



# ICYNENE™

**HEALTHIER, QUIETER, MORE ENERGY EFFICIENT®**



**2009 MEDIAKIT**

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## 01 Letter from the Icyne President

This is an exciting period in Icyne's history – a time when consumers are increasingly concerned about global warming and motivated to reduce their carbon footprint. We are witnessing growing momentum among homebuilders to build houses that follow the precepts of the "Green Movement" and increasing specialization among architects focused on green building design.

Against this backdrop, we are launching ICYNENE LD-R-50™, a renewable-based spray foam insulation that is formulated using castor oil. ICYNENE LD-R-50™ is the next generation of Icyne® that will reinforce its reputation as the leader in spray foam insulation and position our company and its Dealer Network as global leaders in the entire building insulation industry.

Like original Icyne spray foam insulation, I am proud to report that ICYNENE LD-R-50™:

- continues to be 100% water-blown;
- continues to be HFC & PBDE free;
- continues to save homeowners up to 50% on heating and cooling costs (most important in this challenging economic climate)

With ICYNENE LD-R-50™ we have moved forward by adding another layer of green consciousness to an already superior product.

By choosing to insulate their homes with ICYNENE LD-R-50™, homeowners will feel confident that they will take good care of them. Walls insulated with Icyne are ones homeowners can truly love.

Sincerely,

Alan Rankin  
President & CEO, Icyne Inc.

### About Icyne

Icyne Inc. is the leading manufacturer of soft foam insulation products that are designed to help create Healthier, Quieter, More Energy Efficient® homes. These products are distributed (across North America, Australia, Asia and Europe) through a network of Icyne Licensed Dealers who then install the Icyne® products on-site for each custom application.



### News Release:

## Icynene introduces renewable-based spray foam insulation – ICYNENE LD-R-50™

**Mississauga, ON** (January 21, 2009) – Icynene Inc., the leading manufacturer of open-cell foam insulation products, has introduced ICYNENE LD-R-50™, a renewable-based insulation and air barrier material that reduces the need for petroleum-based polyols.

ICYNENE LD-R-50™, the next generation of Icynene's high-performance products, is responsibly made using castor oil and exceeds United States Department of Agriculture (USDA) BioPreferred<sup>SM</sup> and International Code Council (ICC) requirements for a rapidly renewable product.

### Numerous environmental benefits

Extracted from the castor plant, castor oil is a natural ingredient that is safe enough for use in personal care products such as lip balm. Production of the castor plant has low energy dependence and requires no pesticides, fungicides or man-made irrigation. The castor oil used for ICYNENE LD-R-50™ has a make-up which is extremely consistent year over year, from location to location and has a higher yield by weight (~40%) than soya oil (~17%).

"With the introduction of ICYNENE LD-R-50™, Icynene has moved forward and added another layer of green consciousness to an already superior product," says Alan Rankin, President & CEO of Icynene Inc. "Homeowners, builders and architects can feel even more confident that the insulation they're using is helping reduce their environmental impact from production of the product through its contribution in the building envelope."

### Key benefits for homeowners, building professionals, architects

ICYNENE LD-R-50™ offers many advantages for building professionals, architects and homeowners:

- It is an environmentally preferable product that is 100% water-blown, free from HFCs and PBDEs.
- It insulates and air-seals in one step for maximum energy conservation while minimizing the environmental impact during manufacturing and construction.
- By significantly reducing air leakage, ICYNENE LD-R-50™ contributes to a healthier, quieter and more comfortable indoor environment, while reducing energy consumption and related greenhouse gas emissions by as much as 50%.

### Icynene takes green action

As a company dedicated to producing product innovations that reduce our environmental footprint, Icynene is also reducing the environmental impact of its business operations. The company has established a "Go Green" company-wide initiative to reduce environmental impact in the workplace and offers green improvements employees can make at home.

Icynene is committed to reducing its environmental footprint and educating employees on conservation issues, teaching them how to be greener, and directing them to additional environmental resources.

### About the company

Established in 1986, Icynene Inc. is the leading manufacturer of open-cell foam insulation products that are designed to help create Healthier, Quieter, More Energy Efficient<sup>®</sup> environments. Icynene<sup>®</sup> is the insulation of choice for green building around the world, setting a standard for energy performance, comfort and reduced greenhouse gas emissions.

Icynene's line of insulation/air barrier products is distributed (throughout North America, Australia, Asia and Europe) through a network of Icynene Licensed Dealers and Distributors who perform installation on-site for each custom application.

For more information or to locate Icynene Licensed Dealers across North America, visit [www.Icynene.com](http://www.Icynene.com).



### Fact Sheet: Castor Oil

Castor oil was selected as the natural oil polyol (NOP) for ICYNENE LD-R-50™ because it helps reduce reliance on petroleum-based polyols without compromising product performance (in terms of adhesion, yield, air-sealing, and moisture management).

Unlike other NOPs such as soybean oil, castor oil's chemical make-up is extremely consistent year over year and from location to location. In addition to the performance benefits delivered by castor oil, this NOP offers numerous environmental advantages:

#### Castor Oil: Environmental Overview

- For every kilogram of castor polyol produced in place of a petroleum-based polyol, there is a reduction of nearly 3.5 kilograms of Carbon Dioxide (CO<sub>2</sub>) from the atmosphere.
- Castor oil is 100% naturally filtered, with no chemical additives required.
- The estimated carbon dioxide absorption level of castor bean plants is 34.6 tonnes per hectare, with two growing cycles per year (source: [www.DoveBiotech.com](http://www.DoveBiotech.com))
- The castor oil used for ICYNENE LD-R-50™ has a yield (by weight) of ~40% vs. ~17% yield with soya oil.
- The castor oil used for ICYNENE LD-R-50™ is processed under the guidelines of the Responsible Care® Initiative ([www.responsiblecare.org](http://www.responsiblecare.org)).
- The production process of the castor polyol has low energy dependence, consisting simply of de-husking and pressing. Harvesting can be done manually.
- Castor crops are non-irrigated (relying only on natural rainfall), saving scarce water supplies.
- Castor crops do not require treatment with pesticides or fungicides.
- Castor crops do not compete with food crops, as they can be grown on marginal lands not competitive with food production lands.
- Castor beans are a rapidly renewable material, as per the U.S. Green Building Council's (USGBC) definition, which requires a 10-year or shorter re-growth time frame.
- A cradle-to-gate study commissioned by the Department of Energy (DOE) reported that there are essentially zero net greenhouse gas emissions from the production of the castor polyol.



### ICYNENE LD-R-50™

**Q: How is ICYNENE LD-R-50™'s renewable content measured and certified; and why is it important?**

Testing in accordance with ASTM D 6866 confirms that ICYNENE LD-R-50™ exceeds the minimum renewable requirement for a bio-based material and can contribute toward a building's achievement of credits/points under various national green building programs, including:

- Leadership in Energy and Environmental Design for New Construction (LEED-NC) Version 2.2: Materials and Innovation Section 6.0
- NAHB National Green Building Standard (NGBS): Chapter 6 - Resource Efficiency 606.1

**Q: What contribution does ICYNENE LD-R-50™ make toward climate control and a reduction in Global Warming?**

1. In the US, the relationship between a building's energy consumption and greenhouse gas (GHG) emissions is approximately 1:1. Using ICYNENE LD-R-50™ in place of air-permeable insulation can reduce a home's energy consumption by up to 50%, therefore also reducing related GHG emissions by as much as 50%.
2. ICYNENE LD-R-50™ is HFC-free (no HFC-245fa, 1,1,1,3,3,-pentafluoropropane). HFC 245fa is a high "global warming potential (GWP)" gas with a GWP of 950. This means HFC 245fa is 950 times more damaging than CO<sub>2</sub>. Source: EPA

**Q: Does ICYNENE LD-R-50™ meet nationally recognized requirements for an Environmentally Preferable Product?**

Yes. ICYNENE LD-R-50™ is considered an environmentally preferable product because of its contribution to indoor air quality as well as reductions in energy consumption and greenhouse gas emissions.

ICYNENE LD-R-50™ was tested in accordance with Section 01350 of the Material Specifications, adopted by California High Performance Schools (CHPS). ICYNENE LD-R-50™'s compliance is documented in the California High Performance Schools (CHPS) Low-Emitting Materials (LEM) Table which can be found at <http://www.chps.net> (click on "CHPS Low Emitting Material List" from Quick Links). The table also lists ICYNENE LD-R-50™ as a product with rapidly renewable content.

Credits and points under the LEED Rating Systems and the NAHB's National Green Building Standard are granted to buildings that incorporate products with this designation, such as ICYNENE LD-R-50™.

## The Green Economy

This is a transformational time in the economy where energy and environment are discussed with extreme urgency. On the positive side, the seeds of a new green economy are being sown that will produce energy efficient solutions and more environmentally responsible products.

### Homeowners weigh environmental performance

Recent surveys confirm that today's homeowners are carefully researching and evaluating green product options. While consumers place great stock in the performance, reliability and durability that a green product or home can deliver, their environmental benefits help solidify their purchase decision.

### Green building points reflect key purchase factors

More than 60% of homeowners are willing to pay \$10,000 or more for green homes\*. It's good to know that the most influential factors for homeowners when making purchase decisions - energy efficiency, resource efficiency, durability and indoor air quality - are given heavy emphasis by green building programs such as LEED and NGBS. For instance, these programs award the most points for incorporating products that deliver high-performance and economic benefits.

### Green upside in a down market

Even in a down economic market, 49% of homeowners are much more interested in buying a green home versus a conventional home. Builders are aware of this demand as most agree that green is a market differentiator in our current economy.

In fact, 40% of builders think the down market makes it easier to market green homes, while 16% think it is much easier\*.

The green building market is expected to grow to \$70 billion by 2013\* and green products like renewable-based, high-performance insulation will have a significant impact on keeping up this momentum.



**“Energy efficiency has always been an important part of the added value we provide to our Palm Harbor customers and is consistent with our efforts to protect the environment. The [Icynene®-insulated] home will have an expected average bill of less than \$150 per month for electricity and gas which is much less than a code-built home.”**

– Ron Powell, President of Manufacturing, Palm Harbor Homes, Inc.

## ICYNENE LD-R-50™: a profitable, responsible option

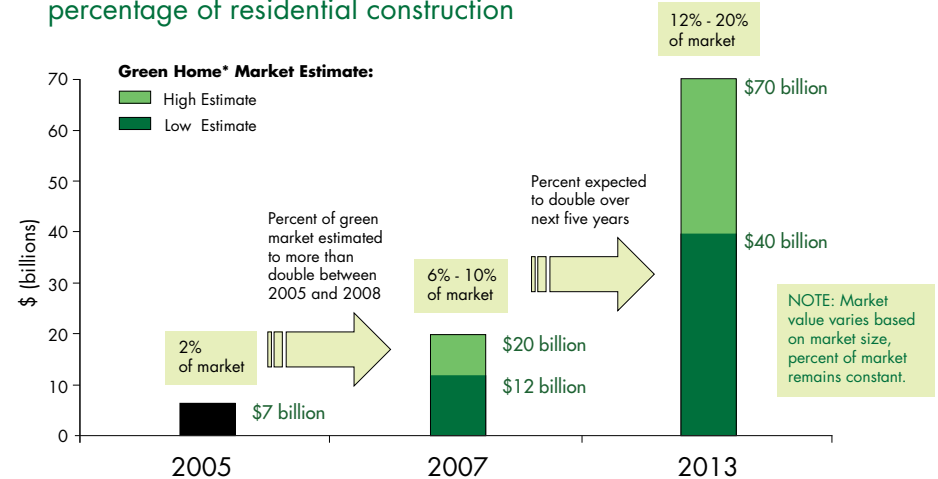
According to a report released by SBI market research, polyurethane foam products will not only survive 2009, but will thrive into 2012, due to an upsurge in demand for green products and homes.

With the introduction of ICYNENE LD-R-50™ – a high-performance insulation with rapidly renewable castor oil content, Icynene will continue to offer builders a profitable and responsible choice for their green building projects.

\*McGraw Hill Construction; The View Ahead: Construction Outlook and Residential Green Trends, October 2008.

## Residential Green Building Market Growth

### Green building represents an increasing percentage of residential construction



Source: Based on Surveys conducted by McGraw-Hill Construction between 2006 & 2008, MHC construction activity and U.S. Department of Census Data  
 \*Green home defined as one containing attributes in energy efficiency, indoor air quality, water efficiency, resource efficiency and site management.

**In 2007, Icynene® insulation was selected as the #1 brand of Spray Foam Insulation by Home Builder Executive magazine, which honors manufacturers for unique products, designs and features brought to the market.**

## The Green Building Pyramid

The Green Building Pyramid™ (see fig.1), developed by Green Builder® Media and modeled after the familiar food pyramid used for decades by the U.S. Department of Agriculture, breaks down and simplifies the complex choices facing builders and homeowners who want to improve the energy performance and resource efficiency of their homes.

The Pyramid uses shades of green to depict the impact of the options presented. Deep green represents high impact choices that should be made even before a home is built and light green represents options that can be added to a home after construction.

### Most cost-effective choices made before soil is turned

The Green Building Pyramid™ offers practical solutions for building professionals and consumers, by showing where it makes the most sense to spend money on upgrades or improvements for their homes. The Pyramid clearly demonstrates that the most cost-effective choices are those made before the first bit of dirt is touched, including insulation choices.

### Insulation = high impact savings and performance

Insulation that delivers maximum performance and economic benefits is a deep green feature on the pyramid because it is considered a high impact choice that contributes significantly to energy efficiency, resource efficiency, durability, and indoor air quality. The choice of insulation can also help a builder acquire more points and achieve a higher level of certification for their projects under green building programs such as LEED and NGBS.

### Renewable content helps push needle on green certification

Lighter green strategies, such as the use of products with rapidly renewable content, help maximize the point score. While fewer points are awarded at the top of the pyramid, they can still make all the difference in moving a home from Gold to Platinum certification.

### NAHBRC/Icynene survey: insulation priorities in line with Pyramid hierarchy

According to the latest NAHBRC/Icynene builder panel survey concluded in July 2008, custom builders are looking for a similar hierarchy of benefits from insulation products as illustrated by the Green Building Pyramid.

Custom builders identify the performance/economic attributes of an insulation product as their core purchase motivator, while social/environmental benefits, such as renewable or recycled content, help tip the scale when selecting insulation.

The results of the NAHBRC/Icynene survey are illustrated in a similar pyramid (see fig. 2, page 10). The most important attributes/benefits of an insulation product are shaded dark green; and those that weigh less for the builder, but would help their homes to be more green and marketable, are shaded lighter green.

### Perfect insulation package: combining performance and environmental characteristics

Moving up the pyramid toward lighter shades of green, it's clear that, while performance/economic characteristics outweigh social/environmental factors, a product that possesses all of these is more likely to be selected.

## The Green Building Pyramid



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Figure 1

## 10 Insulation Priorities in line with Green Building Pyramid™ Hierarchy

### Most Important Insulation Product Attributes Among U.S. Custom Home Builders

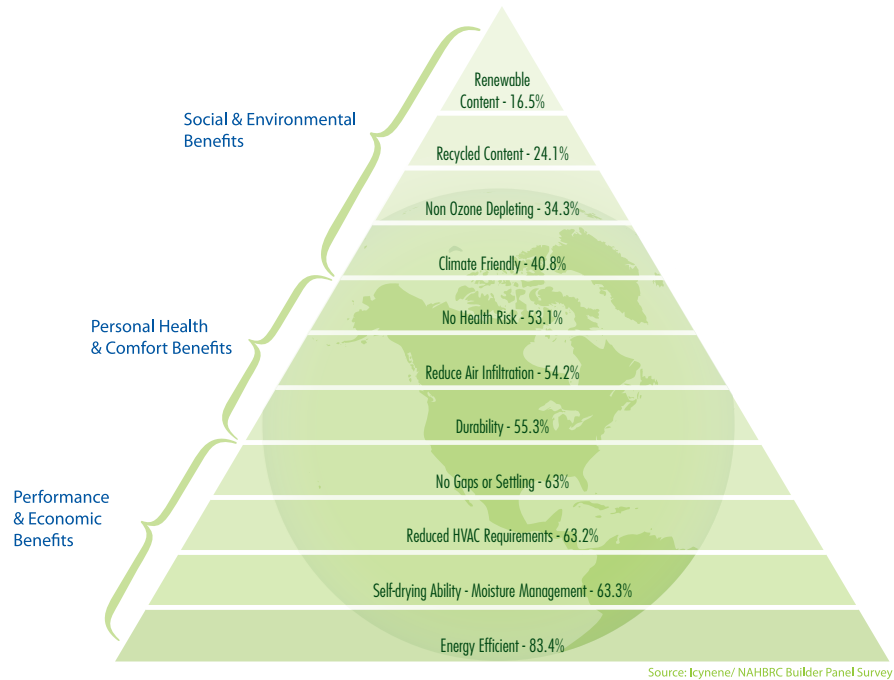
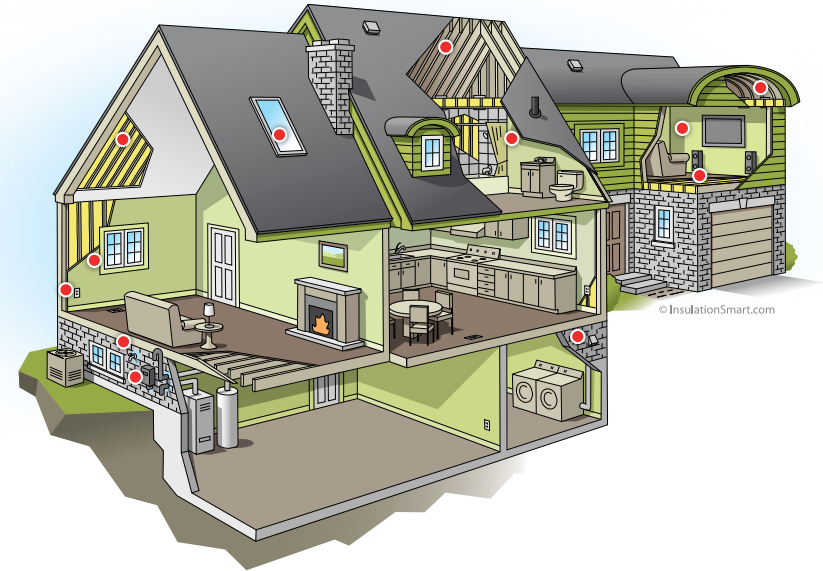


Figure 2

## 11 Interactive Home Illustration

### Interactive Home Helps Consumers Weigh Insulation Options



Similar to how the Green Building Pyramid™ helps simplify complex choices facing builders and homeowners who want to improve their energy performance and resource efficiency, Icynene works with homeowners to understand the many roles insulation can play in a home.

This illustration, adapted from an Icynene interactive tool on InsulationSmart.com, helps homeowners understand the impact of insulation decisions for saving on energy bills, controlling moisture and adding comfort, so they're more receptive to builder messages about green building.

View this online at: [www.insulationsmart.com/interactive\\_insulation\\_tool.htm](http://www.insulationsmart.com/interactive_insulation_tool.htm)



**"Icynene® greatly contributed to the green design of the Fifth Town cheese facility. It complemented other systems in reducing the carbon footprint of the facility as well as offered a healthier indoor environment ensuring that we would meet Platinum LEED certification levels."**

— Francis Lapointe, Architect and Designer, Lapointe Architects, ON



**"Our energy bills were making a big hole in our pockets. While promoting energy efficient buildings in the state, it was time for us to achieve it in-house and educate the industry by providing our own example. Icynene® helped us meet all our goals in the office renovation of our 112 year old building."**

— Mark Nix, Executive Director, HBA of South Carolina

## Latest Consumer Polling For Icynene Reveals Homeowners Want Back-Up For Green Product Claims

*U.S. homeowners overwhelmingly want universal standards for green products  
Few accept unproven green product claims to be true*

Ninety-four percent of U.S. homeowners would like to see universal standards for green products and only eight percent usually accept unsubstantiated green product claims to be true, according to a survey by Ipsos Public Affairs for Icynene.

The survey found that, while 77 percent of homeowners consider the green merits of products when making purchase decisions, only seven percent look at green or environmental qualities alone. The findings suggest that a company's environmental track record might mean more to homeowners than green product qualities when choosing and recommending products:

- 69 percent of homeowners agree they would buy a competing product from a company they believe to be more green
- 64 percent of homeowners agree they'd always consider buying from a green company first
- nearly half of homeowners (43 percent) agree they'd recommend to someone else not to buy products from a non-green company
- 36 percent agree they would not buy products from a company they consider not to be green

"Homeowners clearly want standards for green products so that they can feel more confident they will deliver on their green promises," says Sean Simpson, Research Manager for Ipsos Public Affairs, "but they also seem to be rewarding or penalizing companies for their environmental performance."

### Show me the green

In addition to backing up their environmental promises with performance, companies who market green products would do well if they prove product benefits rather than rely on green promises or names. The survey found homeowners are far more likely to be convinced that a product is truly green by proof of its content than by its name or packaging:

- More than eight in ten homeowners agree they'd be convinced a product was truly green if it was made from renewable resources

- Three-quarters of homeowners agree they'd be convinced a product was truly green if they knew it was climate-friendly and did not produce any greenhouse gases
- Fewer than half (42 percent) of homeowners agree that if 'eco' or 'green' was in the product name it would convince them a product was truly green and only 41 percent agree that green packaging or labels would convince them

The Icynene/Ipsos Public Affairs poll found women are more receptive to green product names than men and respondents in the Northeast are more likely than those in the Midwest to reward or penalize companies for their environmental track record:

- Women (47 percent) are far more likely than men (35 percent) to agree that having 'eco' or 'green' in a product name would convince them that it is truly green
- Men (27 percent) are more likely than women (19 percent) to agree that how green a product or material is has absolutely no impact on their purchase decisions
- Respondents in the Northeast (73 percent) are the most likely and those in the Midwest (56 percent) the least likely to agree that they would always consider buying products from a green company first
- Respondents in the Northeast (41 percent) are the most likely and those in the Midwest (28 percent) least likely to agree that they would not buy products from a non-green company

### About the survey

These are the findings of an Ipsos Public Affairs survey of 1,000 U.S. homeowners conducted via the Ipsos I-Say Online Panel, Ipsos Public Affairs' national online panel. The results are based on a sample where quota sampling and weighting are employed to balance demographics and ensure that the sample's composition reflects that of the actual American population according to Census data.

Quota samples with weighting from the Ipsos online panel provide results that are intended to approximate a probability sample. An unweighted probability sample of this size, with a 100 percent response rate, would have an estimated margin of error of +/- 3.1 percentage points, 19 times out of 20.



**" We initially chose Icynene® for its environmentally-friendly composition but we were pleasantly surprised to learn that Icynene can help us reduce our energy consumption by up to 50% which is better for our environment and our pocketbooks too. We're looking forward to years of sustainable living with the help of Icynene."** – Dave and Anna Porter, Homeowners, Going Green at the Beach Home, WA

# Icynene invites you to experience its high performance insulation and air barrier material at IBS show homes

## The New American Home®: Icynene takes the gamble out of green building in a familiar Vegas Neighborhood

The New American Home (TNAH) 2009, on display during the International Builders' Show (IBS), is on a half-acre lot in a neighborhood with an interesting slice of Las Vegas history. The home is situated right across some property owned by Mr. Las Vegas himself – Wayne Newton.

TNAH 2009 is a net-zero energy home with advanced green building technology including the superior Icynene® spray foam insulation that creates a safer, more energy efficient envelope.

The home incorporates builders' best practices for creating an energy efficient, comfortable and healthy living environment. With its unique air-sealing properties, Icynene helps TNAH meet these goals. For instance, Icynene is sprayed directly to the underside of the roof deck in TNAH, creating an indirectly conditioned attic assembly. This will help reduce air infiltration and ensure warm exterior air stays out and any leakage from attic ductwork remains within the conditioned space. This improves performance of the HVAC system and significantly reduces energy costs.

An insulation and air barrier, Icynene helps improve indoor air quality by minimizing the entry of outdoor allergens and pollutants. Its 100% water blown, HFC- and PBDE-free formula creates a healthier living environment and helps reduce greenhouse gas emissions to minimize the TNAH's environmental impact.

## NextGen 2009 features the latest advancement in Green Home Building

For the 5th year in a row, NextGen selected Icynene as its featured insulation to support their demonstration homes' sustainable, green goals. Both the onsite NextGen Urban Living Home and the offsite NextGen First to the Future Home will showcase the energy efficient, healthy benefits of Icynene insulation.

Icynene open-cell foam insulation is sprayed into the walls of the NextGen First to the Future Home, minimizing air leakage and delivering advanced moisture control, improved air quality and immediate energy savings of up to 50%.

The U.S. Department of Energy's Builders Challenge program calls for 220,000 homes to be built by 2012 that are 30% more efficient than today's homes. Built in partnership with the U.S. Department of Energy, the NextGen First to the Future Home reaches all levels of performance, boasting efficiency levels that are 95% greater than today's standard homes.

Efficient, green and digitally connected, the NextGen First to the Future Home is built to withstand the worst natural disasters, such as earthquakes, which are common in Las Vegas. Continuing a longstanding partnership with the Institute for Business & Home Safety (IBHS), the home is built to the stringent IBHS Fortified...for safer living® standard.

Icynene contributes to the home's standards with its semi-flexible, soft structure that expands and contracts with the home and does not crack or delaminate, delivering performance and durability for the life of the building.

## Icynene Demonstrates the Hidden Benefits Behind the Walls at the 2009 Show Village Homes

Featured in both the Green Home and the Quiet Living Home, Icynene soft spray foam insulation delivers a superior air-seal to help builders overcome diverse insulating challenges and to meet all of the objectives defined by these homes.

### Green Home

Show Village Green Home is certified to Environments For Living® standards. The Environments For Living program provides a rigorous set of requirements that treats a home as a "system". This means that all components of the home work together to deliver high-performance results, translating into optimal comfort and efficiency for the homeowner.

Icynene spray foam insulation and air barrier will integrate with other building components of the Show Village Green Home to implement the 'systems approach' to building.

For instance, as an ASTM qualified air barrier, Icynene significantly reduces random air leakage, stopping up to 40% of a building's energy loss. By controlling air infiltration, it minimizes the intrusion of airborne odors and pollutants. Paired with mechanical ventilation, Icynene helps improve indoor air quality and extend the life of a building by minimizing the flow of airborne moisture that can breed condensation, mold growth and decay.

### Quiet Living Home

The Quiet Living home boasts quieter living spaces for the ultimate getaway that's just on the other side of the wall. Icynene plays a major role in minimizing airborne sound, helping occupants escape from noise originating from the media room, home theater or from common outdoor activities. An effective way to reduce these common sounds

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is to control air movement. Since Icynene is classified as an air barrier, it effectively minimizes unwelcome sounds that would otherwise compromise the quality of the indoor environment.

Soft and flexible, Icynene is also ideal for insulating around plumbing runs and other areas that produce unwanted sounds, including plumbing vibrations caused by a flushing toilet or a running shower.

Icynene is installed and displayed in the exterior walls, ceilings and attic of the media room in the Quiet Living Home.

See Icynene in action at any of these show homes, or visit Booth #N1363 at the International Builders' Show. For more information, please visit [www.icynene.com](http://www.icynene.com)



NextGen 2009 Home



The New American Home



Show Village Quiet Living Home



**“ After almost 30 years in residential renovation and construction, I have decided that I will only use spray foam insulation in any project I build. As a committed green builder, I firmly believe that using Icynene® insulation to create conditioned attics and crawlspaces provides my clients with a healthy, comfortable, and efficient home.”**

*– Carl Seville, Builder/remodeler, Seville Consulting Inc., GA*



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