

A PROGRAM OF MASCO HOME SERVICES, INC.

## Green. It's good for your community, and it's good for your business.

The *Environments For Living*<sup>®</sup> program assists builders with solutions and standards, bringing homebuyers tangible benefits including limited guarantees\* on comfort, and heating and cooling energy use. Learn more about it in this special supplement.

**GUARANTEED**<sup>\*</sup>  
Comfort / Heating and Cooling Energy Use



ENERGY EFFICIENCY



DURABILITY



INDOOR  
ENVIRONMENTAL  
QUALITY



WATER EFFICIENCY

IT'S MORE THAN A HOUSE,  
IT'S A SYSTEM

\*See the guarantee for complete details and limitations

ENERGY  
EFFICIENCY

DURABILITY

INDOOR  
ENVIRONMENTAL  
QUALITYWATER  
EFFICIENCY

# SUSTAINABLE SOLUTIONS *from the* GROUND UP

Building green has never been more important — to builders seeking a competitive edge, to home buyers interested in reducing their energy consumption and carbon footprints, and to communities planning for a more sustainable future. Green is here to stay, and builders who are embracing this sea change are emerging as winners.

They understand that it's hard to catch up when you're lagging behind the trend, and that there is a cost to not taking action. Sure, there are challenges, and market conditions are tough. But it's not extremely difficult to build green, and it doesn't have to increase your cost. Masco companies are committed to helping more builders get in front of the trend and stay ahead of the challenges.

To successfully deliver quality, resource-efficient homes, builders must navigate a sea of information. There are products and services to choose from. There are advanced construction techniques to implement, and education and training needs. There are multiple certifications to consider, and new sales and marketing messages to convey. Masco companies are dedicated to helping our builder-customers meet these challenges at every step — through people, products, and programs.

A compelling example of this commitment is Masco Home Services' *Environments For Living*<sup>®</sup> program. It's the only turnkey national program of its kind that assists builders in constructing homes that are healthier and more energy efficient,

more comfortable, and more durable than conventional code-built homes. It simultaneously enables builders to realize the ongoing goals of reducing risk, decreasing call backs, and increasing customer satisfaction. Introduced in 2001, the program blazed a new trail gaining acceptance in mainstream residential construction, including enthusiastic participation from regional and national home builders. This favorable reception from the production building community is a testament to the *Environments For Living* program's cost-effectiveness and value. In 2007, the *Environments For Living Certified Green* program was introduced, providing a comprehensive green building solution and enhanced builder and homeowner benefits. The advantages of this turnkey program, explored in the following pages, include offering a complete set of services and tools that builders need to go green.

In addition, the *Environments For Living* program and the *Environments For Living Certified Green* program enjoy sponsor support from leading providers of building products and materials — along with participation from Masco companies.

However, it's important to note that while these programs are prescriptive, they are also "product neutral" — meaning builders are free to use any manufacturer's products that meet the program requirements.

## TOUR THE HOME AT IBS '09

For builders who want to learn more about the *Environments For Living Certified Green* program, the 2009 International Builders Show (IBS) in Las Vegas will provide a unique opportunity. The *Environments For Living Certified Green* program will be showcased in the Professional Builders Show Village Home. This state-of-the-art green home will offer attendees the chance to experience the *Environments For Living Certified Green* program in a real-world, hands-on setting. Builders can learn up close and in person how advanced construction techniques and other program requirements result in tangible and measurable benefits to new home buyers. Masco company products that meet the program requirements will be featured throughout the home, as will those of *Environments For Living* sponsors and other companies that have joined with Masco to showcase a range of innovative green products. Best of all, whether or not you're attending the show, everyone can experience the program in a virtual setting by visiting [www.environmentsforliving.com](http://www.environmentsforliving.com) and touring the online, three-dimensional *Environments For Living Certified Green* home.

## ABOUT THIS REPORT

This report is intended to provide builders with a resource on the "why" and "what" of green building, and an overview of what the *Environments For Living Certified Green* program entails. The following pages present a discussion of the state of green building today, and the relationship between green building and building science. The next section provides details on the *Environments For Living Certified Green* program, followed by an overview of the services provided to participating builders — and how to get started. Builders interested in learning more about the *Environments For Living Certified Green* program are invited to get in touch with Masco Home Services by emailing [environmentsforliving@masco.com](mailto:environmentsforliving@masco.com). Additional information can be found at [www.environmentsforliving.com](http://www.environmentsforliving.com).



Masco companies are committed to conducting business in a manner that protects the environment, improves product quality, and protects the people who manufacture, build, and live in and live in homes across the country.

"We're passionate about innovation and 'thought leadership' at Masco," says Donald J. DeMarie, Jr., executive vice president and chief operating officer of Masco Corp. "We established the *Environments For Living* program to provide not only services but also education in building science. As a result, we have helped builders to elevate their knowledge of advanced construction techniques and to apply it on the job site. In turn, homeowners — and the environment — have benefited in numerous ways. Our *Environments For Living Certified Green* program is now enabling builders to deliver an even broader range of features to homeowners, with resulting environmental benefits.



BUILDING BETTER WITH BUILDING SCIENCE

# MAKING THE CASE for BUILDING GREEN HOMES

“For as long as people have been building shelter, we’ve looked at buildings in the context of what nature does to them,”

says Ron Jones, founder of GREEN BUILDER and editor of Green Builder Magazine. “It’s only in the past few decades have we really started to seriously look at it from the other direction and to examine the effect that buildings have on nature — not just individually, but collectively. As human population expands dramatically, we have to look at our built environment, the resource drain that it creates — not just materials used to build, but operationally. We have to examine all the other elements — indoor environment, quality, the waste stream, water — and of course we can’t have any of this discussion without talking about energy. These issues combined help us understand how much impact we have on the environment.”



Green building is growing exponentially. Builders and consumers are being driven to explore options in green building because of increases in energy costs, concern over environmental impact, and increased awareness about issues like indoor environmental quality. In addition, builders in a difficult market are looking for strategies to create a competitive advantage by differentiating their homes. Among some recent findings that showcase the growth of green building:

- The American Institute of Architects found that the number of American counties with green building initiatives has increased by nearly 400 percent since 2003.
- McGraw-Hill estimates the green building industry will be worth \$60 billion by 2010.
- According to the Energy Information Administration’s short-term energy outlook published Sept. 9, 2008, heating fuel expenditures are expected to increase over time.

- According to the Fourth U.S. Climate Action Report (2007), carbon dioxide emissions increased nearly 20 percent between 1990-2004. The mass media is daily urging consumers to seek ways in which they can reduce their carbon footprint.

## DEFINING GREEN BUILDING

Green building is sliced and diced different ways by various organizations that promote or certify green buildings. But there’s one common thread that’s shared by virtually all programs and experts: building science. Fundamentally, a building must be designed and built to perform as a system and must take into account a multitude of individual performance characteristics in order to perform well as a whole. To be a green building, it must perform against specific performance standards. In other words, the performance must be real and measurable.

The *Environments For Living Certified Green* program has measurable performance metrics. It includes requirements in five of the six primary

components of most green building initiatives – energy efficiency, resource/material efficiency, water efficiency, indoor environmental quality, and homeowner education. The one green building component not addressed in the program – because it is prescriptive and not a points-based checklist program – is site planning. This means builders who choose the *Environments For Living Certified Green* program can add site planning and easily meet the requirements of most local green building programs and/or a national program such as the National Association of Home Builders’ (NAHB) Model Green Home Building Guidelines. Builders who wish to achieve one of those certifications, or the U.S. Green Building Council’s LEED for Homes program, are invited to contact our staff to determine how they can best fulfill the requirements of *Environments For Living Certified Green* program, plus the local or national certification of their choice.

## GREEN STARTS WITH ENERGY

Joseph Lstiburek, Ph.D., P.Eng., a principal of Building Science Corporation

“Green sells homes, but it has to be real.  
*The Environments For Living* program sells homes.”

–DR. JOSEPH L. LSTIBUREK

and an internationally renowned building scientist, believes green building is, first and foremost, all about energy. “Eighty percent of all environmental damage on the planet deals with energy in one way or another — finding it, transporting it, creating it, or using it,” says Dr. Lstiburek. According to him, green building efforts must focus on three key areas: energy efficiency, water efficiency, and material efficiency. “Of the three topics, I think energy is 80 percent of the deal. If you want a green, sustainable building, you have to keep your eye on the priorities. It has to be ultra energy-efficient first, then water-efficient, and then material-efficient.”

Dr. Lstiburek states: “The main benefit to the builder to actually provide a demonstrably green building is that the builder gets to sell a house that the public wants to buy. Green sells homes, but it has to be real, because the public is savvy enough to sort through what’s real and what’s not.” Additionally, he notes that while the *Environments For Living* program may not bring the customer through the door, it closes the deal. “That’s a huge benefit. The *Environments For Living* program sells homes. And the reason it sells homes is that it gives builders credibility they wouldn’t otherwise have.”

Dr. Lstiburek says he has seen some builders struggle unnecessarily to meet the air tightness and duct tightness requirements of the *Environments For Living* program. “If you’ve been focused on building appearance and you have to shift your focus to actually delivering a building that works, those performance specs aren’t easy. But they become easy once you’ve got your systems in place to deliver them. It’s an entirely different way of looking at how you put the building together.” In other words, says Lstiburek, for some builders “it ain’t easy being green” – but not to those who are open to change.

# PERFORMANCE-BASED BLUEPRINT *for* SUCCESS



Since 2001, the *Environments For Living* program has assisted builders in improving energy and environmental performance, comfort, and durability of their homes. The turnkey, prescriptive program provides builders with a complete solution for high-performance building, including plan review, field-testing, training, certification, and powerful marketing tools. Because the *Environments For Living* program is performance and not product-based, any product, system, or strategy may be used as long as it meets *Environments For Living* program requirements, allowing builders maximum flexibility.

“What I really like about [the program] is the systematic approach — not just looking at a product or product types in isolation — but in relationship to all of the other elements of the house,” says green building expert Ron Jones. “It’s critical to making sure that you don’t create a set of new problems to replace the ones you’re solving. The fact that

“With the *Environments For Living* program,

The building is a lot more durable and comfortable, meaning a huge reduction in warranty callbacks.

Sure, you save energy, but by the way, you’re dramatically reducing your own risk.”

—DR. JOSEPH L. LSTIBUREK

the *Environments For Living* program is a response to these [green building] issues that come from the manufacturing sector is unique.”

The basic specifications of the original *Environments For Living* program focus on the performance requirements in the following areas:

- Framing
- Thermal envelope

- Air sealing
- Pre- and post-drywall practices
- Mechanicals
- Ducts
- Ventilation
- Pressure balancing
- Carbon monoxide detection
- Moisture management
- Testing protocol and frequency

## PUTTING THE “G” IN GREEN:

### Homeowner Limited Guarantees\*

In addition to providing guidance and tools to builders on how to achieve high-performance homes, the *Environments For Living* program and *Environments For Living Certified Green* program provide limited guarantees on comfort and energy used for heating and cooling. This allows builders to send the message to prospective buyers that the home will perform to the expectations of the program — a unique benefit that no other national green building program offers. Dr. Lstiburek is quick to point out that at all levels the *Environments For Living* program “delivers because it has a guarantee, and the guarantee is coupled to measurable, verifiable metrics. You can’t run, you can’t hide. It either meets it or it doesn’t. As simple as that sounds, that’s very special about this program.”

The comfort guarantee ensures the original

homeowner that the temperature in the home (as measured at the location of the thermostat) will not vary by more than three degrees from the temperature at the center of any room within that thermostat zone. If the comfort guarantee is not satisfied, Masco Home Services will assist the builder in identifying and resolving the comfort issues. The heating and cooling guarantee promises that the energy used to heat and cool the home will not exceed the “guaranteed usage” for the specific home. If the actual usage exceeds the guaranteed usage, Masco Home Services will reimburse the homeowner 100 percent of the cost difference between actual and guaranteed usage.

\* See guarantee for complete details and limitations.

The *Environments For Living* program offers two primary levels of energy performance: Gold (15 percent more efficient than IECC), and Platinum (30 percent more efficient than IECC). The program is intended to be synergistic with other performance-based programs. Gold energy-level homes also qualify as ENERGY STAR homes, and Platinum homes may qualify for an innovative program of the U.S. Department of Energy called the Builders Challenge. The Builders Challenge program seeks to highlight homes in the market that meet or exceed a 70 on the new EnergySmart Home Scale, a consumer-focused rating scale based on the Home Energy Rating System. Participation in the program may allow the builders to qualify for the \$2,000 Federal Tax Credit for Energy Efficiency.

Says Christine Barbour with Newport Partners LLC, who manages the Builders Challenge initiative: “The partnership has

been created to allow builders who meet the Platinum level of the *Environments For Living* program to easily take advantage of the added benefits of participation in the Builders Challenge.”

Beyond Gold and Platinum levels, the flagship *Environments For Living Certified Green* program assists builders in building homes that, at a minimum, reduce energy use by 20 percent as compared with the 2006 International Energy Conservation Code (IECC) and reduce internal water usage by 20 percent and reduce carbon emissions by at least 20 percent as compared to a conventionally built home.

With the benefits of participating in the *Environments For Living* program come serious responsibilities on the part of the builder to ensure that homes meet the requirements of the program and expectations of homeowners. When builders sign on to build *Environments For Living* homes, they commit to ensure that the homes are designed

and constructed to meet the program requirements, and ensure that all subcontractors understand and meet their specific responsibilities. These requirements help realize the benefits that all builders are aiming toward: fewer call backs, less risk, and higher customer satisfaction.

According to Dr. Lstiburek, a key benefit of participating in the *Environments For Living* program is reducing risk associated with problems that might otherwise arise in a home constructed to conventional building codes. “At the end of the day,” says Lstiburek, “not only do you get an energy-efficient building, but you get other collateral benefits. The building is a lot more durable and comfortable, meaning a huge reduction in warranty callbacks. Sure, you save energy, but by the way, you’re dramatically reducing your own risk.”

# TANGIBLE BENEFITS for BUILDERS and BUYERS



The following lists key features and benefits of the Environments For Living Certified Green program under the four primary areas: energy efficiency, water efficiency, indoor environmental quality, and durability.

For detailed program specifications, visit [www.environmentsforliving.com](http://www.environmentsforliving.com)



## ENERGY EFFICIENCY



### Tight Construction

All levels of the *Environments For Living* program require special framing techniques, such as a continuous air barrier, to help reduce leaks and drafts. Framing sets the stage for meeting many of the program's requirements.

### Improved Thermal Systems

All levels of the *Environments For Living* program require enhanced insulation techniques with special attention paid to gaps, voids and compression so as not to reduce the effectiveness or insulating power of the insulation. In addition, the program requires insulation to be in physical

contact with the air barrier, as a primary means of preventing air movement between conditioned and unconditioned space, which can diminish the insulating power. In addition, the *Environments For Living* Certified Green program requires that insulation products be GREENGUARD Indoor Air Quality Certified® or manufactured from at least 75 percent recycled content.

### Right-Sized HVAC

"Right-sizing" a home's heating and cooling system is important because it contributes to the performance and efficiency of the equipment – and to the comfort of the occupants. When it comes to a tightly constructed, energy efficient home, bigger equipment is not necessarily better. Oversized HVAC equipment operates less efficiently and can cause

humidity problems – in addition to being more costly.

### Framing and Sheathing

All levels of the *Environments For Living* program require a continuous air barrier enclosing the conditioned space. This means air barrier continuity must be maintained throughout the entire structure – including knee walls, soffits, garage interfaces and other areas of the home that may need special attention. In addition, rigid exterior sheathings capable of stopping airflow are required at all levels of the *Environments For Living* program. It is recommended as a "best practice" that roof sheathings include a reflective barrier, except when insulation is applied to the underside of the roof deck. These framing and sheathing requirements work together to create a tight building envelope and ultimately an energy efficient home.

## ENERGY EFFICIENCY



### LOW-E WINDOWS



The "E" stands for "emissivity" but Low-E really means energy efficient. Low-E windows have a thin metal coating, virtually invisible from the inside, which allows light in but inhibits thermal heat gain. Low-E windows, like the Milgard SunCoat®, add to energy efficiency in both the heating and cooling seasons – helping to prevent heat from coming inside during the summer and escaping during the winter. For more information about Milgard's Low-E products, visit [www.milgard.com](http://www.milgard.com).

### Lighting Efficiency – CFL/LED Lighting

The *Environments For Living Certified Green* program requires that at least 60 percent of all hard-wired lights are compact fluorescent lights (CFL) or light emitting diode (LED) lights, which reduce home energy consumption.

### Optional Lighting Efficiency – Dimming

The *Environments For Living Certified Green* program recommends use of dimmer switches for non-fluorescent fixtures, which allow homeowners to reduce watt usage. This is optional and not a program requirement, but encouraged as a "best practice."

### ENERGY STAR® appliances

ENERGY STAR® – a program of the U.S. Environmental Protection Agency and the U.S. Department of Energy – promotes energy efficient products and practices. Appliances that qualify for a ENERGY STAR designation meet strict guidelines set by the EPA and DOE. According to the EPA and DOE, ENERGY STAR qualified appliances incorporate advanced technologies that use 10 to 50 percent less energy and water than standard models.



### WATER EFFICIENCY



#### Low-Flow/High-Efficiency Toilets

The *Environments For Living Certified Green* program requires toilets that meet the U.S. Environmental Protection Agency's (EPA) WaterSense™ specifications for efficiency and performance. This includes an effective flush volume of 1.28 gallons, which is 20 percent less than the federal standard, and solid waste removal of 350 grams or greater. According to the EPA, WaterSense™ labeled toilets combine high efficiency with high performance unlike some first generation low-flow toilets to save water without a trade off in flushing power.

#### High-Performance Appliances

The *Environments For Living Certified Green* program requires clothes washers that are ENERGY STAR® qualified and have a water factor (WF) no greater than 6.0. Water factor is a measure of water efficiency, calculated as gallons of water used per cubic foot of capacity. In other words, the lower the water factor, the more efficient the clothes washer according to information from ENERGY STAR®, high performance clothes washers that meet its standards use an average

of 55 percent less water than standard models and about 31 percent less energy to run the washer and heat the water.

#### Engineered Plumbing Systems

In order to reduce water wasted during the time it takes hot water to reach the tap, the *Environments For Living Certified Green* program recommends that builders follow one of several options for efficient plumbing design. These range from central location of the water heater to a demand-controlled hot water recirculation pump.

Efficient plumbing design helps to reduce the “wait time” for hot water – thereby conserving water – and also helps reduce the amount of energy used to heat the water.



### INDOOR ENVIRONMENTAL QUALITY



#### Duct Tightness

The *Environments For Living* program and the *Environments For Living Certified Green* program both require that duct connections are sealed with a UL-listed mastic product, and all supply and return

boot-to-house connections are sealed with UL-listed class 1 pliable sealant such as mastic or caulk. This technique, combined with specific duct tightness metrics required by the program, helps keep attic dust and other contaminants out of the home's ventilation system.

#### Right-sized HVAC

“Right-sizing” a home's heating and cooling system not only contributes to the efficiency of the equipment – it also helps to manage indoor relative humidity by removing moisture during the cooling season. When systems are over-sized, moisture problems can adversely impact indoor environmental quality, along with affecting occupant comfort.

#### Combustion Safety

Avoiding the build-up of carbon monoxide (CO) – a colorless, odorless gas – is important for occupant safety. At all program levels, the *Environments For Living* program requires hardwired and removable CO detectors in all homes.

#### Fresh Air and Spot Ventilation

All levels of the *Environments For Living* program require mechanical fresh air ventilation throughout the home, in

### INDOOR ENVIRONMENTAL QUALITY



#### CABINETS



The *Environments For Living Certified Green* program requires that cabinets, like Merillat's, be constructed of composite panels that meet the standards of the Kitchen Cabinet Manufacturers Association's Environmental Stewardship Program ([www.kcma.org](http://www.kcma.org)), and the Composite Panel Association's Environmentally Preferable Product Specification ([www.pbmdf.com](http://www.pbmdf.com)). For more information about Merillat cabinets, visit [www.merillat.com](http://www.merillat.com).

addition to spot ventilation in the kitchen and bathrooms. Fresh air ventilation means that filtered outside air is brought into the home through the HVAC system. The *Environments For Living Certified Green* program also requires a specific filter performance metric, or approved electronic air cleaner. Spot ventilation in kitchens and bathrooms is important because it helps move moisture from showering and cooking out of the home. At all levels of the program, kitchen and bathroom ventilation must be capable of exhausting to the outside a specific volume of air at a specific rate.

#### Air Pressure Balancing

At all levels, the *Environments For Living* program requires all rooms (except bath and laundry rooms) in the conditioned space to not exceed a pressure differential of +/- 3 pascals with respect to the outside when interior doors are closed and the air handler is operating. Returns, transfer grills or jump ducts may be needed to balance each room.

Why is this important? When equipment does not take in or emit equal amounts of air, positive or negative air pressure imbalance can occur.

#### Internal Moisture Management

Moisture – whether it's naturally occurring from condensation or created by occupant activities such as cooking and showering – is important to manage for the purpose of indoor environmental quality. At all levels, the *Environments For Living* program includes a number of requirements that help manage moisture inside the home. Builders must follow the Energy and Environmental Building Association™ (EEBA) Water Management Guide so that moisture entering building assemblies has a way to dry – either to the interior, exterior or both. Tub and shower surrounds must be backed with specific water resistant materials. And, in hot, humid climates, additional requirements apply, such as not using vinyl wallpaper in kitchens and bathrooms.

#### Low-VOC Paint

The *Environments For Living Certified Green* program requires that paints contain low levels of VOCs – volatile organic compounds. VOCs are organic substances that can off-gas from solids or liquids, including paint and coatings. By using low-VOC products, exposure to these compounds is reduced, resulting in better indoor air quality in the home.

#### Low-VOC Carpets

The *Environments For Living Certified Green* program requires that carpet products carry the Carpet Rug and Institute (CRI) Green Label® for low-VOC (volatile organic compound) emissions. This results in better indoor environmental quality because it limits substances that can off-gas. In addition, the *Environments For Living Certified Green* program requires low-VOC tack strips and adhesives for carpet installation, and prohibits use of urea formaldehyde wood products under carpets. The program also requires use of an approved central vacuum in homes where carpeting exceeds 70 percent of the floor area in the conditioned space.

#### Optional Acoustical Package

Indoor environmental quality isn't just about air quality – it also includes attributes such as sound that contribute to the comfort of the home's occupants. As an option under the *Environments For Living Certified Green* program, builders can elect to install an acoustical package, intended to result in a sound transmission coefficient performance of 37 to 39. In a word, quiet.

#### Optional Advanced IEQ System

With so many consumers increasingly concerned about indoor environmental quality, builders and homebuyers may want to consider adding an advanced IEQ system to provide an even greater range of benefits. As an option under the *Environments For Living* program or the *Environments For Living Certified Green* program, builders may choose to offer an advanced IEQ equipment package, which is based on four pillars of improving indoor air quality – source elimination, ventilation, cleaning/purification, and monitoring. Equipment for this option includes a purification system, advanced HEPA filtration, germicidal lamp and other components that vary according to climate.

### WATER EFFICIENCY



#### LOW-FLOW FAUCETS AND SHOWERHEADS



Water conservation has never been more important, with many regions in the United States facing looming discrepancies in need and supply. Saving water in the kitchen and bathroom with low-flow faucets and showerheads is an easy way to reduce household water consumption. Low-flow showerheads contribute to efficient household water use. New technologies—like Delta's H<sup>2</sup>Okinetic®—have boosted performance so that conservation does not have to mean a trade-off for the homeowner. To learn more about Delta's water-efficient products, visit [www.deltafaucet.com](http://www.deltafaucet.com).

**DURABILITY**

**Optional Framing - Optimum Value Engineering**

At all levels of the *Environments For Living* program, builders are encouraged to apply Optimum Value Engineering (OVE) techniques, also known as advanced framing, in order to reduce lumber requirements while maintaining structural integrity.

**Air Barrier**

Three primary physical forces adversely affect the durability of building materials – air, heat and moisture – and the physics of how they impact durability often interrelate. The air barrier, thermal barrier, and moisture barrier work together as a system to manage air flow, heat flow, and moisture flow. The air barrier inhibits air from entering and exiting the building envelope, and plays an important role not only in energy efficiency but also in durability – because it is part of the system that controls air, heat and moisture flows. At all levels, the *Environments For Living* program requires a continuous air barrier and sealing of penetrations. Components and finished surface materials such as drywall and sheathing act as air barriers, but regardless of the material, it's important that the air barrier is continuous and that holes are sealed.

**Thermal Barrier**

Three primary physical forces adversely affect the durability of building materials – air, heat, and moisture – and the physics of how they impact durability often interrelate. The air barrier, thermal barrier, and moisture barrier work together as a system to manage air flow, heat

**DURABILITY**

**PAINT DURABILITY**



The *Environments For Living Certified Green* program requires that paints have verifiable performance in scrub tests and “hiding characteristics,” or coverage. Paint meeting these performance criteria, like those offered by Behr, may result in material efficiency. Some Behr paints carry the added benefit of being low-VOC. For more information, visit [www.behr.com](http://www.behr.com).

flow, and moisture flow. At all levels, the *Environments For Living* program requires the thermal barrier, or insulation, to be applied in direct physical contact with the continuous air barrier, in order to minimize air flow that can reduce the effectiveness of the insulation. Fiberglass, cellulose and foam insulation materials are all effective thermal barriers, but regardless of the material, it's important that the thermal barrier is in physical contact with the air barrier.

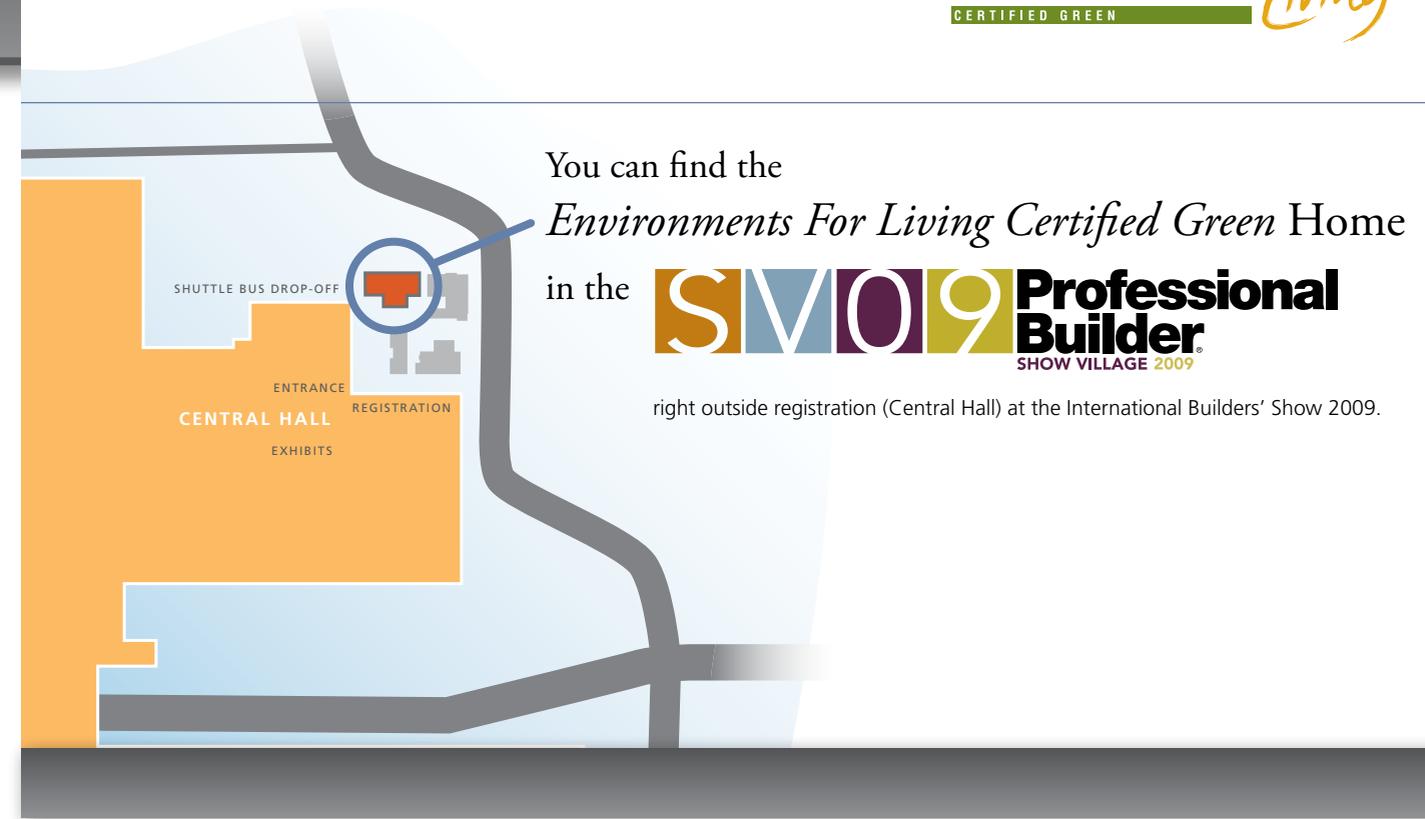
**Internal Moisture Management**

Moisture is one of the three primary physical forces that can adversely affect the durability of building materials – with air and heat being the other two.

Whether it's naturally occurring from condensation or created by occupant activities such as cooking and showering, it is important to control moisture. At all levels, the *Environments For Living* program includes a number of requirements that help manage moisture inside the home. Builders must follow the Energy and Environmental Building Association™ (EEBA) Water Management Guide so that moisture entering building assemblies has a way to dry – either to the interior, exterior or both. Tub and shower surrounds must be backed with specific water resistant materials. And, in hot, humid climates, additional requirements apply, such as not using vinyl wallpaper in kitchens and bathrooms.

**ecomagination™ Homebuilder Program**

The ecomagination Homebuilder Program™ – a collaboration of GE and Masco Home Services – is an option under the *Environments For Living Certified Green* program. The program assists builders in delivering homes that provide at least 20 percent in household energy savings, a 20 percent reduction in indoor water consumption, and 20 percent reduction in greenhouse gas emissions associated with the home.



You can find the *Environments For Living Certified Green Home*

in the **SVO9 Professional Builder**  
SHOW VILLAGE 2009

right outside registration (Central Hall) at the International Builders' Show 2009.

**The Environments For Living Certified Green Home is supported by these sponsors:**



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# BUILDING *and* SELLING HIGH-PERFORMANCE HOMES

Today's new home buyers want resource-efficient homes with all the benefits of utilizing advanced building techniques. And that's exactly what the *Environments For Living Certified Green* program can help builders deliver. This turnkey program is the most comprehensive of its kind, giving builders an edge in selling homes and offering tangible benefits that can be passed on directly to buyers.

## HOW TO GET STARTED

It's easy to get started using the *Environments For Living Certified Green* program. It begins with a plan review of the home or homes the builder intends to build. The plan review provides the builder with:

- an energy performance analysis of your home plan(s) under the *Environments For Living* program;
- a comparison of the way your home plan(s) will perform under the *Environment For Living* program requirements and the identification of and changes necessary for your home plan(s) to conform to the program requirements;

- an estimate of the costs required to meet the program requirements;
- a heating and cooling energy usage estimate; and
- an estimated amount of carbon emissions that will be reduced under the *Environments For Living Certified Green* program.

The *Environments For Living Certified Green* program staff is available to assist builders in preparing the plan input sheet, as well as help locate qualified and certified subcontractors. Once the plan review is completed and builders understand what they need to do to fulfill the program requirements, the job and specifications are ready to go out for bidding.

## ONLINE EDUCATION

Building a high-performance, resource-efficient home isn't difficult, but builders may need more than a checklist to get there. Many builders begin by getting advanced training in building science, both for themselves and key members of their own organizations. Masco Home Services can assist with

this through an exclusive arrangement with Green Builder College™, a Web-based initiative from the publishers of Green Builder® magazine. The five-course *Environments For Living Certified Green* educational track within Green Builder College offers a unique opportunity for builders and subcontractors to learn the science behind high-performance, resource-efficient construction. The course offers specific training in applying the principles of building science on the job site – and the reasons behind it. Because it was developed with proprietary content from the *Environments For Living Certified Green* program, this online learning experience provides a solid grounding in building science and the tools and understanding to follow the program's requirements.

## SALES AND MARKETING

Builders using the *Environments For Living Certified Green* program also have the opportunity to take advantage of sales force training and field training and consultation offered by the program.

Marketing materials include appealing, consumer-focused materials that promote the program benefits, and

## Cracking the Code: Selling Green

More builders are incorporating resource efficiency and building science into their homes, and using certification programs to verify performance. But translating this to sales is a challenge because many "green" features are things people can't see or touch. Some builders have become adept at this, but many admit they're looking for better ways to sell the intrinsic features of a home.

For one thing, building science and home performance are new ideas, at least to the consumer. Builders have been "selling the obvious" for a long time. Here are tips from some who have cracked the code:

Green means different things to different people. For some it's "pocketbook" issues, while others care more about their carbon footprints. Probe to learn what their hot buttons are.

Be ready to delve into their concerns. Energy usage is important, but comfort may be a bigger attraction, particularly if they've experienced problems in the past. Or indoor environmental quality. Modify your message based on what people care about.

Close with the performance message, don't lead with it. Technical features and performance will reinforce why consumers should choose your home, once they become interested. You have to connect emotionally with

a car before you're interested enough to hear about the engine. Same thing with a home.

Sell features and benefits, not just "how you built it." Of course you want to educate your sales staff and realtors about how you built the home, but they in turn need to translate this to how it benefits the homeowner.

Show them, don't tell them. Any story is easier to tell with pictures and demonstrations. Use cutaways to show what's behind the walls. Model home displays that offer a glimpse of what's inside and "how things work" make it real, more understandable and memorable.

Give them homework on the way out. You only have a few minutes of the prospect's time. Offering more information as they leave is a great way to send them home with the details. And food for thought.

As energy costs escalate and attention is focused on the environment, builders may find that consumers are increasingly receptive to learning more about home performance. Getting ahead of the trend will be a competitive edge for those who figure out how to effectively sell these features now. It is all about increasing quality to reduce call backs and increase customer satisfaction.

a homeowner package is provided for builders to give to their homeowners, including:

### Heating and Cooling Energy Use Guarantee\*

Each home receives a limited guarantee on the energy used to heat and cool the home.

### Comfort Guarantee\*

Each home receives a limited comfort guarantee stating that the temperature at the location of the thermostat will not vary more than

three degrees from the center of any conditioned room within a zone.

### Homeowner Manual

Manuals are provided to help new owners understand the extraordinary qualities of their new homes and provide recommendations for optimal performance.

### Certificate of Compliance & Emissions Statement

Homes built under the *Environments For Living Certified Green* program are issued a certificate stating that you have committed to construct the home

according to the *Environments For Living Certified Green* program standards, an estimate of the reduction of carbon dioxide emissions attributable to the home.

### Model Home Displays

Builders using the *Environments For Living Certified Green* program can take advantage of special display options, including use of our electronic home tour in model home displays.

\*See the guarantee for complete details and limitations

# ENVIRONMENTS FOR

CERTIFIED GREEN

# Living<sup>®</sup>

AT THE 2009 INTERNATIONAL BUILDERS' SHOW



## SHOW VILLAGE HOME

S V O 9 Professional  
Builder  
SHOW VILLAGE 2009

**Make your homes stand out with the *Environments For Living* program.**

The *Environments For Living* program provides solutions and standards that matter, with a comprehensive range of energy-efficiency services and tools. And we make it easy to give home buyers tangible benefits, including limited guarantees\* on comfort, and heating and cooling energy use.

Visit the *Environments For Living* Certified Green Home in the 2009 Professional Builders' Show Village at the International Builders' Show. When you see in person how the *Environments For Living* program works, you won't want to build another home without it. To learn more visit [www.eflshowhome.com](http://www.eflshowhome.com)

ENVIRONMENTS FOR *Living*<sup>®</sup>

A Program of Masco Home Services, Inc.

\* See the guarantee for complete details and limitations.