Consultant.”

With this pamphlet, you will find my card with information on how to contact me. I look forward to our collaboration in making your home the “green home” that you desire.

*One final note. While I will do my best to make recommendations to reduce your utility bills and improve your systems’ operation, my company can’t guarantee cost savings because it all depends on climate zones, weather conditions, systems’ use and maintenance, and energy and water consumption practices that differ with each household.*

*Even so, all information from your Certified Green Consultant is based on the latest industry standards and research so you can feel confident that your house is getting the very best professional attention and you are getting a service of value over the life of your home.*