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The NAHB Energy Subcommittee focuses on issues related to cost-effective and affordable energy codes, standards, and regulations, as well as state and federal legislation, and recommends actions for addressing those issues to NAHB’s Construction Codes and Standards Committee. The subcommittee advises NAHB staff and members on the implementation of NAHB policy as it relates to energy conservation requirements for residential construction, and convenes advisory groups in response to critical code and legislative issues.

For more information, visit the NAHB Research Center at www.nahbrc.com/evha

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The NAHB Research Center helps clients overcome barriers to innovation and achieve commercial success. Established nearly 50 years ago, the Research Center has grown into a full-service product commercialization firm, with expertise in product testing and certification, building science, market research, government consulting, and code development. By providing clients an unrivaled depth of understanding of the housing industry and access to its business leaders, the Research Center is finding innovation a home.

The U.S. Department of Energy Building America Program is re-engineering new and existing American homes for energy efficiency, security, and affordability. For both new and existing homes, the industry-led, cost-shared program aims to significantly reduce energy use, construction time, and waste, encourage a systems-engineering approach for design and construction, improve indoor air quality and comfort, integrate on-site power systems, and accelerate the development and adoption of high performance residential energy systems.

The National Renewable Energy Laboratory develops renewable energy and energy efficiency technologies and practices, advances related science and engineering, and transfers knowledge and innovations to address the nation’s energy and environmental goals. It is the only national laboratory solely dedicated to advancing renewable energy and energy efficiency technologies from concept to commercial application. NREL’s 327-acre main campus in Golden, Colo., is a living model of sustainable energy as is its nearby National Wind Technology Center.

The NAHB Energy Subcommittee focuses on issues related to cost-effective and affordable energy codes, standards, and regulations, as well as state and federal legislation, and recommends actions for addressing those issues to NAHB’s Construction Codes and Standards Committee. The subcommittee advises NAHB staff and members on the implementation of NAHB policy as it relates to energy conservation requirements for residential construction, and convenes advisory groups in response to critical code and legislative issues.

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Reflectix, Inc. Page 47
SEISCO International Limited Page 50
The Vinyl Siding Institute with Progressive Foam Page 39
Whirlpool Corporation Page 15

Table of Contents
EnergyValue View 4
Sharing EnergyValue Lessons 6
Nothing But Net ... Zero 8
Building an Tradition 11
The Dream of Value 12
Building Value with a View 13
Making a List, Checking it Twice 14
Great Value, Great Cause 16
The Power of Beauty 18
It’s Always Sunny in Tucson 20
Testing the Limits 22
The Science of Value 24
Seasoned Green 26
Tried, True & Net Zero Too 28
No Gut, No Glory 30
G, That House is Efficient! 33
Trials and Teamwork 34
Sweat Equity, Optimal Efficiency 35
Meaningful Improvements 36
Behind the Scenes 37
Sponsors 38
Appendix
Energy Features, New Homes Division 40
Energy Features, Existing Homes Division 44
2013 EVHA Application 46
How to Sell a Green Certified Home 48

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The EnergyValue Housing Award (EVHA) is designed to recognize builders and remodelers who successfully integrate energy efficiency into all aspects of new and existing homes, as exemplified by a specific home. Through educational programs and national media coverage, the award promotes increased awareness of the value of energy efficiency among home builders, remodelers, homebuyers, homeowners and others within the residential market. Seventeen builders and remodelers from 12 states were selected to receive 2012 EnergyValue Housing Awards. All of the applicants deserve congratulations for significantly improving their energy performance, as well as considering the costs and value of the energy upgrades.

The EVHA is not just an award program, it is also a professional journey for many companies. Every year, at least one non-winning past applicant has returned as a winner. “The EVHA has really changed what I do and the way I think and has made a difference,” says Orlo Stitt, winner of 17 EnergyValue Housing Awards, including the 1999 EVHA Builder of the Year, the 2006 and 2008 EVHA People’s Choice Awards, and a 2012 award. “I can tell you, it will do the same for you and your customers.”

As part of the process, the EVHA applicants are challenged to participate in energy and green programs. Of this year’s EVHA winners, half stepped up and took the Builders Challenge, a voluntary energy certification program through the U.S. Department of Energy, an EVHA partner. In addition, two-thirds of all applicants had their homes certified under an ENERGY STAR program and/or a green building program and many had multiple certifications under these programs.

Many of the winners are also active in the Building America Program, which means they are willing to go the extra mile personally to help advance the entire home building industry. Building America partners take on significant risks and dedicate a tremendous amount of time and resources to build demonstration test homes. But there is a great deal of satisfaction and other benefits partners get in return. By partnering in Building America energy efficiency research, builders benefit from the teams’ collective expertise and garner a competitive advantage.

The fresh approaches that this year’s award-winning builders and remodelers have taken serve as shining examples of what is possible. If you are ready to see examples of satisfied customers and projects contributing to a critical shift in the residential construction industry, read on! Discover exemplary approaches to the design, construction, and marketing of high performing homes and learn how the 2012 EVHA winners are setting the bar higher for the entire industry.

Debra Sagan
EVHA Program Coordinator
Education is a key component to building energy-efficient homes and winning EnergyValue Housing Awards. As Michael Chandler, a former EVHA winner says, "We don’t build them like they used to," and that applies to the materials, practices, design, research, and testing that goes into every high performance home. But while many mainstream contractors view energy efficiency and high performance building as requiring cutting-edge technology, exotic materials, and unlimited budgets, EVHA winners are proving just the opposite.

To say that EVHA-winning builders are different from their competitors may be an understatement. Not only do they hold themselves and their products to a much higher standard of performance and sustainability, they also willingly share their experiences and knowledge with anyone who will listen. They truly are ambassadors for the concept of efficiency and strive to spread the energy savings and wealth of knowledge so others can profit from their experiences.

The three speakers at the 2012 EVHA Educational Session have some unique and exciting stories to tell about their quests. Michael Murphy, Division President of Nexus EnergyHomes, in Stevensville, Md., is quick to share the story of the upstart company. Before even turning one shovel of dirt in their first project, they investigated, researched, and conducted pre-construction energy simulations with a number of consultants. This careful analysis, choice of materials, and education as well as close supervision of subcontractors made it possible for Nexus EnergyHomes to realize their dream of building net-zero homes in a production environment for less than $300,000.

Lauren Kuenzel's GreenPinkies story is fascinating in so many ways, beginning with the fact that it’s a newly-founded Arkansas company headed by Lauren and her mother Kimberly – neither of whom had any remodeling or construction experience. Despite of their inexperience, they were determined to breathe new life into a mid-century brick ranch house with mold and air leakage/insulation problems without changing the exterior. They also wanted to do it all at a reasonable price—$66 a s f was the final cost. In the end, they learned that “nearly anyone” with motivation and a vision can transform a tired, older house into an energy-efficient, healthy, “green” home.

Heather Ferrier Laminack, representing both Ferrier Builders and Ferrier Custom Homes, is the youngest generation of the Ferrier family business that was founded in Texas over 100 years ago. Heather’s mentor/father has dedicated his custom home building career to increasing efficiency, sustainability, and responsibility. Heather continued that legacy in the remodeling of a historic house in downtown Fort Worth. Transitioning from new construction to complete renovations while embracing the goals to make the home energy efficient, healthy, and functional presented both expected and unexpected challenges and provided a wealth of on-the-job learning to the Ferrier companies.

Every high-performance home starts with a high-performance building envelope. Often, that envelope starts with BASF chemistry and its contributions to improved energy efficiency, durability and speed of construction.

**Join us at the EVHA Educational Session:**
“Secrets for Success from EnergyValue Housing Award Winners”
Friday, February 10, 2012 1:30 – 3:00 PM
Orange County Convention Center – West Room 304E
Hear how the experiences of these high performing builders and remodelers can help you advance your business and construction practices and increase your bottom line!
Nexus EnergyHomes began with company president Paul Zanecki’s vision to build net-zero energy homes in a production environment. Joining with experienced production builder Mike Murphy and assisted by the NAHB Research Center Industry Partnership through the U.S. Department of Energy’s Building America Program, the team extensively researched technologies, materials, and practices necessary to get to net-zero electric for everything the builder installs. Murphy describes their big "aha moment" being when they figured out that they could get to net zero in a production environment on a budget of $300,000 or less.

The young company serendipitously discovered a multi-unit project in Frederick, Md., a city rich in heritage and innovation. Just an hour from Washington, D.C., Frederick is home to Hood College, Frederick Memorial Hospital, Fort Detrick, and Bechtel Corp. Murphy felt all of these high-tech employers would attract “the exact people we thought would buy our homes—doctors, nurses, professors, and techies.”

So when the opportunity for building on the site of a former housing authority apartment complex presented itself, Nexus EnergyHomes knew their net-zero energy concept would be an excellent fit. Thus far, their intuition has been on the money and the company has already sold 16 homes with a backlog of 14 to build in the 59-home development. The market rate homes in the revitalized neighborhood are being purchased precisely by the target market they had originally envisioned.

Nexus EnergyHomes’ award-winning 2,710-s.f. duplex home, their first in the development, was the “epitome of value engineering,” according to one EVHA judge, that resulted in a very tight 1.2 ACH50. They selected structural insulated panels (SIPs), installed using best industry practices and sealed with the EnergyComplete system, to help construction go quickly. As a bonus, the SIPs contribute to a quiet interior, despite the busy city location. With open-webbed floor trusses and spray-foam band joist insulation, the company minimized the total length of their well-sealed duct runs, and we were able to prevent any duct losses to the exterior.

Transfer grilles and shorter central returns cut costs and enhanced the air distribution system performance. These cost savings allowed the company to install a top of the line geothermal heat pump, solar water heating, and sufficient PV (4.1 kW) to bring the HERS to 28.

“This is the whole package,” said one judge. “It contains high quality materials, outstanding energy efficient features, and incredible marketing. It is an outstanding and comprehensive package.”

Net content to just be technically sound, Nexus EnergyHomes is also on the cutting edge of marketing. By leveraging free publicity in the local media, the company was able to generate a lot of interest in the innovative project and increased attendance at several open house events, including a groundbreaking and ribbon cutting. Both of these hosted about 175 people, including some high-profile politicians from nearby Washington and Annapolis. When the model was opened, “We had a line out the back,” said Murphy. “People waited an hour or more to tour the home.”

The project received extensive media coverage, including a full-page article in the Washington Post. Recognizing that many potential buyers may be unfamiliar with the attributes and operations of such a highly efficient house, Nexus EnergyHomes developed a sales package that entices customers to learn more about the features. Post-sale homeowner education provides more detailed information and instructions for monitoring and maintaining all components in the house. With each home’s whole-house monitoring and control system, any homeowner with access to the internet can remotely set temperatures, control switches, and view their home’s energy consumption and production.

“Our system offers complete real-time control of a home via the internet. It’s a way for homeowners to communicate with their homes.” The savvy homeowners that are flocking to Nexus EnergyHomes’ Frederick project are communicating with and learning from their homes.

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“Our system offers complete real-time control of a home via the internet. It’s a way for homeowners to communicate with their homes.” The savvy homeowners that are flocking to Nexus EnergyHomes’ Frederick project are communicating with and learning from their homes.
Building an affordable home in Hawaii—where most natural resources except sun and sand are scarce—can be a daunting task. Yet, Armstrong Builders, in a 45-home development built for the Department of Hawaiian Home Lands (DHHL), accomplished this mission with finesse, as exemplified by this EVHA-winning home.

The DHHL helps native Hawaiians return to their land and began with a goal to create a development of homes that are affordable to own and operate, fit the Hawaiian lifestyle, and respect the Hawaiian custom of “kuleana,” or responsibility. DHHL selected Armstrong Builders who jumped at the chance to combine its experience building green homes with the challenges of making each home affordable and culturally significant.

Armstrong Builders started by keeping the homes small (1,169 s.f.). Because the weather is usually pleasant in Hawaii, ample outdoor living space helps improve the functionality of a smaller home while reducing cooling needs and encouraging the traditional Hawaiian way of life. With high electric rates and electricity bills driven by cooling loads, Armstrong Builders wanted to focus on creating a net-zero energy home to keep homeownership affordable. To this end, the company designed elements that reflect heat away from the structure, catch prevailing breezes for natural cooling, and generate electricity from the sun.

To prevent the intense sunlight from heating up the home’s interior, Armstrong Builders installed radiant barrier roof sheathing and ENERGY STAR reflective metal roofing; designed large overhangs to prevent unwanted solar heat gain through windows; provided additional shading for outdoor living areas; and selected windows with low solar heat gain properties.

Capturing the trade winds began with orienting the homes toward prevailing winds and designing ventilation shafts to passively evacuate hot air while drawing in cooler air. When needed, the natural ventilation is boosted by a whole-house fan or exhaust fans in each bedroom.

With the solar orientation and clear roof lines, adding sufficient capacity to reach a HERS Index of 24 was relatively simple. Because of the abundant solar resource, favorable pricing for solar energy, and the high cost of electricity ($0.25 per kWh), Armstrong Builders did install sufficient initial capacity—a total of 2.5 kW—to power an electric vehicle charging station in addition to most of the home’s energy needs. There is still available roof area to accommodate enough PV to bring the house to net-zero in the future. Compared with a typical home’s electric bill of $300 to $500 per month, the first month’s electric bill of $45 seems to prove the home is providing the homeowners with a new tradition of energy value.

Congratulations to Nexus EnergyHomes of Stevensville, Md. for being named 2012 EnergyValue Housing Award Builder of the Year.

Armstrong Builders, LLC
Honolulu, Hawaii
Affordable Category, Hot Climate

Building on Tradition

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Armstrong Builders, LLC
Honolulu, Hawaii
Affordable Category, Hot Climate
The Dream of Value

Colorado Dream Homes, Inc.
Pagosa Springs, Colorado

Pagosa Springs, Colorado

Colorado Dream Homes attributes the rebirth of its business in large part to energy efficiency. “People associate energy efficiency with a quality, well-built home,” says company president Tegan Brown. “They still want it—granite countertops, cedar siding—and they want it affordable. I think one of the reasons we’re so busy now is because we are a good value.”

So, while Colorado Dream Homes builds what customers want, it never compromises on energy efficiency. This steadfast determination, in turn, is driving the company’s recent success despite the industry’s downturn. Whereas many area builders have closed their doors, Brown says, “We currently have five homes under construction and have no doubt it’s because of energy efficiency.”

Through careful cost analysis and product selection, this EVHA-winning mountain beauty achieved an impressive HERS index of 48 at a price point ($130/s.f.) not often achieved in custom homes. This 3,361-s.f. home, built in 2012, was determined to have an energy efficiency technology for now, is where they are finding that bang.

For Colorado Dream Homes, energy efficiency doesn’t simply provide good value to customers; it is a huge component of the company’s market distinction. Their model home showcases energy efficiency practices by including hands-on wall assembly mock-ups, stop-by-stop photos of the construction process, and educational signs. “By the time [potential customers] are taking our tour, they have a thorough understanding about how and why we build energy efficiently,” Brown says.

For its influence in the marketplace and its solid performance, the EVHA judges presented this builder a 2012 Silver EnergyValue Housing Award. As one EVHA judge noted, “Colorado Dream Homes’s exemplary marketing approach, combined with unwavering dedication to efficiency made this application stand out.”

The site owns the home forever, so it is critical that the design fits the site,” says company president Ted Clifton. “The view effectively dominates the lot; the home’s design needed to take this into account.” The northeast-to-southwest orientation, combined with setback constraints, left little room for the perfect passive solar placement. Yet, the builder and the owner made the most of the situation. The first design decision was to build a hip roof to accommodate future solar water heating and PV systems—the homeowners plan to install up to 6.75-kW of PV once they retire and move into the home full-time. Additionally, the upper-level deck will often shade the lower-level windows to prevent overheating.

When undertaking any building project, Clifton View Homes (CVH) prides itself on providing style and substance. As a custom builder, CVH deals in on the client’s wishes, but always manages to deliver an energy and resource-efficient final product. To achieve a solid mix of style and efficiency, CVH invests a great deal of time in planning before drawings are finalized. This process always begins with a solar site survey in which house orientation and window placement for passive solar gain is determined. “The owners may own the home for a time, but the site owns the home forever; so it is critical that the design fits the site,” says company president Ted Clifton.

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“A great deal of time was spent designing this EVHA-winning home to make sure the homeowners were getting the best value for their investment,” according to Heather Ferrier, general manager of Ferrier Custom Homes. For example, after the design loads were calculated, the builder discovered that a significant proportion of the home’s energy losses would be attributed to the uninsulated slab foundation. Though rare and not usually cost-effective in Texas, Ferrier didn’t want to leave any stone unturned in creating a the most efficient home for the money and asked the project’s energy consultant to run the numbers on insulating the slab. Ultimately, based on the very low total level of energy loss the home would experience and the rater’s confirmation that adding insulation to the slab would not be an added value to the client, the builder decided to keep the design as it was. “Because there is so little overall loss,” said Ferrier, “correcting this [loss through the slab] would be like trying to lose that last few pounds” – a lot of effort for very little net gain.

Once plans were in place, Ferrier and the crew started building the modest, 1,746-s.f. home using customized scopes of work that have proven very successful in previous projects. These scopes of work are the basis for communicating expectations to each trade involved in the build and are based on a standardized set that was purchased from NAHB. Through an “evolutionary process,” Ferrier Custom Homes has revised the standardized set of tools to conform to its high performance building methods.

To maintain quality, an inspection checklist accompanies each scope of work. These checklists, which are sometimes used at multiple points during construction, help each trade contractor ensure that details are executed properly. And just as each house is customized to fit the client’s needs, so are the company’s quality management tools tailored to each project.

“As no two projects of ours are the same, neither are the tools,” says Ferrier. “We modify inspection checklists based on the products and technologies incorporated into the home. Since we do not build typical homes, we expect—and inspect—more than the typical contractor.”

In a departure from its standard SIPs construction technique, the builder used advanced framing with spray foam insulation for the wall system in this home. “This system was just a better fit for the owners,” explains Ferrier. She also explored other technologies that owners don’t often elect, such as a ductless mini-split heat pump, but decided the best combination was the more commonly installed systems such as tankless gas water heating with clustered hot water devices.

Evidence that the custom scopes of work and inspection checklists did their job can be found in the home’s test results, which showed air leakage at a diminutive 1.0 ACH50 and a HERS Index of 52 without PV.

Since we do not build typical homes, we expect—and inspect—more than the typical contractor.

Making a List, Checking it Twice
Ferrier Custom Homes
Fort Worth, Texas
Custom/Demonstration Category, Hot Climate

You want sustainability? We’ve got it.

The Inside Advantage™ team presents an easy way to integrate sustainability: the Whirlpool® Eco-Efficient Kitchen, featuring the industry’s most energy-efficient side-by-side refrigerator, a water-saving dishwasher and two energy-saving cooking appliances. For more information, call 800.952.2537 or visit insideadvantage.com.
Flynner Building Company. From Flynn’s humble standpoint, however, his participation wasn’t completely selfless. Constructing a St. Jude Dream Home nets a lot of foot traffic—7,000 – 12,000 visitors on average—a four-month marketing campaign that includes TV, radio, newspaper, direct mail advertisements, and promotional events at the house.

Although it was St. Jude’s idea to do a net-zero energy home, most of the decisions about how to accomplish net-zero were left to the design team which included Flynn, an architect, and an energy consultant with support from the Building America program. During the design, the team considered numerous energy simulations of various combinations to determine the best mix of insulation, mechanical system efficiency, and renewable energy that would get to net zero.

In their final design, they elected a highly insulated double-wall system, triple pane windows, a ductless mini-split heat pump, and an HRV. Combined with a 110 ft. evacuated tube solar thermal water heating system and an 8.2 kW PV array, the home received a HERS of 8 with PV (40 without). Flynn explains, “Designing this house was a very thorough process and a learning experience for all of us.”

The new homeowners living in the 1,935-s.f. St. Jude Dream Home Giveaway won big—not only by winning a house with a $100 raffle ticket, but also by reaping the rewards of net-zero energy living. And while Flynner Building Company revels in the joy of giving and the limelight created by its participation, it’s no doubt that the real winner is the St. Jude Children’s Research Hospital, which raised over $700,000 through the drawing for this home!

Not being content with this achievement and continuously pushing the envelope, Flynner Building Company has just completed their second St. Jude Dream Home, a NGBS Green Certified, carbon-neutral home also located in the Boise area.

Great Value, Great Cause

Flynner Building Company
Boise, Idaho

Custom/Demonstration Category, Cold Climate

Like most of EVHA winners, Flynner Building Company enjoys giving back to the community. So when the company was approached by Northwest ENERGY STAR and Idaho Power to build Idaho’s first net-zero energy home for the St. Jude Children’s Hospital Dream Home Giveaway, owner Scott Flynn says he waited about half a second before saying “yes.”

Since Flynner Building Co. already builds and certifies all of its homes to the National Green Building Standard, Flynn was intrigued by the challenge of building net-zero. “I didn’t know much about St. Jude’s at the time,” he says, “but when I started learning about [the charity], I found that our messages align. We are cutting edge builders, and they are a cutting edge research hospital. We had a nice fit.”

In order to maximize the profits from the $100-per-chance raffle, the majority of the material and all the labor were donated by a variety of suppliers, sub-contractors, and

Before, we were building 100% NGBS Green Certified homes, but now we are known as the green builder in the valley. It really sets us apart.

Great Value, Great Cause

Before, we were building 100% NGBS Green Certified homes, but now we are known as the green builder in the valley. It really sets us apart.
Capitalizing further on solar energy, as well as tax credits for renewable energy, the builder installed sufficient photovoltaic capacity to generate more than enough power for the 3,070-s.f. home over the course of a year. In fact, the 14-kW system was solely responsible for bringing the energy rating from a HERS Index of 55 without renewable energy, to HERS -22 with renewable energy—and there is still some roof area for expansion!

To minimize the impact on the architecture, the builder and homeowner selected a building-integrated photovoltaic product that is resistant to hurricanes. In addition, the system selected is also designed to ensure that even if one section is shaded, the whole array’s output is not compromised—just like a good set of holiday lights that still works when one bulb goes out.

Between energy conservation and on-site generation, it’s easy to see why the builder calls this project the Power Haus.

Josh Wynne Construction of Sarasota, Florida, proved that beauty isn’t only skin deep with this EVHA gold-winning project. When designing and building this upscale home with magazine-worthy looks, the company demonstrated that sustainability can hold equal weight to aesthetics—and that often, the two go hand-in-hand.

Recognizing that duct leakage into attics is a big waste of energy, particularly in the hot attics of Florida, the builder eliminated attic space altogether by using spray foam in the cathedral rafters. In a unique twist not often found in residential design, the ducts were left exposed to the living space and made part of the architectural appeal. This produced the lofty ceilings and open feeling that the homeowners wanted, eliminated problems with duct losses, and contributed to the air sealing package that led to blower door test results of 1.38 ACH50 in this architecturally complex design.

Given the abundance of solar resources, the builder carefully designed the windows and overhangs to provide plentiful daylight without overheating this “Sunshine State” home. Company owner Josh Wynne explains, “Every livable room in this home is on an exterior wall which allows natural lighting to be the primary light source throughout the day time hours.” On the eastern façade, operable clerestory windows allow gentle morning light to penetrate the space. When the windows are opened, they help induce the stack effect and promote natural cooling. In addition, four-foot overhangs shade windows and doors nearly year round and the western facade is further shaded from the setting sun by a forest of over 150 hardwood trees. As the deciduous trees shed their leaves in the colder months, sunlight filters through the branches and helps passively warm the home’s interior.

Supplementing the daylighting is an energy-efficient lighting package consisting entirely of LED fixtures. These state-of-the-art lights don’t simply complement the home’s modernist décor; they help define it. Dimmer switches on the majority of the fixtures make the LEDs even more efficient and give the homeowner more control over ambience and lighting levels.

Every livable room in this home is on an exterior wall which allows natural lighting to be the primary light source throughout the day time hours.

The Power of Beauty

Josh Wynne Construction
Sarasota, Florida

Custom/Demonstration Category, Hot Climate

DV and solar thermal panels give the roof a futuristic appearance.

Exposed ducts in the well-sealed cathedral ceiling add architectural interest to this modern interior design.

Deciduous trees provide shade in summer and allow the sun to shine on this energy-producing house in the winter.

www.nahbrc.com/evha | 19
When building new homes in Tucson, Ariz.—which happens to be the fifth sunniest city in the United States and has an electric utility that actively encourages renewable energy production—solar energy is almost a no-brainer. So, while production builder LaMirada Homes harnessed the sun by installing a solar water heating system and 3.4 kW of photovoltaic capacity on this ultra-efficient urban infill home, it also recognized that the amount of sun through the windows affects the amount of cooling needed. As a result, to prevent unwanted solar heat gain, the production home builder didn’t just use reflective windows and roofing material, it went further by designing the home with the proper solar orientation and using architectural features like a covered patio and louvered trellises to shade the structure’s south side.

But passive solar design features weren’t the only techniques that were new to 35-year residential construction veteran and company president, Michael Ginsburg. In tackling this project, Ginsburg wanted to push the envelope to see what was possible. Working with the Davis Energy Group as part of the U.S. Department of Energy’s Building America Alliance for Residential Building Innovation team, Ginsburg designed this 1,935-s.f. home to be as energy efficient and cost effective as possible. Ginsburg wanted the “superiority and integrity of the thermal envelope [to be] the primary design factor.” To effectively meet LaMirada’s construction goals, the design team chose SIPs walls and roof because of their thermal efficiency and ease of installation. With SIPs installed to exacting specifications and combined with continuous insulation under the slab and around the slab edge, Ginsburg likens the home’s thermal envelope to an “icebox.” Designed without any interior load-bearing walls and exposed support beams that add architectural interest, the homeowners will have lots of flexibility with any future redesign.

One of the most unique aspects of this home is the hydronic radiant floor heating and cooling system that eliminates the need for a forced air system, although one was provided for occasional dehumidification and additional capacity. In this system, a reverse-cycle chiller heats or cools liquid that is circulated through piping embedded in the concrete floor. To cool the house, the chiller operates between midnight and 7 a.m., when electricity rates are low, and uses the concrete mass to store the cooling energy. Despite the chiller operating only at night, the system has worked like a charm during the early cooling season—with evening temperatures deviating only 3°F above the morning temperature. Energy-efficient ceiling fans can supplement cooling, when needed.

To allow the hydronic heating and cooling system to do its job most effectively, the concrete floors throughout the house were left exposed, eliminating the need for expensive floor coverings. The savings nearly covered all of the additional expense of the efficiency features. According to the EVHA judges, LaMirada has done an exceptional job with this first effort. “This is a very unique and well-executed concept home,” that received an “impressively low HERS Index (40 without & 20 with renewable energy sources)” due to its excellent systems engineering. Asked if he’d do it again, Ginsburg said, “This is the process and method by which I will design and build all future homes.”
Lend Lease, a company which specializes in large, complex development projects, embarked on an innovative project at Fort Campbell (KY) to build a net-zero home for the newly privatized military housing market. The first of its kind on a military installation, the ZEH at Campbell Crossing blends not only with the other homes on the base, but also with Lend Lease’s core belief that a sustainable business is not simply a profitable one. Since the company’s founding, says the Fort Campbell project manager Jeff Morrow, “Sustainability has been an integral part of our corporate culture. Today it is a central part of our core business strategy.”

While Lend Lease builds all of its units to ENERGY STAR standards, it wanted to find out if the zero energy goal was possible, and to gather lessons to apply to its nationwide portfolio. According to Morrow, “Since Lend Lease is responsible for utilities at the military rental properties, it made sense to figure out how far we could take energy efficiency.”

To get to ZEH, the company enlisted the help of Concurrent Technologies Corporation (CTC) and the NAHB Research Center to define the most appropriate technologies and construction techniques, and conduct energy analyses of numerous design options. The design team started with the 2,066-s.f. standard duplex floor plan that was already being built on the installation and modified the specifications to significantly reduce energy consumption and add solar renewable energy systems to accomplish a ZEH. For superior air sealing and insulation, the team selected spray foam insulation. To thwart unwanted solar heat gain, the team incorporated awnings and extended roof truss overhangs to shade south-facing windows. A geothermal heat pump provides heating and cooling, and solar is the primary fuel for water heating. Capping off the package is a 7.4-kW PV system that brings the HERS Index to -5 (43 without PV).

Without any financial incentives for the project, Morrow said the company did not expect to have a high return on investment. But, that hasn’t prevented competitors from getting on the bandwagon. “It started a competition with one of our rival projects at Camp LeJuene, which just started building a ZEH,” notes Morrow.

Imitation, as we all know, is the finest form of flattery! But Morrow is secure in the ZEH product he offers. “Our tenants love it,” he said. “They find the house is exceptionally comfortable and quiet. They love seeing the technologies,” which include a whole-house monitoring system that makes the tenants much more cognizant of their energy usage and which has dramatically influenced the occupants use of energy.

On top of the performance and occupant satisfaction, Morrow notes enthusiastically, “It has started to become a big marketing tool for us; a real plus. When senior Army leadership comes to Fort Campbell, they want a tour.”
Scott Bergford, owner of Scott Homes, has been in the business long enough to have accumulated a few stories. "We’ve been building efficient homes since 1983," says Bergford. "Over the years we’ve learned a lot, made mistakes, and done many things right!" The fact that this winning home received a blower door test of 0.65 ACH50 is testament to the things that the company is doing right. This 2,066-s.f. home received an astounding HERS Index of 39 (without PV) in large part due to its tight SIPs construction. Yet the crew is always striving to make it better. For example, when an initial blower door test showed a slightly higher air infiltration, Bergford’s team found the small gaps and cracks and fixed them before they became hidden behind the walls.

Scott Homes’ marketing techniques have evolved into a somewhat unique “preach what we practice” approach as Bergford and his staff reach out to educate and inform the public and potential clients. "Our success in branding ourselves as a quality, energy-efficient builder is due to concentrated marketing efforts and involvement in the community.” Rather than pushing an agenda, Bergford notes, "We use common sense and building science education to win people over.” Through numerous speaking and networking opportunities, Bergford is able to grab people’s attention quickly. "I start by telling them we build homes that are heated for less than $100 per year – then I tell them how we do it.”

Bergford admits that most of his audience is already indoctrinated in the green building arena. “The challenge, as always, is reaching out to people who have not yet seen the point of building an energy-efficient home, or who feel it is something they cannot afford.”

To initiate the unintiated, Bergford always starts by giving potential customers a brief building science “seminar” using visual aids to help illustrate the concepts. "Discussing the awards displayed on our office walls helps, too,” he adds, noting that the awards validate that he knows what he’s doing. But it’s not just paper and plaques: Bergford points out, proudly. "This EVHA winning house costs about $2.12 per day to run, including water. That’s less than a vanilla latte. That’s an example I can sell.” With such a low HERS Index, this home could have undoubtedly achieved net zero with the addition of renewable energy generation but that didn’t fit into the homeowners’ construction budget. Instead they accepted the company’s recommendation to roughing-in for future solar panels by adding a conduit to the south-facing garage roof and installing a circuit in the garage for a future electric car charging station. With the infrastructure in place, adding solar panels in the future will be a breeze.
comfort loves energy bills
Why should the fear of utility costs make us shiver and sweat? Advanced building envelope solutions improve energy efficiency and comfort for building occupants in every climate. Get comfortable with your energy bill.
At BASF we create chemistry.  
www.basf.us/construction

Seasoned Green
Stitt Energy Systems, Inc.
Rogers, Arkansas
Custom/Demonstration Category, Moderate Climate

Stitt’s passion for energy conservation, is certainly not green when it comes to winning EnergyValue Housing Awards. The company was among the program’s honorees at the first EVHA ceremony in 1996.

When the company was formed in 1978, SESI was way ahead of the competition with its energy-efficient, passive- and active-solar homes. As building science information has become more widely available and some builders have begun to catch up, the company continues to improve its practices and integrate new products into its projects.

“We have standards that we consider to be very basic,” says Orlo Stitt. “We aren’t interested in a project unless those features are included. Look at it this way: if you are making an energy efficient car, you have to start with round wheels. If we build a house with ‘square wheels’, we’ve missed a chance to do it right.”

With the current economic climate and the conservative nature of lending, Stitt is encouraged by a trend he has noticed recently—buyers sacrificing glitz for efficiency. But he admits he’d rather see buyers getting everything they want. This 3,474-s.f. mountain oasis, like all of Stitt’s homes, began with a solar survey and a discussion about orientation to take advantage of both passive and active solar applications.

Strategically placing windows and designing overhangs for shading during the summer months helps prevent excessive solar exposure while allowing natural heat gains in the winter. Although roof orientation was not ideal for PV, the owners were dedicated enough to put the 2.2 kW photovoltaic system on “spider legs” on the rear of the house and find space for a solar water heating system. The active solar system was just part of the package that resulted in a HERS Index of 43 (53 without PV).

Beyond the passive solar features, Stitt points out the other “round wheel” aspects of the home, which include an ICF foundation, soy-based spray foam on exterior walls, and its own trademarked “Ice House Roof.” In the Ice House Roof system, the attic is insulated at the roofline with soy-based spray foam, but the roof deck remains vented. The builder likes the system for its simplicity in contributing to a tight (1.4 ACH50) and well-insulated building shell and for its moisture management capabilities.

In the spirit of practicing what it preaches, SESI built a new headquarters that was crowned 2009’s “Greenest Office Building in Northwest Arkansas” by the Arkansas Building Journal and which joins the William J. Clinton Presidential Library and Heifer International’s headquarters as the first three LEED Platinum buildings in the state.
The mission of the National Park Service (NPS) is to “preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.” It is no wonder, then, that when building a ranger’s house at John Day Fossil Beds National Monument in Oregon, the NPS sought to create a functional and durable net-zero energy home that would serve park rangers for generations to come.

The park service was off to a good start when it placed Ted Clifton of Zero-Energy Plans (ZEP) and president of 2011 EVHA Remodeler of the Year, Clifton View Homes, at the helm of the design team. Yet, all along, ZEP’s objective was to exceed expectations without dramatically increasing cost. To accomplish this, Clifton stuck to “tried and true” approaches like SIPs construction, previously-proven slab insulation details, triple-pane windows, and a ductless mini-split heat pump.

When it came time to put the construction out for bid though, Washington-based Clifton’s building company was never in the running. “We knew that federal government procurement regulations would prohibit us from bidding on the construction,” Clifton said. Besides, he noted, “the site was more than seven hours from my office.” Therefore, in the plans, ZEP thoroughly spelled out all construction materials, methods, and sequences. “We made sure, before [the plans] went out to bid, that every note or required detail was clear,” Clifton explained.

When the construction contract was awarded to Kirby Nagelhout Construction based in Bend, Oregon, a unique partnership ensued. The project exemplified how, with the right mix of communication, detailed plans and scopes of work, and quality control mechanisms, carefully crafted plans can be well executed by a good contractor, even if the construction methods are unfamiliar.

According to Chris Prahl, project manager at Kirby Nagelhout Construction, “The combination of great documentation, our experience and standard quality control procedures, and Clifton’s vast SIP experience was critical to the project’s success.” Part of the success was also due to Clifton’s two-day site visit at the start of the SIPs construction. Prahl noted, “It was very helpful to have [Clifton’s] knowledge transferred to our personnel on site.”

Besides the two-day site visit and the comprehensive construction documents, the team held weekly conference calls and occasional educational sessions with subs and the NPS project manager to maintain quality standards. As evidence of the successful coordination in this 1,002-s.f. house, air leakage tested at 1.27 ACH50. As Clifton notes, “There are many experienced SIPs builders who would be quite happy with [that result].”

The noteworthy project execution resulted in a highly functional and energy-efficient final product with a HERS Index of 44 without and -15 with renewable energy production. The compact design isn’t fancy, but it provides everything a ranger needs to live comfortably and in alignment with the park service’s philosophy. In fact, the 5.6-kW PV system produces enough electricity to power the home, the visitors’ kiosk and restrooms, and the ranger’s vehicle—often with a credit remaining from the electric company!
One person's trash is another's treasure. That's exactly how this deteriorating Fort Worth home, which underwent an extensive green renovation by Ferrier Builders, can be described. To be able to envision what is possible when faced with bleak initial conditions—and the reality of what may lie beneath the surface—is an extraordinary gift. Heather Ferrier of Ferrier Builders had that foresight when she found this two-story home in a well established neighborhood in Fort Worth. Ferrier knew instantly that, with a little imagination and a lot of determination and patience, this diamond-in-the-rough could become the brightest gem on the block.

Cautious of spending too much on the renovation and pricing the home out of the market, Ferrier said, “We invested in as many energy upgrades as the market would bear. We worked passionately to find the best value for the investment dollar when it came to energy efficiency.” Within the limited budget, Ferrier’s company “stretched it as far as we could to incorporate every green building feature possible.” What resulted, she notes, is “a beautiful, high-performance remodel that is a beacon of light in an historic neighborhood.”

To get the most “bang for the buck,” the company focused on sealing the attic with spray foam insulation and adding spray foam insulation to any wall cavity that was accessible during the whole-house renovation. This insulation helped the home, post-remodel, receive a HERS of 81. By keeping the original “bones” and footprint of the house, but ridding it of years of neglect, Ferrier Builders created a home that remains true to the architect’s original vision, but which performs like a modern energy-efficient home.

Taking on the project, given the homes obvious state of disrepair, was somewhat risky. “We experienced our fair share of surprises,” Ferrier notes. For example, when the previous owners added a utility room next to the kitchen, they simply laid untreated wood boards on an earthen floor. “Needless to say, this technique had not stood well against the test of time,” she added.

But the seasoned building and remodeling company welcomed the challenge as an opportunity. They repoured the foundation and rebuilt the area into an expanded, sunny, and highly functional kitchen.

In part, Ferrier—who moved from a high-performance new home into this remodeled beauty—took on the project to gain valuable experience of buying and restoring an old home. “It’s quite an education to go through the process on your own home!” she said. Yet, realizing that it is more realistic for many Americans to remodel an existing home than it is to start from scratch, Ferrier sees an opportunity for the green remodeling aspect of her family’s business.

No Gut, No Glory

Ferrier Builders, Inc.
Fort Worth, Texas
Reconstruction/Demonstration (Existing) Category, Hot Climate

We invested in as many energy upgrades as the market would bear.
More and more home building contractors are transitioning into the world of remodeling and renovation of existing homes as a way of supporting their business in lean times. While building new and remodeling are dissimilar in many ways, applying lessons learned from designing and building new energy efficient homes can serve the versatile builder/remodeler very well. Such is the case for Ferrier Builders, Inc., the 2012 EVHA Remodeler of the Year.

An ancillary company of Ferrier Custom Homes, Ferrier Builders, headed by Heather Ferrier, is taking the same approach to remodeling as the fourth generation new home builder uses—cost effectiveness, practicality, value, and efficiency—but also considers the integrity and charm of the original home. So by combining years of experience with great imagination, Ferrier is able to revitalize both the appearance and the performance of older homes and preserve neighborhood gems that might otherwise be lost because of neglect and deterioration.

As one judge remarked, “[We] couldn't ask for a better representa... Ferrier is so committed to [the EnergyValue concept] and is a great company to represent the award.”

Congratulations to Ferrier Builders, Inc. for being named 2012 EVHA Remodeler of the Year.

G Street of Scottsdale, Ariz., has a lofty goal for all of its remodeling projects—to cut energy and water use by half. With this speculative gut-rehab project in a city neighborhood, the company accomplished its goal and much more. While maintaining the original footprint and historic exterior charm of this 900-s.f. 1947 home, G Street slashed energy use by 75 percent from its pre-remodel levels and cut water usage by 62 percent, for a combined projected utility savings of $1,400 per year.

According to founder Philip Beere, “At the core of the decisions G Street makes during every renovation is energy efficiency—and its benefits of making the home superior and environmentally responsible.” To limit construction waste and raw material usage, as well as to create the most energy-efficient final product, Beere says it is G Street policynever to tear down an exterior wall. Within the original footprint, the company made impressive energy use reductions in this home. Energy ratings went from a pre-remodel HERS Index of 238 to a final HERS 58. Instead of making a home bigger, Beere says, “We make the best use of the existing structure through creative and professional design,” to make it more livable, comfortable, and attractive.

The home’s small size wasn’t a deterrent to its marketability. In fact, the new homeowners chose to move from a substantially larger home in the suburbs to this stylish beauty in order to be closer to work and to live in a home more harmonious with their conservationist ideals. In the end, G Street earned a 30 percent return on its investment and sold the renovated home in just 20 days, despite a sluggish local home sales market.

By sprucing up the home and tripling its sales price, the project not only helped increase local property values, the neighborhood also benefited from G Street-hosted workshops before, during, and after renovation. These workshops—attended by over 400 people, including 100 students and neighbors—focused on educating the community about what is possible through renovation. In an area of similar homes, these workshops will undoubtedly inspire other homeowners to consider energy efficiency in subsequent home remodeling projects—homeowners who may, of course, also become new G Street clients!

Because Scottsdale has operated a green home building program since 1998 and it has many green-savvy home shoppers, G Street developed a unique marketing tool. The trademarked “Green Street Performance Report” window sticker sets the company apart from the competition. Displayed on each project, the sticker describes a remodeled home’s green features and monthly utility costs—for this home $88/month—which is a notable and highly marketable feature for potential buyers.

G Street’s educational process doesn’t end at the sale. The builder-installed energy monitoring system allows homeowners to see real-time energy usage for each circuit. For the ecologically-minded homeowners that G Street tends to attract, this information can help them understand how to further cut their energy use, or how to choose electricity rate structures that best suit their usage patterns.
Trials and Teamwork

GreenPinkies, LLC
Fayetteville, Arkansas
Reconstruction/Demonstration Category, Moderate Climate

The idea for starting the GreenPinkies remodeling business began when Lauren Kuenzel, a mechanical engineering graduate of the University of Arkansas, realized that a typical desk job wasn’t for her. By joining forces with her mother and sister, GreenPinkies, LLC, was formed. Being “green” to the remodeling business yet wanting to set themselves apart from other contractors, the team set out to do an environmentally friendly renovation that resulted in their first project being an EVHA-winning house.

For a company without construction experience, the level of research and effort toward applying building science best practices is remarkable.

As an alternative to new homes built in the Fayetteville countryside, the company has a simple business model: renovate 30+ year-old homes to dramatically improve energy efficiency, comfort, and livability. In the process, the women are seeking to dispel the negative public perception of these small, ranch-style homes as “old-fashioned.” “We want to increase the ‘cool factor,’” says Kuenzel, who notes their intrinsic green features of modest size, proximity to town, public transportation, and existing services, and building materials reuse. Without changing the footprint of this 1,478-s.f. home, the company’s gut-rehab corrected moisture and structural problems, modernized the interior, and installed efficiency features that cut the HERS index by more than half, taking it from HERS 118 pre-renovation to HERS 51 post.

At the root of GreenPinkies’ approach is an innovative solar-assisted hydronic heating system with sufficient capacity for space and water heating during about 10 months of the year. A tankless gas water heater provides additional capacity when necessary. The advantage of this system—besides capitalizing on the 218 days of sunshine each year in Fayetteville—is that it can be combined with ducts or with radiant distribution—making it virtually “plug and play” for the homes that the company is targeting for future renovations.

Some of GreenPinkies’ selections, particularly their innovative (not off-the-shelf) solar thermal heating system, were unfamiliar to many of the trade contractors. But, rather than alter their choices, they worked through the issues as a team—often with smiles, food, and drink. This informal interaction, which included a picnic and a happy hour for the trades, led to the creation of a cohesive team of subs that will implement the company’s renovations methods in future projects. “The most important outcome is that we can communicate better,” said Kuenzel. On the next project, each crew will know just how to interface their system and methods with all the others.

Beyond the heating system, the team made big efficiency strides by applying spray foam insulation on the walls and crawlspace floor, and streamlining the duct system and bringing it into conditioned space. “For a company without construction experience, the level of research and effort toward applying building science best practices is remarkable,” said one EVHA judge.

Unique placement of a solar tube in the kitchen, which brings brightness to the kitchen day and night.

Sweat Equity, Optimal Efficiency
Habitat for Humanity South Sarasota County, Inc.
Venice, Florida
Reconstruction/Demonstration Category, Hot Climate

“Through all of our efforts, we have made this home truly affordable,” said Solitto with pride.

To achieve this extraordinary result, Habitat South Sarasota County joined forces with the Florida Solar Energy Center’s BA-PHC team as part of the DOE’s Building America program to find cost-effective efficiency measures that could be implemented by volunteers. One of the first decisions was to create an unvented attic to bring the ducts and air handler into conditioned space and solve the issue of major air leakage between the house and the vented attic. All exterior walls were insulated with rigid insulation and furring strips placed over the reflective insulation surface to provide a nailing surface for the low-surface-to-heat gain into the space.

After installing new low-e, double-pane windows, drywall, and final air sealing measures, the building tested at 5.6 ACH50, an 82 percent improvement over pre-retrofit test results. Because of these improvements, a 2-ton (SEER 16) heat pump was sufficient to replace the old, inefficient (SEER 10) three-ton unit. Along with CFL lights, ENERGY STAR appliances, and an ERV system, the home received a post-retrofit HERS index of 57.5—less than one-third of its pre-retrofit HERS 189.

Since its founding in 1982, Habitat for Humanity (HFF) South Sarasota County, Inc., a Florida HFF affiliate, has dealt with the difficulties and rewards of having volunteers build and renovate affordable housing. This HFF affiliate builds all of its new homes to ENERGY STAR, DOE’s Builder’s Challenge, and Florida Green Building Coalition (FGBC) Certified Green standards. Yet, this EVHA-winning remodeling project presented an entirely new set of challenges for the experienced team. Because this project was the first major energy-efficient renovation it had undertaken, says construction manager Michael Solitto, “it was challenging to figure out how we could transform a 1970s home into one that would rival any newly built home in the efficiency department and accomplish that with volunteer labor. It was also one of the most exciting projects we have ever done.”

Due to the anemic housing market in Florida, the affiliate has begun to focus on rehabilitating abandoned homes, in partnership with Sarasota County’s Neighborhood Stabilization Program. During this project’s remarkable transformation, the 1978 vintage, single-story, 1,818-s.f. home was made dramatically more energy efficient and, thus, more affordable while being kept from deteriorating and contributing to neighborhood blight.

When the house was obtained by HHF, it had uninsulated concrete block walls, ducts in a vented attic, single-pane windows, and an air infiltration rate of 31 ACH50—or the equivalent of a nearly 20” x 24” gaping hole in the structure—and energy bills of $2,600 per year. Post-retrofit energy bills should be $953 per year—with the buyers pocketing an extra $140 each month.

Unusual placement of a solar tube in the light fixture brings brightness to the kitchen day and night.
Improvements.

TAG Mechanical Systems, Inc.
Syracuse, New York

Single Family (Existing) Category, Cold Climate

It’s not often that a remodeling project is undertaken for the express purpose of saving energy and enhancing durability. Yet, through an innovative New York State Energy Research and Development Authority (NYSERDA) program, TAG Mechanical Systems was granted the opportunity to do just that. Without making changes to the living space, TAG Mechanical made impressive improvements in how this 100-year-old Utica, New York, home uses energy and handles moisture.

According to company vice president Ellis Gillees, “This NYSERDA-supported retrofit was one of our most interesting projects. The goal was to dramatically reduce energy use by substantially changing the existing exterior envelope and replacing existing mechanical systems without modifying the living space.”

Before the project began, the home was in a state of disrepair that included obvious energy and moisture problems such as ice damming, standing water in the basement and crawlspaces, peeling paint, rotting wood, and sparse insulation. On top of the obvious issues, leaky construction and leaky ducts in an unconditioned basement led to discomfort and unnecessarily high energy bills for the homeowner.

After rectifying the basement water problem and removing water-damaged wood, TAG Mechanical was able to seal and insulate the home. The company redefined the thermal and air boundary of the home to the rooftops, basement, crawlspace walls, and basement floor; thereby bringing all mechanicals into conditioned space. The tactic presented some challenges—for example, window openings had to be extended to accommodate four inches of foam on the home’s exterior. But, this approach greatly improved the R-value and tightened up the house against air leakage helping the company cut air infiltration by two-thirds from 350 CFM to 120 CFM @ 50 PA. TAG Mechanical added a high-efficiency gas tankless water heater—for water and hydronic space heating to replace the older, natural draft unit—and cut duct leakage 93 percent using the Aeroseal system. Combined, the efficiency upgrades netted a final HERS Index of 93.

The resultant savings of about 70 therms per month during the heating season were welcomed by the elderly, disabled homeowner, who wouldn’t otherwise have been financially able to fix up his house. And, in an area in which natural gas prices consistently exceed the national average by 25 percent, every therm saved is that much more valuable. Furthermore, the durability enhancements, including a standing seam metal roof, a water-managed foundation, and siding attached using a rainscreen approach, will all contribute to the home’s long-term affordability.

The EnergyValue Housing Award Judging Process

As any competitor knows, you’ve got to impress the judges. The EnergyValue Housing Award competition is no different. All of the applications are painstakingly critiqued by a panel of volunteer judges, and the program swears much of its success to this group of experts that donate their time and expertise to the task of determining the worthy award recipients.

Before applications are due, EVHA program manager Debra Sagan gets busy finding judges who are willing and able to volunteer several days of their time to the judging process. “We try to get a mix of experts in building science, construction practices, design, and testing so there is a balanced team to make decisions,” according to Sagan. She also notes that she looks for judges who understand the nuances of building various types of homes in the different U.S. climate regions. The goal is to award homes that truly combine energy efficiency and value.

Going through the application process is a very good way of evaluating the work you are doing.

Getting down to business the next morning, each pair of judges is sequenced with their applications and evaluation form for a preliminary judging phase. Tasked with reaching consensus and making recommendations to the group, the judges discuss any discrepancies and reach a compromise. Connecticut architect Kathy Dorgan, who was paired with Maryland production builder Joe Gregory, explained that in the morning session, “We had very similar preliminary scoring. We had a very detailed discussion about relative ranking and we carefully went through the scoring to make sure we were being as fair as possible.”

In the afternoon, the final judging phase occurs. Each pair of judges presents their recommendations to the entire group, noting the highlights or limitations of each application. The judges raise questions and use the brief application summaries prepared by EVHA staff to help with the decision-making process. Once all applications and preliminary judging recommendations are presented, the group makes the final award decisions.

The final stop for the judges is to then decide upon both a Builder of the Year (for New Construction) and a Remodeler of the Year (for Existing Homes). Only gold award winners are considered for these honors and quite often extensive additional questions are needed before a consensus is reached and the recipient of the superlative awards are selected. These winners’ best exemplify the values of energy efficiency and value and go above and beyond by providing the “entire package” to the residential construction industry.

One of the most important parts of the EVHA process is that the applicants receive feedback on their applications. After the EVHA Celebration each year, the judges’ comments are forwarded to each applicant. “For many applicants, this expert feedback more than compensates for the application fee,” says Sagan. “Having a group of experts review your construction practices and provide candid, unbiased feedback can be a real eye opener.” To which Dorgan adds, “I would encourage more builders to apply. Going through the application process is a very good way of evaluating the work you are doing.” Rather than simply applying to get the feedback, however, Dorgan almost sees it as a builder’s duty, “There are marvelous things being done around the country. It is important to get this good work out in front of other builders.”

Missing from photo:
Subrato Chandra, Ph.D., senior buildings researcher, National Renewable Energy Laboratory
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<th>Nexus EnergyHomes, Inc.</th>
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<td>8&quot; Slab on grade</td>
<td>12&quot; ICF</td>
<td>9.25&quot; ICF + R-25 insulation w/ 4&quot; slab on grade.</td>
<td>4&quot; concrete slab on grade</td>
<td>Slab on grade with insulated stem wall</td>
</tr>
<tr>
<td>Wall Construction</td>
<td>8.5' SIP</td>
<td>Panelized light gauge recycled metal framing</td>
<td>2 x 4 double wall - 12&quot; thick</td>
<td>8.5' SIPs &amp; ICF</td>
<td>2 x 6 advanced framing</td>
<td>4' 2 x 4 double stud wall</td>
</tr>
<tr>
<td>Wall Insulation</td>
<td>R-24 foam</td>
<td>R-11 Ecobatt</td>
<td>R-25 foam</td>
<td>R-25 foam</td>
<td>R-30 spray foam</td>
<td>R-30 spray foam &amp; blown in batt</td>
</tr>
<tr>
<td>Rim Joint Insulation</td>
<td>R-8 spray foam with air sealant</td>
<td>R-38 batt + R-7 foam</td>
<td>R-38 spray foam</td>
<td>R-38 spray foam</td>
<td>R-50 spray foam</td>
<td>R-50 spray foam</td>
</tr>
<tr>
<td>Roof Construction</td>
<td>Trusses</td>
<td>Trusses with radiant barrier sheathing</td>
<td>engineered trusses</td>
<td>4&quot; raised heat trusses</td>
<td>engineered trusses</td>
<td>R-20 batt + R-7 foam</td>
</tr>
<tr>
<td>Ceiling Insulation</td>
<td>R-40 open cell foam</td>
<td>R-10 Ecobatt</td>
<td>R-40 fiberglass</td>
<td>R-40 fiberglass</td>
<td>R-27 total - 2&quot; Polyiso board + 725' spray foam</td>
<td>R-70 total - spray foam &amp; blown in batt</td>
</tr>
<tr>
<td>Windows</td>
<td>Energy Star Low-E, argon filled U - 0.31; SHGC - 0.27</td>
<td>Low-E U - 0.28; SHGC 0.25</td>
<td>Energy Star, Argon filled U - 0.28 - 0.33; SHGC 0.30</td>
<td>Energy Star, Low-E Gas-filled, U - 0.26 SHGC 0.30</td>
<td>Energy Star, Low-E Gas-filled, U - 0.26 SHGC 0.30</td>
<td>Energy Star-triple pane: 34 - .40 U-0.18 - 0.22 SHGC 0.35 - 0.42</td>
</tr>
<tr>
<td>HVAC</td>
<td>Ground Source HP split system: 4.2 &amp; 4.7 COP; 18.8 &amp; 28.8 SEER w/ TRV ventilation</td>
<td>Cooling: natural ventilation aided by whole house fan &amp; cooling fans</td>
<td>95% EF gas forced air heat coupled with ducted fireplace cooling; 7 cooling coil &amp; 8 exhaust fans</td>
<td>C3P 2.8 Air to Water HP, Cooling - ventilation + exhaust fans</td>
<td>Mix-split system with 5 indoor units: 155scfm ERV</td>
<td>HEP 0.5 mini-split + whole house ventilation</td>
</tr>
<tr>
<td>Ducts</td>
<td>R-8 metal 100% in conditioned space</td>
<td>Insulated metal 98% in conditioned space</td>
<td>for air handling system only 100% in conditioned space</td>
<td>for air handling system only 100% in conditioned space</td>
<td>for air handling system only 100% in conditioned space</td>
<td>for air handling system only 100% in conditioned space</td>
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<tr>
<td>Water Heating</td>
<td>DIpper/heater with 80% EF gas back-up</td>
<td>Solar thermal &amp; electric assist</td>
<td>98% EF gas tankless heater</td>
<td>Hybrid HP water heater with provisions for Solar Thermal installation</td>
<td>Hybrid HP water heater with provisions for Solar Thermal installation</td>
<td>Solar evacuated tube with electric back-up</td>
</tr>
<tr>
<td>Lighting</td>
<td>26 total fixtures: 34 Energy Star; 24 LED's; 10 CFLs</td>
<td>100% CFLs</td>
<td>98% EF gas tankless heater</td>
<td>Hybrid HP water heater with provisions for Solar Thermal installation</td>
<td>Hybrid HP water heater with provisions for Solar Thermal installation</td>
<td>100% CFLs</td>
</tr>
<tr>
<td>On-Site Energy Generation</td>
<td>4.1 kW PV</td>
<td>2.5 kW system</td>
<td>N/A</td>
<td>No provisions made for installation of 6.75kW system</td>
<td>None</td>
<td>6.2 kW PV</td>
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<tr>
<td>Duct Leakage Test</td>
<td>195 total - U to exterior</td>
<td>258 cfm total, 38 to exterior</td>
<td>N/A</td>
<td>None</td>
<td>None</td>
<td>380 cfm total - 50PA (2.0 ACH @ 50PA)</td>
</tr>
<tr>
<td>Blower Door Test</td>
<td>450 cfm @ 50PA (117 ACH @50PA)</td>
<td>250 cfm @ 50 PA (150 ACH @50PA)</td>
<td>362 cfm @ 50PA (163 ACH @50PA)</td>
<td>164 cfm @ 50 PA (1.0 ACH@50)</td>
<td>560 cfm @ 50PA (2.0 ACH @ 50PA)</td>
<td>560 cfm @ 50PA (2.0 ACH @ 50PA)</td>
</tr>
<tr>
<td>HERS Index</td>
<td>51 w/s PV</td>
<td>28 with PV</td>
<td>N/A not preformed in Ht</td>
<td>48</td>
<td>56</td>
<td>52</td>
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## Appendix: Energy Features, New Homes Division, CONTINUED

### Winning Home

<table>
<thead>
<tr>
<th>Builder</th>
<th>Website</th>
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<tbody>
<tr>
<td><strong>Josh Wynne Construction</strong></td>
<td><a href="http://www.joshwynneconstruction.com">www.joshwynneconstruction.com</a></td>
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<td><strong>LaMirada Homes</strong></td>
<td><a href="http://www.Lamiradahomes.net">www.Lamiradahomes.net</a></td>
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<tr>
<td><strong>Land Lease</strong></td>
<td><a href="http://www.actuslendlease.com">www.actuslendlease.com</a></td>
</tr>
<tr>
<td><strong>Scott Homes</strong></td>
<td><a href="http://www.scotthomes.com">www.scotthomes.com</a></td>
</tr>
<tr>
<td><strong>Stitt Energy Systems, Inc.</strong></td>
<td><a href="http://www.stittenergy.com">www.stittenergy.com</a></td>
</tr>
<tr>
<td><strong>Zero Energy Plans/Kirby Nagelhout Construction</strong></td>
<td><a href="http://www.zero-energyplans.com">www.zero-energyplans.com</a></td>
</tr>
</tbody>
</table>

### Category

- **Custom/Production**
- **Multi-family**

### Climate

- **Hot**
- **Cold**

### Location

- Sarasota, FL
- Tucson, AZ
- Fort Campbell, KY
- Olympia, WA
- Rogers, AR
- Mitchell, OR

### Square Footage

- 3,070
- 1,935
- 2,066
- 2,066
- 3,474
- 1,002

### Foundation

- 5" slab-on-grade over 6 mil plastic
- Stem wall w/thermal mass floors; R-10 under slab - R-7 perimeter insulation
- Post-tensioned concrete slab-on-grade with R-10 perimeter insulation
- R-10 slab-wall with 10' BP floor
- R-20 ICF
- R-39 8" Stem-wall with 10" SIPs floor
- R-22 ICF
- Shallow foundation w/ R-20 slab & R-10 perimeter insulation

### Wall Construction

- Tripolymer block fill with 1.5" air space & Fifoil VR Plus 2
- 4.5" SIPs with 2 x 2 furring
- 2 x 6 panels
- 10" SIPs
- 2 x 4 @ 16" OC
- 6.5" SIPs

### Wall Insulation

- R - 17. total
- R-20 total; R-15 SIPs + R-5 exterior finish
- R - 3.9 spray foam
- R-30
- R - 20 - 12" spray foam
- R-26

### Rim Joist Insulation

- N/A
- 9.9 spray foam
- R-30 spray foam
- R-20 rigid & spray foam with R-22 fiberglass batts

### Roof Construction

- Cypress timbers, tongue & groove with metal roofing
- 6.5" BP's
- Open web trusses with metal roof
- 12" BP's
- Recess heat brusses
- R-19.8 spray foam

### Ceiling Insulation

- R-11 spray foam
- 8.60 blown in batta
- R-47
- R-30 - 72" spray foam
- R-43

### Windows

- Energy Star Low-E, argon filled U - 0.35 - 0.31: SHGC - 0.20
- Low-E, argon filled U - 0.20; SHGC - 0.21 - no direct solar exposure
- Low-E U - 0.054; SHGC - 0.31
- Energy Star Low-E, triple-glazed U - 0.11 - 0.15; SHGC - 0.48
- Energy Star Low-E, argon filled U - 0.26 - 0.34
- SHGC - 0.22 - 0.29
- Ground Source HP - 3.10 COP, 14.7 SEER with integrated air handler + ERF ventilation
- Ductless mini-split 10.6 HSPF with 95 AFUE propane fireplace + 155 cfm HRV
- Passive Solar Design, 52.7 HSPF 14.7 SEER AC/ fireplace with fan + Heat Recovery Ventilator
- Ductless split system HSPF 10.1 + Energy Recovery Ventilator

### HVAC

- Ground Source HP - 3.10 COP: 14.7 SEER with integrated air handler + ERF ventilation
- Ductless mini-split 10.6 HSPF with 95 AFUE propane fireplace + 155 cfm HRV
- Passive Solar Design, 52.7 HSPF 14.7 SEER AC/ fireplace with fan + Heat Recovery Ventilator
- Ductless split system HSPF 10.1 + Energy Recovery Ventilator

### Ducts

- Double wall R-19 Spiral metal 100% in conditioned space
- R-12 flex duct 100% in conditioned space
- R-12 Metal & flex 100% in conditioned space
- Ducts for HRV only 100% in conditioned space
- R-6 Metal ducts 100% in conditioned space
- Solar thermal with electric back-up

### Water Heating

- Solar thermal with electric backup
- Tankless propane 50% EF
- Solar thermal with 56 EF electric backup
- 100% Energy Star, 100% CFLs

### Lighting

- 100% Energy Star - 86 LED fixtures
- All Energy Star & CFL's
- 85% CFL's
- 37 total fixtures: 34 Energy Star, 2 LED, 12 CFLs
- 96% Energy Star
- Energy Star

### Appliances

- Energy Star
- Energy Star
- Energy Star
- Energy Star
- 5640 watt PV provides 100% of home energy use + feeds back into grid

### On-Site Energy Generation

- 14.2 kW amorphous silica panels provide 102% of needs
- 3.4 kW PV
- 74 kW PV provides 100% of needs
- none - prepped for future installation
- 2.2 kW PV provides 42% of annual electrical needs
- 158 cfm of GOA

### Duct Leakage Test

- 160 cfm total
- 0 to exterior
- 46 cfm total
- 0 to exterior
- 44 cfm total
- 0 to exterior
- 325 cfm total
- 0 to exterior
- 44 cfm of PV - 15 with PV

### Blower Door Test

- 883 cfm ≥ 50PA (138ACH ≥ 50PA)
- 750 cfm ≥ 50PA (24.62CH ≥ 50PA)
- 744 cfm ≥ 50PA
- 230 cfm ≥ 50PA (0.55 CH ≥ 50PA)
- 883 cfm ≥ 50PA (0.72 CH ≥ 50PA)
- 883 cfm ≥ 50PA (1.38ACH ≥ 50PA)

### HERS Index

- 22 with PV
- 40 w/s PV
- 20 with PV
- 43 w/s PV - 5 with PV
- 30
- 53 w/s PV + 43 with PV

### Award Level

- **Gold**
- **Gold**
- **Silver**
- **Gold**
- **Silver**
Appendix: Energy Features, Existing Homes Division

### Winning Home

| Builder                  | Website                              | Category                     | Climate | Location            | Square Footage | Foundation | Wall Construction | Wall Insulation | Rim JOint Insulation | Roof Construction | Ceiling Insulation | Windows | HVAC | Ducts | Water Heating | Lighting | Appliances | On-Site Energy Generation | Duct Leakage Test | Blower Door Test | HERS Index | Award Level |
|--------------------------|--------------------------------------|------------------------------|---------|---------------------|----------------|------------|------------------|------------------|--------------------|-------------------|------------------|------------------|---------|------|------|-------------|----------|------------|------------------------|-----------------|-----------------|------------|-------------|
| Ferrier Builders, LLC    | www.ferrierbuilders.com              | Existing Homes – Reconstruction/Demonstration | Hot     | Fort Worth, TX      | Pre Remodel: 1,693 | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: none             | Unchanged          | Pre: R-24         | Pre: new shingles | Pre: U- 0.25    | Pre: 80% EF gas furnace | 5.5  | Pre: 2 ton split HP HSPF 9.2 | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 95% EF gas tankless heat to air to heater + HRV | Pre: no address | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 1100 kWh | Gold, Silver |
| S Street                | www.streetinc.com                    | Existing Homes – Single Family Home | Hot     | Scottsdale, AZ      | 852 unchanged    | Pre: on grade unchanged | Pre: new 10 frame wood frame | Pre: R-10 fiberglass batts | Pre: R-6 spray foam | Pre: on grade unchanged | Pre: new shingles | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | 5.5  | Pre: 2 ton split HP HSPF 9.2 | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 95% EF gas tankless heat to air to heater + HRV | Pre: no address | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 1100 kWh | Gold, Silver |
| GreenPikes, LLC         | www.greenpikes.com                   | Existing Homes – Reconstruction/Demonstration | Moderate | Fort Worth, TX      | 1,478 unchanged  | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | Pre: R-6 spray foam | Pre: on grade unchanged | Pre: new shingles | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | 5.5  | Pre: 2 ton split HP HSPF 9.2 | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 95% EF gas tankless heat to air to heater + HRV | Pre: no address | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 1100 kWh | Gold, Silver |
| Habitat for Humanity South Sarasota Co., Inc. | www.habitatsouthsarasota.org | Existing Homes – Reconstruction/Demonstration | Hot     | Venice, FL          | 852 unchanged    | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | Pre: R-6 spray foam | Pre: on grade unchanged | Pre: new shingles | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | 5.5  | Pre: 2 ton split HP HSPF 9.2 | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 95% EF gas tankless heat to air to heater + HRV | Pre: no address | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 1100 kWh | Gold, Silver |
| TAG Mechanical Systems, Inc. | www.tagmechanical.com              | Existing Home Division – Single Family Home | Hot     | Syracuse, NY        | 1,478 unchanged  | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | Pre: R-6 spray foam | Pre: on grade unchanged | Pre: new shingles | Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds | Pre: none          | Pre: R-10 fiberglass batts | 5.5  | Pre: 2 ton split HP HSPF 9.2 | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 95% EF gas tankless heat to air to heater + HRV | Pre: no address | Post: Energy Star, Low-E, Argon filled U-0.27 | Pre: 1100 kWh | Gold, Silver |

<table>
<thead>
<tr>
<th>Award Level</th>
<th>Winning Home</th>
<th>Builder</th>
<th>Website</th>
<th>Category</th>
<th>Climate</th>
<th>Location</th>
<th>Square Footage</th>
<th>Foundation</th>
<th>Wall Construction</th>
<th>Wall Insulation</th>
<th>Rim JOint Insulation</th>
<th>Roof Construction</th>
<th>Ceiling Insulation</th>
<th>Windows</th>
<th>HVAC</th>
<th>Ducts</th>
<th>Water Heating</th>
<th>Lighting</th>
<th>Appliances</th>
<th>On-Site Energy Generation</th>
<th>Duct Leakage Test</th>
<th>Blower Door Test</th>
<th>HERS Index</th>
<th>Award Level</th>
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<tbody>
<tr>
<td>Gold</td>
<td>Ferrier Builders, LLC</td>
<td><a href="http://www.ferrierbuilders.com">www.ferrierbuilders.com</a></td>
<td>Existing Homes – Reconstruction/Demonstration</td>
<td>Hot</td>
<td>Fort Worth, TX</td>
<td>Pre Remodel: 1,693</td>
<td>852 unchanged</td>
<td>Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds</td>
<td>Pre: none</td>
<td>Pre: R-10 fiberglass batts</td>
<td>Pre: R-6 spray foam</td>
<td>Pre: on grade unchanged</td>
<td>Pre: new shingles</td>
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<td>Pre: none</td>
<td>Pre: R-10 fiberglass batts</td>
<td>5.5</td>
<td>Pre: 2 ton split HP HSPF 9.2</td>
<td>Post: Energy Star, Low-E, Argon filled U-0.27</td>
<td>Pre: 95% EF gas tankless heat to air to heater + HRV</td>
<td>Pre: no address</td>
<td>Post: Energy Star, Low-E, Argon filled U-0.27</td>
<td>Pre: 1100 kWh</td>
<td>Gold, Silver</td>
</tr>
<tr>
<td>Silver</td>
<td>S Street</td>
<td><a href="http://www.streetinc.com">www.streetinc.com</a></td>
<td>Existing Homes – Single Family Home</td>
<td>Moderate</td>
<td>Fort Worth, TX</td>
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<td>Pre: none</td>
<td>Pre: R-10 fiberglass batts</td>
<td>Pre: R-6 spray foam</td>
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<td>Pre: R-10 fiberglass batts</td>
<td>5.5</td>
<td>Pre: 2 ton split HP HSPF 9.2</td>
<td>Post: Energy Star, Low-E, Argon filled U-0.27</td>
<td>Pre: 95% EF gas tankless heat to air to heater + HRV</td>
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<td><a href="http://www.greenpikes.com">www.greenpikes.com</a></td>
<td>Existing Homes – Reconstruction/Demonstration</td>
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<td>Fort Worth, TX</td>
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<td>Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds</td>
<td>Pre: none</td>
<td>Pre: R-10 fiberglass batts</td>
<td>Pre: R-6 spray foam</td>
<td>Pre: on grade unchanged</td>
<td>Pre: new shingles</td>
<td>Pre: un insulated enclosed crawl space with R-12 batts installed back-grounds</td>
<td>Pre: none</td>
<td>Pre: R-10 fiberglass batts</td>
<td>5.5</td>
<td>Pre: 2 ton split HP HSPF 9.2</td>
<td>Post: Energy Star, Low-E, Argon filled U-0.27</td>
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<td>Habitat for Humanity South Sarasota Co., Inc.</td>
<td><a href="http://www.habitatsouthsarasota.org">www.habitatsouthsarasota.org</a></td>
<td>Existing Homes – Reconstruction/Demonstration</td>
<td>Hot</td>
<td>Venice, FL</td>
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<td>Pre: R-10 fiberglass batts</td>
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<td>Gold, Silver</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- **Ferrier Builders, LLC**
  - Pre Remodel: 1,693
  - Post Remodel: 1,915
  - Original slab-on-grade unchanged

- **S Street**
  - Pre: new shingles

- **GreenPikes, LLC**
  - Pre: R-10 fiberglass batts
  - Pre: R-6 spray foam

- **Habitat for Humanity South Sarasota Co., Inc.**
  - Pre: 2 x 6 framing
  - Post: Low-E; U - 0.28 - 0.30; SHGC - 0.18 - 0.19 + 2 TDD’s

- **TAG Mechanical Systems, Inc.**
  - Pre: R-10 fiberglass batts
  - Pre: 100% CFL's

---

**2012 energy view | www.nahbrc.com/evha**
APPLICATION
The EnergyValue Housing Award (EVHA) recognizes builders, remodelers, and contractors who successfully integrate energy efficiency into all aspects of new home production or energy performance remodeling, as exemplified by a specific home. Through educational programs and media coverage, the award promotes increased awareness of the value of energy efficiency among home builders, remodelers, homeowners, and others within the residential market.

The NAHB Research Center, the National Association of Home Builders, the National Renewable Energy Laboratory, and the U.S. Department of Energy, invite you to enter the 2013 EnergyValue Housing Award competition.

PRESENTATION OF AWARDS
• Awards will be revealed during the presentation of awards at the annual EVHA Celebration.

• The 2013 EVHA Celebration will be held during the International Builders Show in Las Vegas, NV (scheduled for January 22 – 25), specific data TBA.

BENEFITS OF APPLYING
• All applicants receive a professional evaluation of their entries, and two complimentary passes to the 2013 EVHA Celebration.

• Winners will be recognized at the eighteenth annual EnergyValue Housing Award Celebration during the 2013 International Builders’ Show in Las Vegas, NV.

• Winner’s receive EVHA Winner logos and customized press releases for local promotion and marketing.

• Winners are featured on the NAHB Research Center website.

• Selected winners may be featured on DOE’s Building America website, NAHB’s Nation’s Building News (NBN), and in other national publications or invited to share their success stories at workshops, educational programs, or conferences.

ELIGIBILITY
• All professional US, home builders; remodeling contractors, and developers whose primary occupation is constructing/ remodeling homes and/or developing real estate are eligible to participate. Applicants need NOT be members of NAHB.

• Previously submitted homes and models are ineligible; however, previous winners may submit new or different homes.

• Submitted homes must have been completed after January 2010 and before application submission.

APPLICANT RESPONSIBILITIES
Applicants must be willing to share information with other builders through magazines and NAHB Research Center workshops, presenta tions, and publications. Exceptions include proprietary information that must be clearly identified on application materials.

NEW HOMES DIVISION
In all four categories addressing new home construction, builders should exhibit the integration of energy efficiency into their general design, construction, and marketing practices. The award categories are: Affordable, Custom/Demonstration, Production, and Multi-family.

The New Homes Division Application is available at www.nahbrc.com/evha/newhomes.

EXISTING HOMES DIVISION
For three categories addressing existing homes, remodelers should demonstrate the integration of energy efficiency into the design, re-design, construction, and marketing practices for home retrofit and reconstruction projects. The award categories are: Single-family, Multi-family, Reconstruction/Demonstration.

The EVHA Existing Home Division Category Application is separate from the EVHA New Home Application. More information is available at www.nahbrc.com/evha/existinghomes.

CLIMATE REGIONS
Winners in each category will be chosen from within the following climate regions: Cold, Moderate, and Hot.

EVHA BUILDER OF THE YEAR & EVHA REMODELER OF THE YEAR
Judges may choose one overall winner in each Division who best represents energy value and the goals of the award program.

JUDGING
Judging will be based on the evaluation of criteria essential to the value of energy efficiency in new home construction or in a remodeling project. Applicants will be measured relative to a threshold based on previous winners as well as other applicants within a division, specific category, and climate region.

A panel of energy-efficiency experts representing the disciplines of engineering, construction, building, remodeling, design, and marketing will judge each entry. Judges will consider all available information to determine winners. Judges’ decisions are final.

Based on the sole discretion of the judges, awards will be made in categories and regions where there are qualified applicants. If you have any questions about the different divisions, categories, or climate regions, please contact the EVHA Program Coordinator at (800) 638-8556 or email evha@nahbrc.com.

JUDGING CRITERIA
Applications will be evaluated based on the design, construction, innovation, performance, marketing & customer relations, and other criteria; please visit the Judging Criteria section online at www.nahbrc.com/evha/criteria-for-details. Note that homes in the New Home Division “Custom/Demonstration” and in the Existing Home Division “Reconstruction/Demonstration” categories are weighted differently than homes in other categories. In addition, builders/ remodelers entering a “Demonstration” project should discuss the purpose of the demonstration house, level of involvement of manufacturers, interaction between energy features and benefits, cost-effectiveness of the products and equipment used, and what significant impact the project could have on the building industry.

INSTRUCTIONS
To apply, please download the appropriate New Homes or Existing Homes Division application form with the NAHB Research Center website at www.nahbrc.com/evha or request by email or phone: NAHB Member: (800) 638-8556, or by phone, (800) 638-8556. Updated guidelines for completing the application will be available at the NAHB Research Center website. Please visit the EVHA website frequently for news, event notices, and updates at www.nahbrc.com/evha.

ENTRY DEADLINE AND FEE
All Entries must be postmarked by Tuesday, July 31, 2012. The entry fee for the EnergyValue Housing Award is $125 per entry. A company may submit only one application in each category. A home entered under more than one category will be treated as separate entries. Please submit a separate entry fee and set of applications for each home and category. The fee and application materials are non-refundable. Make checks payable to the NAHB Research Center.

Full details at buildinggreen.com/landing/insulation/
How to Sell a Green Certified Home

Let’s start with a basic fact – a green home can be sold to anyone. However, homebuyers are a diverse group of individuals and there is no one single way to sell a home successfully. For this reason, builders and their sales teams need to identify what green home benefits are most compelling to their potential buyers.

Below are some of the “tricks from the trenches” from builders and remodelers participating in the NAHB Research Center’s National Green Building Certification Program and selling third-party certified green homes. While some of the basic techniques are relevant to new home marketing in general, each has its own twist on how to specifically home in on what makes a green home different, special, and marketable.

What Do Homebuyers Really Want?

Over the past few years there have been numerous surveys of potential homebuyers to ascertain what green features buyers want and, more importantly, which ones they are willing to pay extra for. Most surveys conclude that homebuyers are interested in energy-efficiency features.

For example, the 2010 AVID Home Design Driver Research survey looked at the home design preferences of 10,003 North Americans who built a new home in the last nine years. Of the green features surveyed, 60 percent were labeled “must haves” by survey respondents. Respondents in all of the homebuyer categories (First-Time, Move Up, Second Home, Displaced, and Empty Nester) considered energy efficiency a must-have feature.

In Energy Efficiency All that Matters to Consumers?

The short answer to this question is no. Energy efficiency is a very tangible benefit that consumers recognize as valuable. The energy efficiency benefit is easily measured by the operational savings that the home buyer will realize but consumers are looking for more than home’s that are efficient, and a Green Certified home will deliver those benefits that consumers are seeking.

Skeptical builders may object and note that their buyers are not asking for “green.” It’s true, few homebuyers march into a sales center and declare that they are looking for a green home. The problem is that green is too vague, overused, and often meaningless, and consumers know exactly what they want. They just don’t necessarily call it green. That’s why having your sales pitch and the language you use is critical.

Some other consumers may assume that a home tagged as “green” will cost more than they can afford. In these markets it doesn’t mean that select green features aren’t desirable, just that consumers may be more interested in the specific benefits as opposed to a blanket categorization of features being green. The most important step in selling a green home is to convey to the buyer what makes your green home and how its environmental impact is rated.

Homebuyers Respond to Diverse Sales Points

Builders often want to sell their homes with a single marketing message. Unfortunately, research shows that gender, geography, age, and educational level all impact which green marketing message will resonate best. Some examples:

- Energy efficiency, which results in lower operating costs, may be a difficult benefit to sell in neighborhoods where utility costs are low.
- Younger buyers typically care more about the potential environmental impact of their home and respond more favorably to information about features that reduce the home’s environmental footprint.
- Women are more influenced by green features than men and they often respond very positively to marketing messages that have “show and tell” visual aids and interactive displays.

Sell the Benefits of Your Green Home, Not the Features

In selecting a new home, most buyers have a few simple goals in mind. They want to save money, lower operating costs, and increase the value of their home. Homebuyers are looking for homes that are efficient, and a Green Certified home will deliver those benefits that consumers want to know. However, homebuyers are a diverse group of individuals and there is no one single way to sell green successfully. For this reason, builders and their sales teams need to identify what green home benefits are most compelling to their potential buyers.

Training Your Sales Staff

Too often builders who construct high-performance homes rely on sales staff and realtors who are not familiar with the home’s green attributes and related benefits to make the case for buying a green home. Make sure your sales staff are up to speed on the green features in the home that contribute to its performance, but also be sure that they are selling the benefits of the features and not the features themselves. Many green practices and products need explanation, such as advanced framing, thermal barriers, R-Value, Low-E windows, and air infiltration. At a minimum, sales staff should understand the basics of these practices and then know where to direct the buyer for more detailed information. The NAHB Research Center’s technical website, ToolBase.org, can be a helpful, unbiased-commercial resource for explaining many green technologies and their benefits. Remind staff to discuss those features that increase the home’s durability as those are often neglected in the sales pitch.

Third-Party Certification Matters

An independent, third-party green certification means that your buyers don’t have to take your word that the home is a high-performance home. In the current housing market where many buyers are fraught with anxiety, third-party certifications have never been more important. Homebuyers want credibility to the builder and assurance to the buyer.

Numerous surveys and research demonstrate that independent, third-party certification and certification provides credibility and assurance that a marketer’s claims are truthful and accurate. In fact, a recent opinion survey by Cone LLC found that 88 percent of consumers believe that certification by a third-party organization is important in providing oversight to ensure environmental messaging by companies is accurate.

Comply with the Federal Trade Commission’s Green Guides

The FTC recently issued revised proposals to its Guides for the Use of Environmental Marketing Claims (Green Guides) to help marketers avoid making deceptive marketing claims. Familiarize yourself with the Green Guides and use them so that you don’t run afoul of the FTC. In general, the FTC wants environmental claims to be specific, quantified, and substantiated. Builders should not make claims or deceptively use certifications and labels. For information about having a home Green Certified to the National Green Building Standard by the NAHB Research Center and marketing that certified home, visit nahbgreen.org/certification.

www.nahbgreen.org/certification
The EnergyValue Housing Award® 2012 Winners publication contains a snapshot of the best practices from award-winning energy efficient new and existing homes. Now in its 17th year, the EVHA is the nation’s preeminent energy-efficiency award honoring builders and remodelers who voluntarily incorporate energy efficiency into all aspects of a home construction or renovation project. Builders across the nation submit detailed applications in any of four categories [Affordable, Custom, Demonstration, Multifamily, and Production] in three climate regions (Cold, Moderate, and Hot). Remodelers submit applications in any of three categories [Single Family Existing Homes, Multifamily Existing Buildings, and Reconstruction/Demonstration] in the same three climate regions. A panel of industry experts evaluates the applications and selects winners based on Energy Value, Design, Construction, Marketing and Customer Relations, and Participation in Energy Programs. Each year the EVHA winners are honored at the EVHA Celebration held during the International Builders’ Show (IBS)—the world’s largest annual construction tradeshow. The event highlights the accomplishments of the finalists and provides networking opportunities with EVHA judges, winners, government representatives, and sponsors. Selected EVHA finalists also participate in educational outreach programs during the IBS. The EVHA is facilitated by the NAHB Research Center in partnership with the National Association of Home Builders, the U.S. Department of Energy’s Building America Program, and the National Renewable Energy Laboratory with additional support from private-sector sponsors.

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